

**Acid Deposition Monitoring Network
in East Asia (EANET)**

Data Report 2024

December 2025

Network Center for EANET

Table of Contents

	Page
1. Introduction	1
2. Network Description	5
2.1 Classification of Monitoring Sites	7
2.2 Monitoring Activities in 2024	8
3. Wet Deposition Monitoring	15
3.1 Method	17
3.1.1 Field Operation	18
3.1.2 Laboratory Operation	18
3.1.3 Data Management	19
3.1.4 Meteorological Measurements	19
3.1.5 Overview of the Statistics and Definition	20
3.1.6 Terms and Abbreviations	23
3.1.7 Monitoring Sites	24
3.2 Results of Monitoring	27
4. Air Concentration and Dry Deposition Monitoring	137
4.1 Method	139
4.1.1 Automatic Monitoring Method	139
4.1.2 Manual Monitoring Method	139
4.1.3 Monitoring Sites	139
4.2 Results of Monitoring	144
5. Soil and Vegetation Monitoring	219
5.1 Method	221
5.1.1 Field Operation	221
5.1.2 Laboratory Operation	223
5.1.3 Monitoring Sites	224
5.2 Results of Monitoring	226
6. Inland Aquatic Environment Monitoring	235
6.1 Method	237
6.1.1 Selection of Sampling Sites	237
6.1.2 Field Operation	237
6.1.3 Laboratory Operation	238
6.1.4 Monitoring Sites	239
6.2 Results of Monitoring	239

	Page
7. Catchment-scale Monitoring	279
7.1 Method	281
7.1.1 Field Operation	281
7.1.2 Laboratory Operation	283
7.1.3 Data Management	283
7.1.4 Monitoring Sites	284
7.2 Results of Monitoring	288
Appendix 1 Overview of Data Report 2024	293
Appendix 2 Meteorological Statistics at the Monitoring Sites	303
Appendix 3 Description of trees: Pasoh, Malaysia	319
Appendix 4 Corrigenda of Wet Deposition Monitoring	343
Appendix 5 Corrigenda of Air concentration and Dry Deposition Monitoring	349
Appendix 6 Corrigenda of Inland Aquatic Environment Monitoring	369

CHAPTER 1

Introduction

1. Introduction

The Acid Deposition Monitoring Network in East Asia (EANET) was established as an initiative for regional cooperation among the participating countries, creation of a common understanding on the state of both air concentration and acid deposition problems and for providing useful inputs to policy makers at various levels.

Monitoring activities started during the preparatory phase activities of EANET from March 1998 to December 2000. Regular air concentration and acid deposition monitoring started in January 2001 with 10 participating countries, namely China, Indonesia, Japan, Malaysia, Mongolia, Philippines, Republic of Korea, Russia, Thailand, and Vietnam. Cambodia, Lao PDR, and Myanmar joined EANET in 2001, 2002 and 2005, respectively. There are currently 13 countries participating in the EANET activities.

Air concentration and acid deposition monitoring activities of EANET consist of five environmental items – wet deposition, dry deposition (air concentration), soil and vegetation, inland aquatic environment, and catchment-scale monitoring. Monitoring for wet and dry deposition is implemented to measure atmospheric concentrations and to evaluate fluxes of acidic substances to the land surface, while monitoring for soil and vegetation, inland aquatic environment and catchment-scale is carried out to assess adverse impacts on terrestrial and aquatic ecosystems. These monitoring data are used to evaluate the state of air concentration and acid deposition as well as impacts on ecosystems.

The participating countries are required to submit monitoring data and related information obtained from the monitoring activities to the Network Center for EANET (NC) by the end of June of each year based on the guidelines of EANET. The NC prepared a draft Data Report 2024 through the discussion with QA/QC managers from participating countries at the 26th Senior Technical Managers' Meeting (STM26). After verification by the experts of each monitoring field, the NC submitted the draft Data Report to the 25th session of Scientific Advisory Committee (SAC25) held in October 2025, and the Data Report 2024 was adopted. Following the comments and guidance at the SAC25, the NC elaborated and finalized the report.

The Data Report 2024 contains the data obtained from monitoring activities carried out in 2024.

CHAPTER 2

Network Description

2. Network Description

2.1 Classification of Monitoring Sites

EANET monitoring sites are classified into two basic categories, namely “air concentration/ acid deposition monitoring sites” and “ecological survey sites”. Air concentration/acid deposition monitoring sites are ones for the collection of fundamental data on the temporal and spatial distribution of acid deposition as well as air concentration, and they are further classified into 3 sub-categories: remote sites, rural sites, and urban sites for specific objectives of monitoring. Ecological survey sites are those that provide basic data for assessing the effects of acidification on terrestrial ecosystems, and they are further classified into 2 sub-categories: basic survey sites and ecosystem analysis sites. The classification of the monitoring sites is shown in Table 2.1.

Table 2.1 Classification of monitoring sites

Site category	Site classification	Main purpose and siting criteria
Air concentration/ acid deposition monitoring site for wet deposition and dry deposition monitoring	Urban site	- Assessment of the state of air concentration and acid deposition in urban areas - Urbanized and industrial areas, and the areas immediately outside the urban area - Data can be used for evaluation of air concentration and acid deposition effect on buildings and historical monuments or human health
	Rural site	- Assessment of the state of air concentration and acid deposition in rural areas and/or hinterlands - Data can be used for the evaluation of air concentration and acid deposition on agricultural crops, forests etc. - More than 20 km apart from large pollution sources like cities, power plants and highways
	Remote site	- Assessment of the state of air concentration and acid deposition in background areas - Data can be used for evaluation of long-range transport and deposition models - More than 50 km apart from large pollution sources like cities, power plants and highways - More than 500 m apart from main roads (less than 500 vehicles per day)
Ecological survey site for soil and vegetation, Inland aquatic environment, and catchment-scale monitoring	Basic survey site	- Accumulation of basic data on soil, forest, and inland aquatic environment and disclose trends in their properties - In the vicinity of the air concentration and acid deposition monitoring site
	Ecosystem analysis site	- Assessment of air concentration and acid deposition impacts on whole ecosystem through application of terrestrial ecosystem analysis and/or catchment analysis - Sensitive areas to changes in atmospheric acidity and ecologically conserved area

2.2 Monitoring Activities in 2024

Thirteen EANET countries, namely, Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand and Vietnam participated in air concentration and acid deposition monitoring in 2024. A total of 65 sites are nominated for the air concentration/acid deposition monitoring, including 26 urban, 19 rural, and 20 remote sites. The map showing the locations of these sites with the classification information is provided in Figure 2.1. The details on the locations of these sites are presented in Table 2.2.



Figure 2.1 Locations of air concentration/acid deposition monitoring sites in 2024

Table 2.2 Locations of air concentration/acid deposition monitoring sites in 2024

Country	Site	Code* ¹	Class.	Latitude* ²	Longitude* ²	Altitude /m
Cambodia	Phnom Penh	KHA001	Urban	11°33'18"N	104°56'20"E	15
China	Chongqing - Haifu	CNA003	Urban	29°37'30"N	106°30'34"E	317
	- Jinyunshan	CNA004	Rural	29°49'42"N	106°22'43"E	871
	Xi'an - Shizhan	CNA005	Urban	34°14'33"N	108°57'10"E	415
	- Jiwozi	CNA007	Remote	33°51'06"N	108°48'52"E	1,837
	Xiamen - Hongwen	CNA008	Urban	24°28'47"N	118°09'47"E	39
	- Xiaoping	CNA009	Remote	24°51'23"N	118°02'55"E	530
	Zhuhai - Xiang Zhou	CNA010	Urban	22°16'22"N	113°31'46"E	29
	- Zhuxiandong	CNA011	Urban	22°12'24"N	113°31'00"E	18
	- Haibin-Park	CNA012	Urban	22°15'40"N	113°34'25"E	10
	Wuzhishan - Wuzhishan	CNA013	Remote	18°50'11"N	109°29'26"E	958
	Lijiang - Lijiang	CNA014	Remote	27°13'38"N	100°14'48"E	3410
Indonesia	Jakarta	IDA001	Urban	06°09'22"S	106°50'32"E	7
	Kototabang	IDA003	Remote	00°12'08"S	100°19'05"E	845
	Maros	IDA005	Rural	04°59'50"S	119°34'17"E	1
	Jembrana	IDA006	Rural	08°20'27"S	114°37'02"E	24
	Lombok	IDA007	Rural	08°38'10"S	116°10'15"E	52
Japan	Rishiri	JPA001	Remote	45°07'30"N	141°14'30"E	40
	Ochiishi	JPA002	Remote	43°09'43"N	145°29'50"E	49
	Sado-seki	JPA004	Remote	38°15'02"N	138°24'01"E	129
	Happo	JPA005	Remote	36°41'48"N	137°47'53"E	1,850
	Ijira	JPA006	Rural	35°34'14"N	136°41'51"E	140
	Oki	JPA007	Remote	36°17'19"N	133°11'06"E	90
	Yusuhara	JPA009	Remote	33°22'46"N	132°56'06"E	790
	Hedo	JPA010	Remote	26°51'58"N	128°14'55"E	60
	Ogasawara	JPA011	Remote	27°05'32"N	142°13'02"E	212
	Tokyo	JPA012	Urban	35°41'30"N	139°45'10"E	26
	Niigata-maki* ³	JPA013	Rural	37°48'33"N	138°51'09"E	47
	Tsushima	JPA014	Remote	34°14'48"N	129°17'17"E	390
Lao PDR	Vientiane	LAA001	Urban	17°59'53"N	102°34'56"E	175
Malaysia	Petaling Jaya	MYA001	Urban	03°06'07"N	101°38'42"E	46
	Tanah Rata	MYA002	Rural	04°29'03"N	101°22'17"E	1,545
	Danum Valley	MYA003	Remote	04°58'53"N	117°50'37"E	426
	Kuching	MYA004	Urban	01°29'25"N	101°21'09"E	22
	Gunung Brinchang	MYA005	Remote	04°31'22"N	101°23'17"E	2,012
Mongolia	Ulaanbaatar* ⁴	MNA001	Urban	47°53'39.54"N	106°52'57.19"E	1,275
	Bayanzurkh* ⁴	MNA003	Urban	47°55'03.25"N	106°56'15.44"E	1,301
	Khan-Uul* ⁴	MNA004	Urban	47°53'39.54"N	106°52'57.19"E	1,284
	Terelj	MNA002	Remote	47°59'7.65"N	107°27'30.41"E	1,550
Myanmar	Yangon	MMA001	Urban	16°51'53"N	96°09'13"E	21

Table 2.2 Locations of air concentration/acid deposition monitoring sites in 2024 (continued)

Country	Site	Code*1	Classification	Latitude*2	Longitude*2	Altitude/m
Philippines	Metoro Manila					
	- Manila Observatory	PHA001	Urban	14°38'09"N	121°04'43"E	55
	- North Caloocan	PHA004	Urban	14°44'59.95"N	121°3'45.35"E	76
	Laguna - Los Baños	PHA002	Rural	14°09'53"N	121°15'00"E	25
	- Sta Rosa	PHA005	Rural	14°18'57.88"N	121°6'37.85"E	8
	Benguet					
	- Mt. Sto. Tomas	PHA003	Rural	16°21'23" N	120°33'33"E	1,500
	- Lower Session Road	PHA006	Rural	16°24'41.1" N	120°35'55.38" E	1,473
Republic of Korea	Ganghwa	KRA001	Rural	37°42'32"N	126°16'26"E	60
	Jeju	KRA002	Remote	33°17'32"N	126°09'43"E	37
	Imsil	KRA003	Rural	35°36'09"N	127°10'53"E	217
Russia	Listvyanka	RUA002	Rural	51°50'47"N	104°53'34"E	646
	Irkutsk	RUA003	Urban	52°14'53"N	104°15'33"E	495
	Primorskaya	RUA004	Rural	43°37'45"N	132°14'13"E	85
Thailand	Bangkok	THA001	Urban	13°47'04"N	100°32'22"E	5
	Samutprakarn	THA002	Urban	13°39'58"N	100°36'21"E	4
	Pathumthani	THA003	Rural	14°02'46"N	100°42'43"E	6
	Khanchanaburi	THA004	Remote	14°47'05"N	98°36'05"E	130
	(Vajiralongkorn Dam)					
	Chiang Mai					
	- Chang Phueak	THA006	Urban	18°50'26"N	98°58'11"E	329
	- Si Phum	THA007	Urban	18°47'27"N	98°59'24"E	313
	Nakhon Ratchasima					
	- Nai Mueang	THA009	Urban	14°58'46"N	102°05'53"E	184
Vietnam	Hanoi	VNA001	Urban	21°03'24"N	105°43'36"E	6
	Hoa Binh	VNA002	Rural	20°50'12"N	105°20'32"E	23
	Cuc Phuong	VNA003	Remote	20°18'01"N	105°41'38"E	155
	Da Nang	VNA004	Urban	16°02'35"N	108°12'24"E	5
	Can Tho	VNA005	Rural	10°05'18"N	105°41'45"E	2
	Ho Chi Minh	VNA006	Urban	10°47'04"N	106°42'00"E	5
	Yen Bai	VNA007	Rural	21°42'28"N	104°52'29"E	56

*1 Codes for the air concentration/acid deposition monitoring sites are assigned according to the following rules.

e.g.) KH A 0 01

(a) (b) (c) (d)

(a): country code (2 digits)

(b): item code ("A" : air concentration/acid deposition monitoring)

(c): sub-serial number for ecological monitoring

(d): serial number for each country (2 digits)

*2 Coordinates are shown according to the World Geodetic System (WGS)

*3 Niigata-maki has been discontinued since April 2024 due to the change in the National Monitoring Plan of Japan.

*4 It was proven that the Ulaanbaatar site (MNA001) had been relocated and split into two monitoring sites, Bayanzurkh (MNA003) and Khan-Uul (MNA004), in June 2020 due to new building construction. The monitoring data relating to wet deposition, air concentration and dry deposition were revised accordingly (see Cpt. 3 and 4). For further details, please refer to Appendices 4 and 5.

The current status on basic survey sites for ecological monitoring and their nearest air concentration/acid deposition monitoring sites are shown in Table 2.3. Soil and vegetation monitoring and inland aquatic environment monitoring are conducted at 33 plots in 10 countries and 19 lakes/rivers in 11 countries, respectively. Most of the ecological monitoring sites are corresponded to the air concentration/acid deposition monitoring sites. Soil and vegetation monitoring is conducted in the vicinity of four air concentration/acid deposition monitoring sites in China, one site in Indonesia, four sites in Japan, four sites in Malaysia, two sites in Mongolia, four sites in Philippines, one site in Republic of Korea, seven sites in Russia, two sites in Thailand, and two sites in Vietnam. Similarly, inland aquatic environment monitoring is carried out at one site in Cambodia, four sites in China, two sites in Indonesia, two sites in Japan, one site in Lao PDR, two sites in Malaysia, one site in Mongolia, two sites in Philippines, two sites in Russia, one site in Thailand, and one site in Vietnam. It is expected that the air concentration and acid deposition monitoring data collected at their nearest monitoring sites will be used for interpretation of the data on ecological monitoring.

Table 2.3 Basic survey sites for ecological monitoring and their nearest air concentration /acid deposition monitoring sites

Country	Site for air concentration/acid deposition monitoring	Plot for soil and vegetation monitoring	Code for soil and vegetation monitoring* ¹	Site for inland aquatic environment monitoring	Code for inland aquatic environment monitoring* ¹
Cambodia	-	-	-	Sras Srang Lake	KHI002
China	Chongqing - Jinyunshan	Jinyunshan	CNS004	Jinyunshan Lake	CNI004
	Xi'an - Jiwozi	Dabagou	CNS007	Jiwozi River	CNI007
	Xiamen - Xiaoping	Xiaoping	CNS009	Xiaoping Dam	CNI209
	Zhuhai - Zhuxiandong	Zhuxiandong	CNS011	Zhuxiandong Stream	CNI111
Indonesia	Serpong	Bogor Research Forest (Dramaga Experimental Forest)	IDS002	-	-
	Bandung	-	-	Patengang Lake	IDI004
	-	-	-	Gunung Lake	IDI006
Japan	Happo	Sekido-san	JPS005	Futago-ike Lake	JPI005
		Horyu-zan	JPS105		
	Ijira	Ijira	JPS006	Ijira Lake	JPI006
		Yamato	JPS106		
Lao PDR	Vientiane	-		Nam Houm Lake	LAI001

Table 2.3 Basic survey sites for ecological monitoring and their nearest air concentration/acid deposition monitoring sites (continued)

Country	Site for air concentration/acid deposition monitoring	Plot for soil and vegetation monitoring	Code for soil and vegetation monitoring* ¹	Site for inland aquatic environment monitoring	Code for inland aquatic environment monitoring* ¹
Malaysia	Petaling Jaya	Pasoh TEAM Plot 1	MYS201	-	-
		Pasoh TEAM Plot 8	MYS202	-	-
	Danum Valley	-	-	Baru River	MYI103
	-	UPMKB Rehabilitated Forest Planted in 1991	MYS005	-	-
		UPMKB Rehabilitated Forest Planted in 2008	MYS105	-	-
	-	-	-	Kuala Tahan	MYI006
Mongolia	Ulaanbaatar	Bogdkhan Mountain	MNS001	-	-
	Terelj	Terelj Mountain	MNS002	Terelj River	MNI002
Philippines	Manila Observatory	La Mesa Watershed	PHS001		
	Los Baños	Mt. Makiling	PHS002	Pandin Lake	PHI102
		UP Quezon, Land Grant	PHS102		
	Mt. Sto Tomas	Boneco Long Term Ecological Research Site	PHS003	Ambulalakaw Lake	PHI003
Republic of Korea	Imsil	Mt. Naejang	KRS003	-	-
Russia	Irkutsk	Irkutsk	RUS003	-	-
	Listvyanka	Bolshie Koty	RUS002		
		Pereemnaya river catchment	RUS102	Pereemnaya River	RUI102
	Mondy	Ilchir Lake	RUS001	-	-
		Okinskoe Lake	RUS101		
		Solar Observatory	RUS201		
	Primorskaya	Primorskaya	RUS004	Komarovka River	RUI004
Thailand	Khanchanaburi (Vajiralongkorn Dam)	Vajiralongkorn Dam	THS004	Vajiralongkorn Dam	THI004
		Vajiralongkorn Puye	THS104		
Vietnam	Hoa Binh	Cave of Heaven	VNS002	Hoa Binh Reservoir	VNI002
		Thang Ranh	VNS102		

*1 Each code of ecological monitoring sites is assigned in accordance with the following rules.

e.g.) CN S 0 04

(a) (b) (c) (d)

(a): country code (2 digits) (b): item code ("S": soil and vegetation monitoring, "I": inland aquatic environment monitoring)

(c): sub-serial number when there are multiple ecological monitoring sites in the nearest air concentration/acid deposition monitoring site

(d): 2-digit serial number corresponding to its nearest air concentration/acid deposition monitoring site

(If there is no nearest air concentration/acid deposition monitoring site within 50 km, another new serial number is assigned after the existing air concentration/acid deposition monitoring site in its country.)

Table 2.4 shows the sites for catchment-scale monitoring.

Table 2.4 Site for catchment-scale monitoring

Country	Site for air concentration /acid deposition monitoring	Site for catchment-scale monitoring	Code for catchment-scale monitoring ^{*1}
Japan	Ijira	Lake Ijira catchment	JPC006
Philippines	Manila Observatory	La Mesa Watershed	PHC001

*1 Each code of the catchment-scale monitoring sites is assigned in accordance with the following rules.

e.g.) JP C 0 06

(a) (b) (c) (d)

(a): country code (2 digits) (b): item code (“C”: catchment-scale monitoring)

(c): Sub-serial number when there are multiple ecological monitoring sites in the nearest air concentration/acid deposition monitoring site

(d): 2-digit number corresponding to its nearest air concentration/acid deposition monitoring site

(If there is no nearest air concentration/acid deposition monitoring site within 50 km, another new serial number is assigned after the existing air concentration/acid deposition monitoring site in its country.)

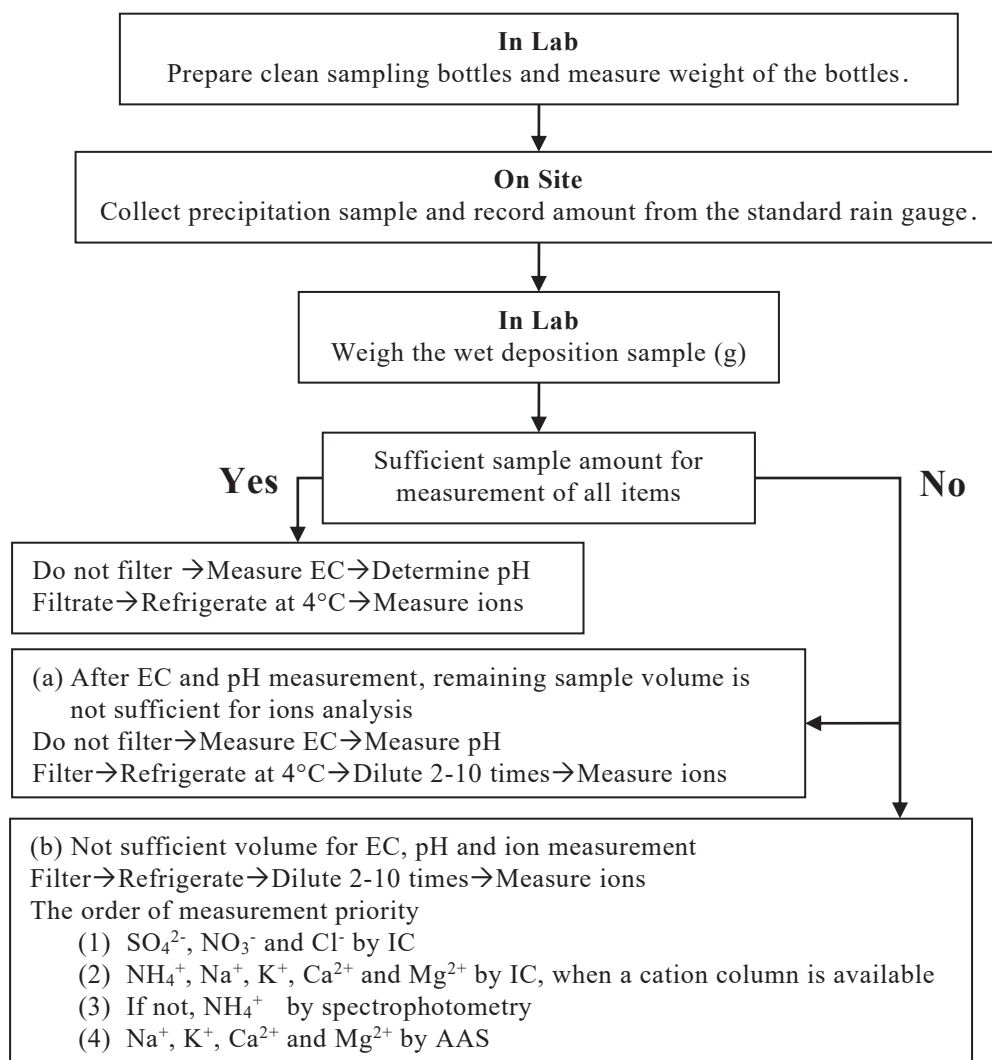
CHAPTER 3

Wet Deposition Monitoring

3. Wet Deposition Monitoring

3.1 Method

Each participating country is required to carry out acid deposition monitoring using common methodologies as specified in “*Guidelines for Acid Deposition Monitoring in East Asia, Technical Manual for Wet Deposition Monitoring in East Asia -2010*”, which was issued by the Network Center for EANET in November 2010 to obtain comparable, high quality monitoring data. Figure 3.1 shows the flow chart that summarizes the procedures for sampling and chemical analysis by the participating countries.



* EC: Electric conductivity, IC: Ion chromatography

Figure 3.1 Flow chart of sampling and chemical analysis of Wet Deposition

3.1.1 Field Operation

The wet-only sampler is recommended for the collection of the precipitation samples. This instrument is designed to collect precipitation samples during the period of rainfall which is detected by an equipped rain sensor that opens the lid on the collecting bucket or funnel. The lid of this instrument closes to avoid any collection into the collecting bucket or funnel, when no rainfall is detected by the sensor.

On the other hand, when a manual sampler is used to collect the precipitation since an automatic instrument is not available, the sampling shall be done by ensuring the sample collection only during rainfall period.

Precipitation chemistry samples are always at risk of degradation. Refrigeration is recommended to prevent the degradation. If refrigeration cannot be used, biocides such as thymol should be used to prevent microbial uptake and conversion of organic acids, especially in tropical region.

On the other hand, the special care for the sampling of wet deposition in the higher latitude region during winter seasons should be done. The collection of the wet deposition samples may encounter difficulties due to low ambient temperature particularly when the temperature falls below -10 to -20°C.

3.1.2 Laboratory Operation

Procedures for the analysis of major constituent in wet deposition sample according to the “*Technical Manual for Wet Deposition Monitoring in East Asia -2010*” are shown in Table 3.1. Ion chromatography is recommended as the major analytical method which has been adopted by the participating countries for chemical analysis of both anions and cations contained in precipitation samples. Atomic absorption/emission spectrometry for Na^+ , K^+ , Ca^{2+} , and Mg^{2+} , and spectrophotometry for NH_4^+ are the secondary methods for the determination of these ions. Laboratories that use other non-recommended methods with insufficient analytical sensitivity, such as titration method, will encounter problems of unsatisfactory detection limit.

The EANET Data quality objective (DQO) values are defined in the “*Technical Documents for Wet Deposition Monitoring in East Asia -2010.*” And DQO values about Detection limits are shown in Table 3.2.

3.1.3 Data Management

Each laboratory has to submit the analyzed data of the precipitation samples to the National Center. Each National Center is expected to submit the compiled data in the required format to the Network Center for EANET (NC) by the end of June in the following year. All the data have to be checked by calculating values of ion balance (R_1) and conductivity agreement (R_2). If a sample or individual datum has problems including “insufficient sample volume” or “low precision”, the flags corresponding to the problems should be recorded onto the data sheet. Participating countries can refer to QA/QC part of the EANET document on “*Technical Manual for Wet Deposition Monitoring in East Asia -2010.*”

3.1.4 Meteorological Measurements

It is recommended that monitoring sites incorporate collocated meteorological measurements including wind direction/speed, temperature, humidity, precipitation amount and solar radiation. Meteorological data can also be acquired from the nearest standard meteorological station (meeting the requirements of the national weather service). Local meteorological data are very useful when dealing with the interpretation of unusual precipitation events.

Meteorological statistics at the monitoring sites are shown in Appendix 2 at the end of the report.

Table 3.1 Recommended analytical method for the measurement of major constituent in wet deposition samples

Analytical items	Method
Electric conductivity (EC)	Conductivity cell method ^{*1}
pH	Glass electrode ^{*1}
Cl^- , NO_3^- , SO_4^{2-} , NO_2^- , F^- , PO_4^{3-}	Ion chromatography, Spectrophotometry
NH_4^+	Ion chromatography, Spectrophotometry (Indophenol Blue) ^{*2}
Na^+ , K^+ , Ca^{2+} , Mg^{2+}	Ion chromatography Atomic absorption/emission spectrometry
HCO_3^-	Ion chromatography, Alkalinity method, HPLC
Organic acids	Ion chromatography

^{*1} Measuring at constant 25°C with a temperature-controlled bath is recommended.

^{*2} An alternative analysis method should be used if thymol is used as a biocide during sample collection.

Table 3.2 DQO values about Detection limits

Items	Detection limits ($\mu\text{mol L}^{-1}$)
SO_4^{2-}	0.3
NO_3^-	0.5
Cl^-	0.5
NH_4^+	0.8
Na^+	0.3
K^+	0.3
Ca^{2+}	0.2
Mg^{2+}	0.3

3.1.5 Overview of the Statistics and Definition

An overview of the statistics and definitions used is given below.

Weighted average: the precipitation amount weighted average concentration ($\mu\text{mol L}^{-1}$) over the summary period.

Calculated as:

$$\hat{C} = \Sigma(C_i P_i) / \Sigma P_i$$

where $\hat{C}$: precipitation amount weighted average concentration ($\mu\text{mol L}^{-1}$)

C_i : measured valid concentration for sample i ($\mu\text{mol L}^{-1}$)

P_i : precipitation amount for the same sample i with valid concentration (mm)

Deposition amount: the wet deposition amount (mmol m^{-2}) for the summary period.

Calculated as:

$$\text{Deposition amount} = \hat{C} \times (\text{total precipitation amount for the summary period}) / 1000$$

The concentrations for the sampling periods with missing data have consequently been assumed to be equal to the weighted average of the summary period.

Non-sea-salt sulfate and non-sea-salt calcium ($\mu\text{mol L}^{-1}$): Equal to the measured sulfate (calcium) in the sample minus the sulfate (calcium) contributed by sea salt. Sea salt sulfate (calcium) is estimated from the concentration of sodium and the component ratio of sea water.

$$[\text{nss-SO}_4^{2-}] = [\text{SO}_4^{2-}] - 0.06028 [\text{Na}^+]$$

$$[\text{nss-Ca}^{2+}] = [\text{Ca}^{2+}] - 0.02161 [\text{Na}^+]$$

(Na⁺ : 468.3 mmol L⁻¹, SO₄²⁻ : 28.23 mmol L⁻¹, Ca²⁺ : 10.12 mmol L⁻¹; Ref.: *Guide to maritime observation, Oceanographic Society of Japan*)

Data completeness:

- (i) **Percent precipitation coverage length (%PCL):** Percentage of days with measured precipitation plus no precipitation days in the summary period. Calculated as:

$$\%PCL = [(\text{Number of days in the summary period}) - (\text{Number of days with missing or unknown precipitation})] / (\text{Number of days in the summary period}) \times 100$$

- (ii) **Percent total precipitation (%TP):** Percentage of total precipitation amount over the summary period represented by valid component measurements. Calculated as:

$$\%TP = (\text{Sum of precipitation amounts for samples with valid sample component measurements}) / (\text{Sum of precipitation amounts for all samples}) \times 100$$

- (iii) **Data completeness criteria for monthly and annual summaries:**

$$\%PCL > 80\% \text{ and } \%TP > 80\%$$

The low values on data completeness were caused by some trouble, such as contamination of sample and malfunction of the wet-only sampler or the rain gauge.

Ion balance (R₁):

Calculated as:

$$R_1 = (C - A) / (C + A) \times 100 (\%)$$

where C: total cation equivalent concentration (μeq L⁻¹)

A: total anion equivalent concentration (μeq L⁻¹)

$$C = 10^{(6-pH)} + \sum(C_{Ci}V_i)$$

where C_{Ci} : the concentration of i-th cation (μmol L⁻¹)

V_i : the valence of the given ion

$$A = \sum(C_{Ai}V_i)$$

where C_{Ai} : the concentration of i-th anion (μmol L⁻¹)

Required criteria for R₁ :

The required ion balances of precipitation analyses are given in Table 3.3.

Table 3.3 Required criteria for R₁

(C+A) (μeq L ⁻¹)	R ₁ (%)
<50	± 30
50 – 100	± 15
>100	± 8

Conductivity agreement (R₂) :

Calculated as:

$$R_2 = (\Lambda_{\text{calc}} - \Lambda_{\text{meas}}) / (\Lambda_{\text{calc}} + \Lambda_{\text{meas}}) \times 100 (\%)$$

where Λ_{calc} : the calculated conductivity (mS m⁻¹)

Λ_{meas} : the measured conductivity (mS m⁻¹)

$$\Lambda_{\text{calc}} = \sum (C_i \Lambda_i^0) \times 10^{-4}$$

where C_i : the ionic concentration of i-th ion (μmol L⁻¹)

Λ_i^0 : the molar conductivity at infinite dilution and 25°C (Scm² mol⁻¹)

$$\Lambda_{\text{calc}} = \{349.7 \times 10^{(6-\text{pH})} + 80.0 \times 2c(\text{SO}_4^{2-}) + 71.4c(\text{NO}_3^-) + 76.3c(\text{Cl}^-) + 73.5c(\text{NH}_4^+) + 50.1c(\text{Na}^+) + 73.5c(\text{K}^+) + 59.5 \times 2c(\text{Ca}^{2+}) + 53.0 \times 2c(\text{Mg}^{2+})\} / 10000$$

where $c()$: the ionic concentrations (μmol L⁻¹)

Required criteria for R₂:

The required conductivity comparison criteria are given in Table 3.4.

Table 3.4 Required criteria for R₂

Λ_{meas} (mS m ⁻¹)	R ₂ (%)
<0.5	± 20
0.5 – 3	± 13
>3	± 9

3.1.6 Terms and Abbreviations

Terms and abbreviations are given in Table 3.5.

Table 3.5 Terms and abbreviations

	Terms and abbreviations	Definition
For all data	Data in hatched cell (■)	Rejected monthly (annual) value by the criteria. [%PCL≤80% and/or %TP≤80%]
	[--]	Precipitation was 0 mm.
	[*]	The constituent was rejected or not measured although precipitation was not 0 mm. [%TP=0%]
	[**]	Precipitation was not measured. [%PCL=0%]
	[***]	No data or no measurement
	Black cell (■)	Monitoring was not carried out.
For precipitation amount weighted average concentrations	Max	Maximum monitoring data for a year.
	Min	Minimum monitoring data for a year.
For concentration of ions except H ⁺	[<0.2]	The values were lower than each DQO value about Detection limit ([<0.2]: Ca ²⁺ , [<0.3]: SO ₄ ²⁻ , Na ⁺ , K ⁺ and Mg ²⁺ , [<0.5]: NO ₃ ⁻ and Cl ⁻ , [<0.8]: NH ₄ ⁺). nss-SO ₄ ²⁻ and nss-Ca ²⁺ refer to Detection limit of SO ₄ ²⁻ and Ca ²⁺ respectively.
	[<0.3]	
	[<0.5]	
	[<0.8]	
For deposition	[0.00]	Deposition amount was zero. (Precipitation was 0 mm.)
	[<0.01]	Calculated deposition amount was lower than 0.01mmol m ⁻² .
For results of ion balance (R ₁) and conductivity agreement check (R ₂)	Sample (N)	Number of samples.
	R ₁ (N)	Number of samples measured and calculated ion balance (R ₁).
	R ₁ (AA)	Number of samples within allowable ranges for R ₁ .
	R ₂ (N)	Number of samples measured and calculated conductivity agreement (R ₂).
	R ₂ (AA)	Number of samples within allowable ranges for R ₂ .
	R ₁ &R ₂ (N)	Number of samples measured and calculated both R ₁ and R ₂ .
	R ₁ &R ₂ (AA)	Number of samples within allowable ranges of both R ₁ and R ₂ .

3.1.7 Monitoring Sites

Precipitation samples are collected on a daily basis at 24 out of 57 sites, while weekly and biweekly collection are performed at 22 and 11 sites, respectively, as presented in Table 3.6. The analytical methods used in the laboratories for measuring the precipitation samples are presented in Table 3.7.

Moreover, Table 3.7 shows also additional items which are analyzed in some sites. R_1 and R_2 were calculated for these sites including the additional items.

Table 3.6 Sampling frequencies for wet deposition monitoring in 2024

Country	Site	Classification	Sampling Interval	Starting Month	
Cambodia	Phnom Penh ^{*1}	Urban	Weekly	April 2004	
China	Chongqing	- Haifu	Urban	Daily	January 2008
		- Jinyunshan	Rural	Daily	April 1999
	Xi'an	- Shizhan	Urban	Daily	April 1999
		- Jiwozi	Remote	Daily	April 1999
	Xiamen	- Hongwen	Urban	Daily	April 1999
		- Xiaoping	Remote	Daily	April 1999
	Zhuhai	- Xiang Zhou	Urban	Daily	April 1999
		- Zhuxiandong	Urban	Daily	December 1999
	Wuzhishan	- Wuzhishan	Remote	Daily	January 2019
Lijiang	- Lijiang	Remote	Daily	January 2019	
Indonesia	Jakarta	Urban	Weekly	April 1998	
	Kototabang	Remote	Weekly	April 1998	
	Maros	Rural	Weekly	January 2008	
	Jembrana	Rural	Weekly	January 2019	
	Lombok	Rural	Weekly	January 2019	
Japan	Rishiri	Remote	Biweekly ^{*3}	April 1998	
	Ochiishi	Remote	Biweekly ^{*3}	January 2003	
	Sado-seki	Remote	Biweekly ^{*3}	April 1999	
	Happo	Remote	Biweekly ^{*3}	April 1998	
	Ijira	Rural	Biweekly ^{*3}	June 1999	
	Oki	Remote	Biweekly ^{*3}	April 1998	
	Yusuhara	Remote	Biweekly ^{*3}	December 1999	
	Hedo	Remote	Biweekly ^{*3}	December 1999	
	Ogasawara	Remote	Biweekly ^{*3}	May 1999	
	Tokyo	Urban	Biweekly ^{*3}	April 2007	
	Niigata-maki ^{*2}	Rural	Daily	January 2019	
	Tsushima	Remote	Biweekly ^{*3}	January 2019	
Lao PDR	Vientiane	Urban	Daily	October 2003	
Malaysia	Petaling Jaya	Urban	Weekly	April 1998	
	Tanah Rata	Rural	Weekly	January 1999	
	Danum Valley	Remote	Weekly	January 2005	
	Kuching	Urban	Weekly	January 2008	
	Gunung Brinchang ^{*1}	Remote	Weekly	September 2020	
Mongolia	Khan-Uul ^{*4}	Urban	Daily	June 2020	
	Terelj	Remote	Daily	September 1998	
Myanmar	Yangon	Urban	Weekly	January 2007	

Table 3.6 Sampling frequencies for wet deposition monitoring in 2024 (continued)

Country	Site	Classification	Sampling Interval	Starting Month
Philippines	Metro Manila - Manila Observatory	Urban	Weekly	April 1999
	Laguna - Los Baños	Rural	Weekly	April 1999
	Benguet - Mt. Sto. Tomas	Rural	Weekly	October 2006
Republic of Korea	Ganghwa	Rural	Daily	March 1999
	Jeju	Remote	Daily	April 1999
	Imsil	Rural	Daily	January 2001
Russia	Listvyanka	Rural	Daily	January 2000
	Irkutsk	Urban	Daily	January 2000
	Primorskaya	Rural	Daily	February 2002
Thailand	Bangkok	Urban	Daily	April 1999
	Samutprakarn	Urban	Daily	January 2004
	Pathumthani	Rural	Daily	March 1999
	Khanchanaburi ^{*1}	Remote	Daily	April 1999
Vietnam	Hanoi	Urban	Weekly	August 1999
	Hoa Binh	Rural	Weekly	August 1999
	Cuc Phuong	Remote	Weekly	January 2009
	Da Nang	Urban	Weekly	January 2009
	Can Tho	Rural	Weekly	January 2014
	Ho Chi Minh	Urban	Weekly	January 2014
	Yen Bai	Rural	Weekly	May 2015

*1 Wet deposition monitoring data of Phnom Penh, Gunung Brinchang and Khanchanaburi were not submitted.

*2 Niigata-maki has been abolished since April 2024 (see Cpt. 2).

*3 The sampling interval at 11 sites in Japan has been changed from daily/weekly to biweekly since April 2024.

*4 The wet sampler proved to have been transferred from Ulaanbaatar (MNA001) to Khan-Uul (MNA004) since June 2020 (see Cpt. 2).

Table 3.7 Analytical methods and additional items in 2024

Country	Site	Analytical methods			Additional items (Analytical methods)
		Anions	NH ₄ ⁺	Other Cations	
China	Chongqing	- Haifu	IC, TI	IC	HCO ₃ ⁻ (TI), F ⁻ (IC)
		- Jinyunshan	IC, TI	IC	HCO ₃ ⁻ (TI), F ⁻ (IC)
	Xi'an	- Shizhan	IC, TI	IC	HCO ₃ ⁻ (TI), F ⁻ (IC)
		- Jiwozi	IC, TI	IC	HCO ₃ ⁻ (TI), F ⁻ (IC)
	Xiamen	- Hongwen	IC	IC	F ⁻ (IC)
		- Xiaoping	IC	IC	F ⁻ (IC)
	Zhuhai	- Xiang Zhou	IC	IC	F ⁻ (IC)
		- Zhuxiandong	IC	IC	F ⁻ (IC)
	Wuzhishan	IC	IC	IC	F ⁻ (IC)
	Lijiang	IC	IC	IC	F ⁻ (IC)
Indonesia	Jakarta	IC	IC	IC	
	Kototabang	IC	IC	IC	
	Maros	IC	IC	IC	
	Jembrana	IC	IC	IC	
	Lombok	IC	IC	IC	

Table 3.7 Analytical methods and additional items in 2024 (continued)

Country	Site	Analytical methods			Additional items (Analytical methods)
		Anions	NH ₄ ⁺	Other Cations	
Japan	Rishiri	IC	IC	IC	
	Ochiishi	IC	IC	IC	
	Sado-seki	IC	IC	IC	F ⁻ , Br ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ (IC)
	Happo	IC	IC	IC	
	Ijira	IC	IC	IC	
	Oki	IC	IC	IC	
	Yusuhara	IC	IC	IC	F ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ (IC)
	Hedo	IC	IC	IC	
	Ogasawara	IC	IC	IC	NO ₂ ⁻ (IC)
	Tokyo	IC	IC	IC	NO ₂ ⁻ (IC)
	Niigata-maki	IC	IC	IC	
	Tsushima	IC	IC	IC	
Lao PDR	Vientiane	IC	IC	IC	F ⁻ , Br ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ (IC)
Malaysia	Petaling Jaya	IC	IC	IC	F ⁻ , HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Tanah Rata	IC	IC	IC	HCO ₃ ⁻ , F ⁻ , HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Danum Valley	IC	IC	IC	F ⁻ , HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Kuching	IC	IC	IC	HCO ₃ ⁻ , F ⁻ , HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
Mongolia	Khan-Uul	IC	IC	IC	
	Terelj	IC	IC	IC	
Myanmar	Yangon	IC	IC	IC	
Philippines	Metro Manila	IC, TI	IC	AAS, AES	HCO ₃ ⁻ (TI)
	- Manila Observatory				F ⁻ , Br ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ (IC)
	Laguna - Los Baños	IC, TI	IC	AAS, AES	HCO ₃ ⁻ (TI)
					F ⁻ , Br ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ (IC)
	Benguet - Mt. Sto. Tomas	IC, TI	IC	AAS, AES	HCO ₃ ⁻ (TI)
					F ⁻ , Br ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ (IC)
Republic of Korea	Ganghwa	IC	IC	IC	
	Jeju	IC	IC	IC	
	Imsil	IC	IC	IC	
Russia	Listvyanka	IC, SP, TI	SP	AAS	HCO ₃ ⁻ (TI), F ⁻ , Br ⁻ (IC), NO ₂ ⁻ (SP), PO ₄ ³⁻ (SP)
	Irkutsk	IC, SP, TI	SP	AAS	HCO ₃ ⁻ (TI), F ⁻ , Br ⁻ (IC), NO ₂ ⁻ (SP), PO ₄ ³⁻ (SP)
	Primorskaya	SP, TI	SP	AAS	
Thailand	Bangkok	IC	IC	IC	
	Samutprakarn	IC	IC	IC	
	Pathumthani	IC	IC	IC	NO ₂ ⁻ , PO ₄ ³⁻ , HCOO ⁻ , CH ₃ COO ⁻ (IC)

Table 3.7 Analytical methods and additional items in 2024 (continued)

Country	Site	Analytical methods			Additional items (Analytical methods)
		Anions	NH ₄ ⁺	Other Cations	
Vietnam	Hanoi	IC	IC	IC	F ⁻ (IC)
	Hoa Binh	IC	IC	IC	F ⁻ (IC)
	Cuc Phuong	IC, TI	IC	IC	HCO ₃ ⁻ (TI), F ⁻ (IC)
	Da Nang	IC, TI	IC	IC	HCO ₃ ⁻ (TI), F ⁻ (IC)
	Can Tho	SP, TI	SP	AES	F ⁻ (SP)
	Ho Chi Minh	SP, TI	SP	AES	F ⁻ (SP)

AAS: Atomic absorption spectrometry, AES: Atomic emission spectrometry,
IC: Ion chromatography, SP: Spectrophotometry, TI: Titration

3.2 Results of Monitoring

The monthly summaries of each monitoring site in 2024 are shown in Table 3.8 through Table 3.64. The annual summaries of wet deposition monitoring in 2024 are shown in Table 3.65 through Table 3.67. The summaries contain the precipitation amount weighted average, data completeness (%PCL, %TP) and the wet deposition amount.

Results of ion balance (R_1) and the conductivity agreement (R_2) of each monitoring site are shown in Table 3.68. The summaries of annual data from 2010 to 2024 are shown in Table 3.69 through Table 3.93. Figure 3.2 to Figure 3.58 are plots of R_1 and R_2 for each site. The following information is provided to describe the figures:

(1) Ion Balance (R_1)

- (C + A) is logarithmic scale
- Horizontal bar : The allowable range of R_1 in each concentration range

(2) Conductivity Agreement (R_2)

- (Λ_{meas}) is logarithmic scale
- Horizontal bar : The allowable range of R_2 in each conductivity range

Results of the additional items are shown in Table 3.94 through Table 3.101.

Note that the annual data before 2010 are disclosed in EANET homepage and the data in 2000 were obtained during the preparatory-phase activities of EANET.

EANET homepage URL <https://monitoring.eanet.asia/document/public/index>

In this report, numerical values are generally presented with three significant figures; however, it is recommended to refer to the original files when greater precision is required.

Table 3.8 Monthly results

Site: Phnom Penh

Country: Cambodia

Code: KHA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 3.5.

Table 3.9 Monthly results

Site: Haifu

Country: China

Code: CNA003

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	115	114	214	21.3	389	8.65	9.82	64.9	64.8	7.78	5.27	5.28	7.71	16.0
Feb	98.4	97.5	162	22.5	320	13.9	12.1	88.2	87.9	9.12	0.360	6.44	7.33	12.9
Mar	73.4	72.9	138	12.6	248	7.22	9.32	82.7	82.5	7.77	0.605	6.22	5.61	16.1
Apr	26.8	26.6	40.7	5.96	88.0	3.56	3.49	28.7	28.6	3.10	0.668	6.18	2.07	201
May	17.3	17.2	32.0	4.12	79.8	1.87	1.52	19.9	19.9	1.62	0.541	6.27	1.70	131
June	11.0	10.9	23.7	3.66	57.7	2.11	1.19	9.59	9.54	1.06	0.598	6.22	1.12	242
July	12.0	11.8	25.3	3.79	57.3	2.22	1.19	20.6	20.5	1.94	0.596	6.22	1.40	178
Aug	10.8	10.8	16.1	2.26	13.9	0.870	1.28	13.5	13.5	1.23	0.955	6.02	0.708	19.5
Sept	17.0	16.9	32.0	5.41	61.7	1.46	2.53	29.9	29.8	1.96	0.816	6.09	1.75	98.9
Oct	24.9	24.9	46.3	4.33	90.7	1.25	5.89	22.3	22.3	1.43	1.25	5.90	2.04	57.5
Nov	51.2	50.8	92.7	11.0	160	6.75	6.21	49.2	49.1	3.58	0.849	6.07	3.92	45.6
Dec	71.0	70.6	155	14.7	217	6.24	32.6	73.6	73.5	8.50	1.76	5.75	5.49	24.2
Annual	23.1	23.0	42.6	5.58	87.1	2.87	3.40	25.3	25.3	2.37	0.774	6.11	2.00	1043
Max.	285	285	592	83.8	1155	91.8	125	194	194	21.8	22.4	6.83	20.3	
Min.	4.37	4.24	10.0	1.69	13.9	0.870	0.767	4.24	4.19	0.823	0.148	4.65	0.661	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.84	1.83	3.43	0.341	6.22	0.138	0.157	1.04	1.04	0.125	0.0843
Feb	1.27	1.26	2.10	0.291	4.13	0.179	0.156	1.14	1.13	0.118	<0.01
Mar	1.18	1.17	2.22	0.203	3.99	0.116	0.150	1.33	1.33	0.125	<0.01
Apr	5.40	5.35	8.19	1.20	17.7	0.717	0.702	5.78	5.77	0.625	0.134
May	2.27	2.25	4.19	0.541	10.5	0.245	0.199	2.61	2.61	0.212	0.0709
June	2.67	2.64	5.73	0.885	14.0	0.510	0.287	2.32	2.31	0.257	0.145
July	2.12	2.10	4.49	0.674	10.2	0.393	0.211	3.65	3.64	0.345	0.106
Aug	0.211	0.210	0.314	0.0440	0.270	0.0170	0.0249	0.263	0.262	0.0241	0.0186
Sept	1.68	1.68	3.17	0.535	6.10	0.144	0.250	2.95	2.95	0.194	0.0807
Oct	1.43	1.43	2.66	0.249	5.21	0.0719	0.339	1.28	1.28	0.0824	0.0716
Nov	2.34	2.32	4.23	0.500	7.30	0.308	0.283	2.24	2.24	0.163	0.0387
Dec	1.72	1.71	3.75	0.355	5.25	0.151	0.790	1.78	1.78	0.206	0.0426
Annual	24.1	24.0	44.5	5.82	90.8	2.99	3.55	26.4	26.3	2.48	0.807

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.10 Monthly results

Site: Jinyunshan

Country: China

Code: CNA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	88.4	88.1	145	10.8	195	5.34	8.02	84.1	83.9	7.75	26.0	4.58	6.27	30.5
Feb	71.6	71.2	115	15.8	184	7.19	8.62	53.1	52.9	8.37	2.52	5.60	4.58	16.8
Mar	85.2	84.8	129	13.9	192	8.17	22.1	94.7	94.6	11.3	0.801	6.10	5.38	20.7
Apr	19.8	19.7	29.2	3.69	49.8	1.90	2.78	17.3	17.2	2.24	4.78	5.32	1.45	179
May	18.8	18.7	35.6	4.66	79.1	1.53	2.23	13.3	13.3	1.39	0.835	6.08	1.60	86.5
June	14.4	14.3	28.4	3.66	54.3	1.39	1.39	7.89	7.86	1.39	4.46	5.35	1.22	144
July	11.4	11.3	21.7	2.97	43.8	1.30	0.892	10.5	10.5	1.56	2.15	5.67	0.964	101
Aug	24.3	24.2	45.8	6.87	115	0.989	2.91	35.5	35.4	2.02	0.937	6.03	2.49	17.9
Sept	7.05	6.97	13.2	2.77	18.5	1.45	1.20	12.8	12.8	2.28	0.777	6.11	0.651	49.0
Oct	36.2	36.1	58.0	5.10	94.0	1.75	3.28	11.1	11.0	2.21	21.8	4.66	2.70	48.6
Nov	31.7	31.6	59.8	4.98	85.8	2.08	2.71	16.0	15.9	2.51	14.9	4.83	2.53	48.2
Dec	61.3	61.1	133	10.4	174	3.56	6.04	31.6	31.6	4.23	41.0	4.39	5.06	29.9
Annual	25.9	25.7	45.1	4.97	75.0	2.12	3.12	19.9	19.9	2.58	7.39	5.13	1.98	772
Max.	431	429	857	56.7	1164	49.2	103	1268	1267	41.1	110	7.46	30.4	
Min.	4.06	3.93	9.19	1.13	1.10	0.870	0.767	3.49	3.47	0.823	0.0347	3.96	0.388	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	2.70	2.69	4.43	0.331	5.95	0.163	0.245	2.56	2.56	0.236	0.794
Feb	1.20	1.20	1.94	0.266	3.09	0.121	0.145	0.892	0.889	0.141	0.0423
Mar	1.76	1.75	2.67	0.288	3.98	0.169	0.457	1.96	1.96	0.235	0.0166
Apr	3.54	3.52	5.21	0.659	8.90	0.340	0.497	3.09	3.08	0.400	0.853
May	1.63	1.62	3.08	0.403	6.85	0.133	0.193	1.15	1.15	0.120	0.0722
June	2.07	2.06	4.10	0.527	7.83	0.200	0.200	1.14	1.13	0.201	0.643
July	1.14	1.14	2.18	0.299	4.41	0.130	0.0898	1.06	1.06	0.157	0.217
Aug	0.435	0.434	0.819	0.123	2.05	0.0177	0.0521	0.635	0.635	0.0362	0.0168
Sept	0.346	0.341	0.647	0.136	0.908	0.0712	0.0588	0.626	0.625	0.112	0.0381
Oct	1.76	1.75	2.82	0.248	4.57	0.0850	0.159	0.538	0.537	0.107	1.06
Nov	1.53	1.52	2.88	0.240	4.13	0.100	0.131	0.770	0.768	0.121	0.718
Dec	1.83	1.83	3.99	0.310	5.20	0.106	0.180	0.946	0.944	0.127	1.23
Annual	19.9	19.9	34.8	3.83	57.9	1.64	2.41	15.4	15.3	1.99	5.70

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.11 Monthly results

Site: Shizhan

Country: China

Code: CNA005

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	24.0	23.2	59.2	9.85	152	13.2	6.26	73.7	73.5	3.58	0.0305	7.52	3.56	11.0
Feb	106	100	97.9	59.4	97.7	102	11.3	152	150	19.3	0.0458	7.34	6.48	6.5
Mar	63.2	59.7	94.9	23.5	225	58.8	7.21	149	148	12.9	0.0282	7.55	6.38	10.0
Apr	17.2	14.6	28.2	28.3	1.53	42.6	7.28	69.9	68.9	5.19	0.0565	7.25	2.25	64.5
May	31.8	30.2	33.4	28.7	10.1	26.3	7.25	78.0	77.5	7.65	0.0989	7.00	2.51	65.8
June	29.0	27.9	50.6	42.5	46.5	17.9	7.56	75.3	74.9	5.08	0.111	6.96	2.94	33.7
July	10.7	10.4	15.5	4.76	67.0	4.94	6.51	24.1	24.0	0.532	0.0856	7.07	1.52	216
Aug	20.5	20.1	38.1	11.8	45.8	7.10	7.57	32.6	32.5	1.77	0.128	6.89	1.94	109
Sept	4.97	4.87	7.08	9.05	12.3	1.61	4.09	16.2	16.2	0.494	0.288	6.54	0.493	79.8
Oct	25.4	25.2	46.1	10.5	57.5	4.08	4.54	30.3	30.2	<0.3	0.931	6.03	1.64	32.1
Nov	41.2	40.2	68.7	21.5	168	17.5	15.5	56.2	55.8	15.1	0.116	6.94	4.26	57.2
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	20.2	19.4	31.3	15.3	56.5	14.0	7.31	43.3	43.0	3.67	0.156	6.81	2.08	686
Max.	114	108	124	219	225	307	23.0	201	199	57.9	1.23	7.60	8.04	
Min.	3.44	3.40	3.81	1.18	<0.8	<0.3	2.99	11.2	11.2	<0.3	0.0251	5.91	0.493	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.264	0.255	0.651	0.108	1.67	0.145	0.0689	0.811	0.808	0.0394	<0.01
Feb	0.690	0.650	0.636	0.386	0.635	0.660	0.0732	0.988	0.974	0.126	<0.01
Mar	0.632	0.597	0.949	0.235	2.25	0.588	0.0721	1.49	1.48	0.129	<0.01
Apr	1.11	0.941	1.82	1.83	0.0985	2.74	0.470	4.51	4.45	0.335	<0.01
May	2.09	1.99	2.20	1.89	0.666	1.73	0.477	5.13	5.10	0.503	<0.01
June	0.978	0.941	1.70	1.43	1.57	0.604	0.255	2.54	2.52	0.171	<0.01
July	2.31	2.25	3.34	1.03	14.5	1.07	1.41	5.21	5.19	0.115	0.0185
Aug	2.24	2.19	4.17	1.29	5.01	0.776	0.828	3.57	3.55	0.193	0.0140
Sept	0.396	0.389	0.565	0.723	0.982	0.128	0.327	1.29	1.29	0.0394	0.0230
Oct	0.816	0.808	1.48	0.337	1.84	0.131	0.146	0.971	0.968	<0.01	0.0299
Nov	2.36	2.30	3.93	1.23	9.58	1.00	0.888	3.22	3.19	0.863	<0.01
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	13.9	13.3	21.4	10.5	38.8	9.58	5.01	29.7	29.5	2.52	0.107

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.12 Monthly results

Site: Jiwozi

Country: China

Code: CNA007

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	12.8	9.57	5.51	41.4	26.7	53.4	6.42	96.3	95.1	6.29	0.0472	7.33	2.86	25.0
Feb	28.5	24.8	39.4	74.4	28.5	61.0	22.1	48.0	46.7	9.16	0.151	6.82	2.78	18.9
Mar	37.5	32.3	53.1	31.0	38.5	85.9	15.2	87.4	85.5	17.0	0.0909	7.04	4.09	16.0
Apr	34.6	32.8	54.0	12.3	24.8	29.9	10.0	101	101	8.37	0.0684	7.17	3.15	55.0
May	34.1	33.3	59.9	10.3	6.78	13.2	13.3	80.0	79.7	5.36	0.139	6.86	2.56	85.0
June	63.5	63.0	25.2	7.36	4.43	8.56	10.7	78.4	78.2	4.08	0.747	6.13	2.44	94.5
July	25.6	24.9	24.6	10.6	1.74	11.0	13.1	69.1	68.9	3.51	0.0943	7.03	1.89	149
Aug	22.8	20.8	12.8	13.1	9.99	32.9	13.7	38.1	37.4	3.70	0.0868	7.06	1.63	27.6
Sept	8.54	8.16	7.02	13.3	3.60	6.26	7.30	38.5	38.4	1.78	0.112	6.95	1.04	48.4
Oct	46.0	45.8	46.9	9.94	11.6	3.41	19.7	82.7	82.6	12.6	0.265	6.58	2.85	32.8
Nov	50.6	49.7	33.4	11.7	16.9	16.3	14.0	63.7	63.4	17.0	0.146	6.84	2.94	29.8
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	34.6	33.5	32.8	14.5	9.93	18.7	12.5	72.7	72.3	6.07	0.218	6.66	2.35	582
Max.	83.2	82.5	83.8	109	78.8	111	37.7	122	122	25.6	1.66	7.50	4.40	
Min.	2.47	2.02	2.94	2.71	<0.8	<0.3	2.10	25.0	24.8	<0.3	0.0316	5.78	0.805	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.320	0.239	0.138	1.04	0.667	1.34	0.160	2.41	2.38	0.157	<0.01
Feb	0.538	0.469	0.745	1.41	0.538	1.15	0.418	0.908	0.883	0.173	<0.01
Mar	0.600	0.517	0.849	0.496	0.616	1.38	0.243	1.40	1.37	0.272	<0.01
Apr	1.90	1.80	2.97	0.675	1.37	1.65	0.552	5.58	5.55	0.460	<0.01
May	2.90	2.83	5.09	0.873	0.576	1.12	1.13	6.80	6.78	0.455	0.0118
June	6.00	5.95	2.38	0.695	0.419	0.809	1.01	7.41	7.39	0.385	0.0706
July	3.81	3.71	3.66	1.58	0.259	1.64	1.96	10.3	10.3	0.522	0.0140
Aug	0.630	0.575	0.352	0.360	0.276	0.909	0.379	1.05	1.03	0.102	<0.01
Sept	0.413	0.395	0.340	0.641	0.174	0.303	0.354	1.87	1.86	0.0861	<0.01
Oct	1.51	1.50	1.54	0.326	0.381	0.112	0.647	2.71	2.71	0.414	<0.01
Nov	1.51	1.48	0.995	0.349	0.504	0.485	0.417	1.90	1.89	0.505	<0.01
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	20.1	19.5	19.1	8.44	5.78	10.9	7.26	42.3	42.1	3.53	0.127

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.13 Monthly results

Site: Hongwen

Country: China

Code: CNA008

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	23.4	21.4	81.0	43.0	59.7	33.6	3.75	52.7	51.9	7.87	2.45	5.61	2.76	12.9
Feb	14.0	12.9	38.6	20.6	47.1	17.9	3.68	12.1	11.7	4.52	1.17	5.93	1.37	36.2
Mar	15.9	15.3	38.9	17.3	53.2	11.0	3.14	20.6	20.4	3.81	0.622	6.21	1.68	33.1
Apr	15.9	15.3	6.84	16.7	44.9	8.89	1.88	6.11	5.92	2.01	7.72	5.11	1.24	264
May	10.8	10.4	22.8	12.2	33.8	6.35	1.48	7.18	7.05	2.75	4.21	5.38	0.931	160
June	7.93	7.30	17.8	15.7	21.2	10.4	1.03	5.80	5.57	2.66	1.51	5.82	0.749	160
July	7.95	5.97	9.35	41.3	6.10	32.9	1.35	5.48	4.77	3.83	1.95	5.71	0.879	121
Aug	9.38	8.50	26.4	14.2	13.4	14.6	0.901	6.51	6.19	2.49	13.5	4.87	1.11	59.0
Sept	10.3	9.49	19.5	20.6	23.8	13.2	1.20	5.08	4.79	2.61	7.40	5.13	0.902	190
Oct	13.5	12.4	18.4	27.6	45.0	19.6	1.13	8.75	8.33	2.88	0.513	6.29	0.990	7.8
Nov	6.85	6.47	15.8	13.1	24.2	6.31	0.769	15.8	15.6	1.89	0.376	6.42	0.876	14.8
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	11.5	10.7	17.8	19.8	29.9	13.3	1.56	7.37	7.08	2.78	5.19	5.28	1.04	1059
Max.	85.0	81.9	250	122	309	107	16.2	84.5	83.1	15.8	44.7	6.72	7.42	
Min.	5.10	4.55	3.39	3.10	1.11	1.87	0.769	2.38	2.32	0.833	0.191	4.35	0.320	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.302	0.276	1.05	0.555	0.770	0.433	0.0484	0.679	0.670	0.102	0.0316
Feb	0.506	0.466	1.40	0.747	1.71	0.648	0.133	0.438	0.424	0.164	0.0424
Mar	0.527	0.505	1.29	0.574	1.76	0.364	0.104	0.682	0.674	0.126	0.0206
Apr	4.20	4.05	1.81	4.42	11.9	2.35	0.497	1.62	1.56	0.530	2.04
May	1.73	1.67	3.64	1.95	5.42	1.02	0.237	1.15	1.13	0.440	0.673
June	1.27	1.17	2.86	2.52	3.40	1.67	0.166	0.929	0.893	0.426	0.243
July	0.960	0.720	1.13	4.99	0.737	3.97	0.163	0.661	0.575	0.463	0.235
Aug	0.553	0.502	1.56	0.841	0.790	0.862	0.0532	0.384	0.365	0.147	0.797
Sept	1.96	1.81	3.72	3.93	4.53	2.52	0.229	0.967	0.913	0.496	1.41
Oct	0.106	0.0964	0.143	0.215	0.351	0.153	<0.01	0.0683	0.0650	0.0224	<0.01
Nov	0.101	0.0957	0.234	0.194	0.358	0.0934	0.0114	0.234	0.232	0.0279	<0.01
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	12.2	11.4	18.8	20.9	31.7	14.1	1.65	7.81	7.50	2.94	5.50

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.14 Monthly results

Site: Xiaoping

Country: China

Code: CNA009

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	9.75	8.95	27.5	22.7	28.9	13.3	9.35	9.56	9.28	3.67	1.01	6.00	1.07	43.1
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	12.2	11.7	26.7	13.1	46.2	8.04	2.50	7.32	7.15	2.54	1.45	5.84	1.12	54.8
Apr	13.0	12.8	8.25	12.1	43.3	3.52	1.87	7.59	7.51	1.89	6.10	5.21	1.17	126
May	10.0	9.80	18.1	9.51	18.5	3.86	1.57	9.10	9.02	2.50	2.72	5.57	0.799	172
June	10.0	9.48	19.8	13.6	23.4	8.65	1.29	7.94	7.75	2.38	0.890	6.05	0.845	223
July	10.7	9.50	18.6	27.2	23.4	20.5	1.62	6.85	6.41	2.55	3.76	5.42	1.05	133
Aug	12.6	12.2	34.3	4.56	38.2	6.45	1.28	7.58	7.44	1.87	2.21	5.66	1.14	154
Sept	9.14	8.88	19.8	12.5	23.1	4.39	1.24	6.67	6.58	1.75	1.80	5.75	0.787	97.5
Oct	11.2	10.9	19.0	12.2	24.7	4.58	1.06	6.53	6.44	1.71	5.86	5.23	0.928	26.7
Nov	7.48	7.31	14.4	10.3	11.6	2.85	1.55	6.95	6.88	1.07	1.99	5.70	0.681	49.2
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	10.8	10.3	20.5	13.2	27.9	7.84	1.83	7.74	7.57	2.22	2.62	5.58	0.956	1079
Max.	46.8	46.0	68.7	77.7	218	69.1	16.2	17.5	17.2	5.42	19.5	6.58	3.37	
Min.	5.42	5.31	2.74	1.27	1.11	0.870	0.769	3.50	3.47	0.833	0.263	4.71	0.320	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.421	0.386	1.19	0.979	1.25	0.572	0.403	0.413	0.400	0.158	0.0435
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.666	0.639	1.46	0.718	2.53	0.441	0.137	0.401	0.392	0.139	0.0795
Apr	1.63	1.61	1.04	1.52	5.44	0.442	0.235	0.953	0.944	0.237	0.766
May	1.73	1.69	3.11	1.64	3.18	0.665	0.270	1.57	1.55	0.429	0.468
June	2.23	2.12	4.41	3.03	5.22	1.93	0.288	1.77	1.73	0.532	0.199
July	1.43	1.26	2.47	3.62	3.10	2.72	0.215	0.909	0.851	0.338	0.499
Aug	1.94	1.88	5.27	0.700	5.87	0.990	0.197	1.16	1.14	0.288	0.339
Sept	0.892	0.866	1.93	1.22	2.25	0.428	0.121	0.651	0.642	0.171	0.175
Oct	0.298	0.291	0.507	0.327	0.660	0.122	0.0284	0.175	0.172	0.0458	0.157
Nov	0.368	0.359	0.708	0.507	0.568	0.140	0.0761	0.341	0.338	0.0524	0.0977
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	11.6	11.1	22.1	14.2	30.1	8.45	1.97	8.34	8.16	2.39	2.82

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.15 Monthly results

Site: Xiang Zhou

Country: China

Code: CNA010

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	16.1	15.6	45.3	20.6	69.1	8.36	3.34	21.9	21.8	1.84	1.96	5.71	1.80	4.8
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	27.9	23.1	73.7	88.1	80.7	79.2	4.36	15.0	13.3	9.69	11.2	4.95	3.23	28.5
Apr	24.8	22.7	39.6	38.4	57.8	35.3	4.10	19.3	18.6	4.99	9.23	5.03	2.34	189
May	7.91	6.56	19.7	23.9	16.9	22.4	1.12	3.86	3.37	2.94	9.20	5.04	1.21	608
June	5.68	4.71	16.2	17.8	16.4	16.2	0.766	4.39	4.04	1.75	3.27	5.49	0.800	382
July	4.72	3.33	8.56	24.6	8.23	22.9	0.819	2.78	2.28	2.37	3.25	5.49	0.700	233
Aug	8.65	8.38	28.3	8.06	54.1	4.40	0.433	7.12	7.02	1.88	1.57	5.80	1.05	351
Sept	5.33	4.47	15.5	19.3	15.8	14.2	0.490	4.10	3.79	2.09	1.38	5.86	0.787	339
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	5.01	4.76	16.4	4.29	11.5	4.03	0.731	2.24	2.15	1.01	3.97	5.40	0.695	176
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	8.38	7.31	20.8	20.4	25.3	17.8	1.09	5.69	5.30	2.50	4.93	5.31	1.08	2311
Max.	91.0	81.3	185	296	214	283	10.7	39.4	38.9	33.3	85.1	6.56	8.55	
Min.	2.29	1.91	3.23	1.13	<0.8	1.30	<0.3	0.250	<0.2	<0.3	0.275	4.07	0.245	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.0772	0.0748	0.217	0.0989	0.332	0.0401	0.0160	0.105	0.104	<0.01	<0.01
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.794	0.658	2.10	2.51	2.30	2.26	0.124	0.427	0.378	0.276	0.319
Apr	4.70	4.30	7.50	7.27	10.9	6.68	0.775	3.66	3.52	0.945	1.75
May	4.81	3.99	12.0	14.6	10.3	13.7	0.684	2.35	2.05	1.79	5.60
June	2.17	1.80	6.19	6.80	6.25	6.17	0.292	1.67	1.54	0.670	1.25
July	1.10	0.778	2.00	5.74	1.92	5.35	0.191	0.648	0.532	0.553	0.757
Aug	3.04	2.94	9.94	2.83	19.0	1.55	0.152	2.50	2.47	0.662	0.550
Sept	1.80	1.51	5.27	6.53	5.35	4.80	0.166	1.39	1.28	0.709	0.466
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.880	0.837	2.89	0.753	2.02	0.708	0.128	0.394	0.378	0.177	0.697
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	19.4	16.9	48.1	47.1	58.4	41.2	2.53	13.1	12.3	5.79	11.4

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.16 Monthly results

Site: Zhuxiandong

Country: China

Code: CNA011

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	34.1	28.2	125	119	23.3	98.7	4.09	103	101	16.0	0.302	6.52	4.58	2.9
Feb	39.4	36.0	121	65.4	126	54.8	4.60	38.9	37.7	10.3	2.34	5.63	3.72	1.6
Mar	40.3	33.3	98.0	125	97.0	117	6.21	22.9	20.4	14.3	20.5	4.69	4.68	26.1
Apr	15.3	13.7	28.4	27.9	33.9	26.6	3.22	15.3	14.7	4.07	4.69	5.33	1.57	165
May	9.47	7.62	26.7	32.6	17.7	30.8	1.37	5.85	5.18	3.72	13.3	4.88	1.49	386
June	5.32	4.32	13.4	18.0	10.6	16.6	0.883	3.24	2.88	1.82	5.26	5.28	0.784	414
July	6.34	4.55	10.2	30.4	7.82	29.7	1.45	8.47	7.83	3.24	1.42	5.85	0.945	166
Aug	6.37	6.00	16.4	10.1	23.4	6.19	<0.3	6.78	6.65	1.19	1.37	5.86	0.732	154
Sept	6.93	5.14	19.6	30.7	20.8	29.7	2.66	7.50	6.86	3.56	1.56	5.81	1.10	344
Oct	35.5	33.7	143	31.9	116	30.4	5.63	64.6	64.0	8.23	0.295	6.53	3.25	9.4
Nov	11.1	9.92	38.2	16.1	22.6	20.3	3.46	23.3	22.9	2.98	2.06	5.69	1.56	128
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	8.78	7.25	22.7	26.6	19.8	25.3	1.83	8.73	8.19	3.17	5.50	5.26	1.21	1797
Max.	94.5	79.8	339	247	126	284	30.7	299	294	42.0	107	6.56	13.3	
Min.	2.50	2.11	4.68	3.10	1.66	0.435	<0.3	<0.2	<0.2	<0.3	0.275	3.97	0.336	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.0990	0.0818	0.362	0.346	0.0675	0.286	0.0119	0.300	0.293	0.0465	<0.01
Feb	0.0630	0.0577	0.193	0.105	0.202	0.0877	<0.01	0.0623	0.0604	0.0165	<0.01
Mar	1.05	0.869	2.56	3.27	2.53	3.04	0.162	0.598	0.532	0.373	0.536
Apr	2.52	2.26	4.69	4.60	5.60	4.40	0.532	2.52	2.43	0.671	0.775
May	3.66	2.94	10.3	12.6	6.83	11.9	0.530	2.26	2.00	1.44	5.14
June	2.20	1.79	5.56	7.45	4.37	6.88	0.365	1.34	1.19	0.752	2.18
July	1.05	0.756	1.69	5.04	1.30	4.92	0.241	1.41	1.30	0.537	0.236
Aug	0.978	0.921	2.52	1.55	3.59	0.951	0.0316	1.04	1.02	0.183	0.210
Sept	2.38	1.77	6.75	10.6	7.16	10.2	0.915	2.58	2.36	1.22	0.537
Oct	0.334	0.316	1.35	0.300	1.09	0.286	0.0529	0.607	0.601	0.0773	<0.01
Nov	1.42	1.27	4.88	2.06	2.88	2.59	0.442	2.98	2.92	0.381	0.263
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	15.8	13.0	40.8	47.9	35.6	45.5	3.29	15.7	14.7	5.70	9.88

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.17 Monthly results

Site: Wuzhishan

Country: China

Code: CNA013

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	12.4	11.7	20.0	12.1	35.0	10.9	3.80	10.2	9.96	1.20	0.759	6.12	1.20	18.3
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	4.17	3.89	6.06	5.98	11.5	4.62	2.04	3.10	3.00	<0.3	1.05	5.98	0.642	102
June	*	*	*	*	*	*	*	*	*	*	0.910	6.04	0.831	26.6
July	2.01	1.43	4.21	9.43	6.94	9.61	3.16	5.15	4.94	<0.3	0.581	6.24	0.441	169
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	2.28	2.01	4.30	8.35	11.1	4.43	7.60	4.85	4.75	1.46	0.533	6.27	0.590	432
Oct	2.68	2.23	3.65	8.77	3.12	7.40	1.76	3.65	3.51	1.08	0.596	6.22	0.400	125
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	2.73	2.36	4.74	8.42	9.68	6.07	5.09	4.63	4.51	0.969	0.629	6.20	0.560	873
Max.	12.4	11.7	20.0	45.7	51.1	25.7	56.4	10.2	10.1	3.30	1.62	7.68	1.30	
Min.	1.00	0.812	1.50	1.30	<0.8	1.70	<0.3	<0.2	<0.2	<0.3	0.0209	5.79	0.200	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.227	0.215	0.366	0.221	0.641	0.199	0.0695	0.187	0.182	0.0220	0.0139
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.426	0.398	0.619	0.610	1.18	0.472	0.208	0.317	0.306	<0.01	0.107
June	*	*	*	*	*	*	*	*	*	*	0.0242
July	0.340	0.242	0.712	1.60	1.18	1.63	0.536	0.871	0.836	0.0333	0.0984
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sept	0.982	0.867	1.86	3.60	4.81	1.91	3.28	2.09	2.05	0.630	0.230
Oct	0.335	0.279	0.457	1.10	0.391	0.927	0.220	0.457	0.440	0.135	0.0747
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	2.38	2.06	4.14	7.35	8.45	5.30	4.45	4.05	3.93	0.846	0.549

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	0	0	0	0	0	0	0	0	0	0	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.18 Monthly results

Site: Lijiang

Country: China

Code: CNA014

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	43.9	43.5	13.9	9.11	159	6.33	81.8	91.6	91.5	22.3	0.0697	7.16	1.05	12.4
Mar	57.0	56.3	51.5	36.5	348	11.3	73.4	105	105	34.9	0.164	6.78	4.19	3.6
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	5.05	4.95	7.70	5.96	48.4	1.64	24.9	16.5	16.5	7.86	0.121	6.92	0.799	74.4
June	5.16	5.09	7.03	49.1	17.4	1.11	42.1	14.9	14.8	4.06	0.378	6.42	1.35	53.9
July	2.98	2.84	6.12	1.72	40.8	2.33	2.09	19.0	19.0	1.58	0.659	6.18	0.503	63.9
Aug	4.61	4.59	8.89	7.45	21.3	0.400	5.80	9.26	9.25	3.37	0.864	6.06	0.531	66.0
Sept	13.8	13.8	15.5	6.48	41.0	0.400	0.562	3.50	3.49	0.625	0.932	6.03	0.818	21.7
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	7.02	6.98	11.8	9.92	5.29	0.585	0.400	6.24	6.23	0.548	0.434	6.36	0.681	4.6
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	7.42	7.32	8.91	13.7	42.2	1.62	19.7	18.2	18.2	5.14	0.506	6.30	0.827	301
Max.	64.3	63.1	78.4	378	389	46.5	348	158	158	68.7	2.40	7.47	6.64	
Min.	<0.3	<0.3	<0.5	<0.5	<0.8	0.400	0.400	0.400	0.391	0.400	0.0339	5.62	0.230	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.544	0.539	0.172	0.113	1.97	0.0785	1.01	1.14	1.13	0.277	<0.01
Mar	0.205	0.203	0.185	0.131	1.25	0.0406	0.264	0.380	0.379	0.126	<0.01
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.376	0.368	0.573	0.443	3.60	0.122	1.85	1.23	1.23	0.585	<0.01
June	0.278	0.274	0.379	2.65	0.937	0.0600	2.27	0.801	0.800	0.219	0.0204
July	0.190	0.181	0.391	0.110	2.60	0.149	0.134	1.22	1.21	0.101	0.0421
Aug	0.305	0.303	0.587	0.492	1.40	0.0264	0.383	0.611	0.610	0.222	0.0570
Sept	0.300	0.300	0.336	0.141	0.890	<0.01	0.0122	0.0760	0.0758	0.0136	0.0202
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.0323	0.0321	0.0541	0.0456	0.0244	<0.01	<0.01	0.0287	0.0286	<0.01	<0.01
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	2.23	2.20	2.68	4.12	12.7	0.488	5.93	5.48	5.47	1.55	0.152

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.19 Monthly results

Site: Jakarta

Country: Indonesia

Code: IDA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	13.1	12.8	12.2	15.8	21.6	4.85	6.98	11.3	11.2	1.57	8.57	5.07	1.16	225
Feb	29.1	26.5	24.7	99.8	28.9	42.3	11.5	70.8	69.9	10.9	7.32	5.14	3.12	340
Mar	18.7	17.6	16.7	21.2	16.1	17.4	20.2	18.4	18.0	1.87	16.4	4.79	1.44	198
Apr	23.2	22.5	25.5	32.9	31.5	11.7	23.0	17.5	17.2	2.26	18.9	4.72	1.69	121
May	65.8	58.5	70.6	65.6	154	205	35.3	96.4	91.9	21.7	1.36	5.87	7.12	7.1
June	22.9	22.2	26.1	13.5	23.4	12.3	7.17	17.3	17.0	5.39	4.16	5.38	1.48	109
July	13.8	12.9	17.0	15.9	30.6	13.7	2.96	11.2	10.9	2.68	2.72	5.57	1.15	83.2
Aug	108	101	179	107	81.3	104	37.3	253	251	26.6	0.339	6.47	8.92	2.2
Sept	36.4	34.8	27.9	29.5	54.6	27.2	13.8	39.3	38.7	9.78	15.6	4.81	2.99	202
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	49.6	46.7	43.6	22.6	9.46	46.8	12.2	51.8	50.8	7.14	25.1	4.60	3.29	72.0
Dec	20.0	19.2	18.1	24.9	13.2	14.0	3.04	9.24	8.94	3.93	5.81	5.24	1.28	332
Annual	24.4	23.1	22.2	38.5	26.1	22.5	10.8	30.3	29.8	5.63	10.4	4.98	2.01	1690
Max.	108	101	179	190	182	694	68.9	253	251	53.7	60.3	6.47	15.9	
Min.	6.28	<0.3	7.87	5.58	<0.8	1.75	0.696	3.39	3.35	0.917	0.339	4.22	0.910	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	2.95	2.88	2.75	3.55	4.87	1.09	1.57	2.54	2.52	0.354	1.93
Feb	9.89	9.02	8.40	33.9	9.82	14.4	3.91	24.1	23.8	3.72	2.49
Mar	3.69	3.48	3.29	4.19	3.19	3.45	3.99	3.64	3.57	0.369	3.23
Apr	2.80	2.71	3.09	3.97	3.81	1.41	2.78	2.11	2.08	0.273	2.28
May	0.467	0.415	0.502	0.466	1.09	1.46	0.250	0.684	0.653	0.154	<0.01
June	2.49	2.41	2.83	1.46	2.54	1.33	0.778	1.87	1.84	0.584	0.452
July	1.15	1.08	1.41	1.32	2.55	1.14	0.247	0.935	0.911	0.223	0.226
Aug	0.237	0.223	0.393	0.235	0.179	0.229	0.0820	0.556	0.551	0.0586	<0.01
Sept	7.34	7.01	5.63	5.95	11.0	5.49	2.78	7.93	7.81	1.97	3.15
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	3.57	3.36	3.14	1.63	0.681	3.37	0.875	3.73	3.66	0.514	1.81
Dec	6.64	6.36	6.02	8.25	4.39	4.64	1.01	3.06	2.96	1.30	1.92
Annual	41.2	39.0	37.5	65.0	44.1	38.0	18.3	51.1	50.3	9.52	17.5

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.20 Monthly results

Site: Kototabang

Country: Indonesia

Code: IDA003

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	6.05	5.80	6.46	11.6	12.1	4.15	30.1	9.82	9.73	0.776	5.85	5.23	0.581	245
Feb	17.7	17.6	4.93	6.34	5.77	2.00	21.1	6.85	6.81	0.959	32.8	4.48	1.48	126
Mar	19.8	19.5	10.4	11.6	19.9	5.93	8.26	11.4	11.3	1.59	21.8	4.66	1.52	312
Apr	6.97	6.84	3.97	2.25	17.1	2.11	2.53	3.02	2.97	1.18	8.63	5.06	0.617	399
May	13.6	13.5	4.91	7.22	10.1	1.43	1.88	2.44	2.41	0.895	25.4	4.59	1.27	505
June	6.52	6.40	5.64	16.6	6.79	1.95	1.76	3.16	3.12	0.875	22.4	4.65	1.31	125
July	4.98	4.62	4.82	5.23	9.39	5.89	2.57	2.99	2.86	1.73	5.53	5.26	0.515	121
Aug	10.8	10.4	9.09	6.47	44.9	6.35	3.26	5.80	5.66	2.00	1.64	5.78	0.955	103
Sept	5.81	5.54	4.83	5.21	7.37	4.36	2.88	6.68	6.59	1.47	3.99	5.40	0.563	225
Oct	11.9	11.8	4.04	5.12	4.29	1.29	1.42	2.28	2.26	1.29	22.8	4.64	1.02	256
Nov	8.65	8.16	4.57	6.38	12.3	8.15	3.16	7.13	6.95	3.33	20.7	4.68	0.934	295
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	10.7	10.5	5.60	7.20	12.8	3.69	6.41	5.46	5.38	1.44	16.6	4.78	0.987	2710
Max.	28.2	27.9	25.8	28.7	104	19.4	47.0	22.2	22.1	4.67	38.9	5.98	2.58	
Min.	2.60	2.05	2.52	1.10	<0.8	0.651	1.27	1.78	1.73	<0.3	1.05	4.41	0.290	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.48	1.42	1.58	2.83	2.97	1.02	7.38	2.40	2.38	0.190	1.43
Feb	2.22	2.21	0.620	0.797	0.725	0.251	2.65	0.861	0.856	0.120	4.12
Mar	6.18	6.07	3.23	3.62	6.21	1.85	2.57	3.56	3.52	0.495	6.81
Apr	2.78	2.73	1.59	0.900	6.82	0.844	1.01	1.21	1.19	0.471	3.45
May	6.87	6.83	2.48	3.64	5.12	0.720	0.948	1.23	1.22	0.452	12.8
June	0.812	0.797	0.702	2.06	0.845	0.243	0.219	0.394	0.388	0.109	2.79
July	0.601	0.558	0.582	0.632	1.13	0.712	0.310	0.361	0.346	0.208	0.668
Aug	1.11	1.07	0.936	0.666	4.62	0.653	0.336	0.597	0.583	0.206	0.169
Sept	1.30	1.25	1.09	1.17	1.66	0.979	0.648	1.50	1.48	0.329	0.897
Oct	3.06	3.04	1.04	1.31	1.10	0.329	0.363	0.585	0.578	0.329	5.84
Nov	2.55	2.41	1.35	1.88	3.63	2.41	0.931	2.10	2.05	0.984	6.11
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	29.0	28.4	15.2	19.5	34.8	10.0	17.4	14.8	14.6	3.89	45.1

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.21 Monthly results

Site: Maros

Country: Indonesia

Code: IDA005

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	4.68	3.63	6.60	20.3	6.85	17.4	1.06	7.70	7.32	2.43	9.35	5.03	0.530	597
Feb	4.12	3.35	4.22	34.8	6.35	12.8	22.1	12.5	12.2	1.66	2.89	5.54	0.902	591
Mar	5.33	4.46	6.49	14.7	7.76	14.3	2.60	4.57	4.26	2.49	3.24	5.49	0.528	272
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	10.6	10.2	15.6	16.3	24.3	5.08	3.34	6.97	6.86	1.70	0.898	6.05	1.16	102
June	9.47	8.63	10.5	17.3	34.0	13.9	1.69	10.3	9.95	2.79	1.88	5.73	1.06	75.7
July	3.29	3.10	4.10	2.50	9.32	3.14	3.38	4.33	4.26	<0.3	1.58	5.80	0.300	104
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	44.8	41.2	1.06	132	<0.8	58.4	29.1	75.3	74.1	8.96	1.38	5.86	3.30	4.2
Oct	19.1	18.6	21.5	23.4	104	8.08	4.54	19.5	19.3	3.30	2.00	5.70	1.50	23.9
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	5.34	4.52	6.52	23.2	10.4	13.7	8.73	9.00	8.70	2.06	4.88	5.31	0.719	1770
Max.	44.8	41.2	29.0	132	104	78.8	50.4	81.7	81.6	8.96	13.8	6.55	3.30	
Min.	2.86	2.65	1.06	2.50	<0.8	2.91	0.600	2.19	2.07	<0.3	0.282	4.86	0.300	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	2.79	2.17	3.94	12.1	4.09	10.4	0.632	4.60	4.37	1.45	5.59
Feb	2.44	1.98	2.50	20.6	3.75	7.59	13.1	7.37	7.20	0.982	1.71
Mar	1.45	1.22	1.77	4.00	2.11	3.90	0.708	1.24	1.16	0.679	0.883
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	1.08	1.04	1.59	1.67	2.48	0.518	0.340	0.711	0.700	0.174	0.0916
June	0.717	0.653	0.796	1.31	2.57	1.05	0.128	0.776	0.753	0.211	0.142
July	0.341	0.321	0.425	0.259	0.966	0.326	0.351	0.449	0.442	0.0256	0.164
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sept	0.188	0.173	<0.01	0.554	<0.01	0.245	0.122	0.316	0.311	0.0376	<0.01
Oct	0.457	0.445	0.515	0.560	2.48	0.193	0.109	0.466	0.462	0.0788	0.0477
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	9.46	8.00	11.5	41.0	18.5	24.2	15.5	15.9	15.4	3.64	8.63

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.22 Monthly results

Site: Jembrana

Country: Indonesia

Code: IDA006

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	26.3	25.1	29.4	44.3	7.95	20.6	11.4	4.13	3.69	2.66	50.3	4.30	2.96	145
Feb	14.5	13.5	10.2	25.3	1.87	15.8	8.65	3.49	3.15	2.36	27.6	4.56	1.53	220
Mar	12.3	11.3	18.8	37.7	2.47	16.5	16.8	5.11	4.75	2.43	43.7	4.36	2.32	183
Apr	8.25	6.52	6.58	45.0	1.70	28.7	13.0	3.94	3.31	3.97	12.2	4.91	1.13	237
May	28.1	21.1	14.3	179	8.01	117	19.1	13.8	11.2	12.3	40.3	4.39	3.48	22.8
June	5.84	2.99	4.81	57.2	1.24	47.3	2.23	5.19	4.16	5.69	5.62	5.25	1.05	96.6
July	18.6	12.6	12.2	97.1	<0.8	99.8	6.52	61.2	59.1	34.4	0.447	6.35	3.02	28.8
Aug	13.4	9.22	7.98	88.1	0.963	69.2	5.08	13.2	11.7	9.70	15.4	4.81	2.08	79.8
Sept	21.0	14.0	18.3	170	0.907	115	4.03	17.1	14.6	15.0	17.6	4.76	2.85	93.6
Oct	22.7	18.3	10.4	116	4.26	73.0	24.7	18.1	16.5	11.8	11.4	4.94	2.37	132
Nov	22.6	21.4	31.8	63.6	51.0	19.2	30.9	10.5	10.0	4.49	26.6	4.57	2.60	249
Dec	7.19	6.65	5.60	32.4	20.8	8.97	23.2	6.86	6.66	3.07	4.99	5.30	0.843	476
Annual	14.3	12.4	13.8	56.7	13.3	31.2	17.1	8.53	7.86	5.31	20.0	4.70	1.80	1963
Max.	108	108	43.3	462	99.5	200	79.3	61.2	59.1	34.4	64.6	6.59	9.88	
Min.	1.42	0.724	4.59	14.9	<0.8	2.76	1.40	2.11	1.80	1.47	0.257	4.19	0.710	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	3.81	3.63	4.26	6.41	1.15	2.98	1.65	0.598	0.534	0.384	7.27
Feb	3.19	2.98	2.25	5.57	0.412	3.49	1.90	0.769	0.693	0.520	6.07
Mar	2.24	2.06	3.43	6.90	0.452	3.01	3.08	0.934	0.869	0.443	7.99
Apr	1.95	1.54	1.56	10.7	0.403	6.81	3.08	0.932	0.785	0.939	2.89
May	0.642	0.481	0.326	4.07	0.183	2.67	0.435	0.314	0.256	0.281	0.919
June	0.564	0.289	0.464	5.53	0.120	4.57	0.216	0.501	0.402	0.550	0.543
July	0.536	0.363	0.350	2.80	0.0195	2.87	0.188	1.76	1.70	0.990	0.0129
Aug	1.07	0.735	0.637	7.03	0.0768	5.52	0.405	1.06	0.937	0.774	1.23
Sept	1.96	1.31	1.71	15.9	0.0849	10.8	0.377	1.60	1.36	1.41	1.64
Oct	2.99	2.41	1.37	15.3	0.563	9.65	3.27	2.40	2.19	1.56	1.51
Nov	5.62	5.33	7.92	15.8	12.7	4.77	7.68	2.60	2.50	1.12	6.62
Dec	3.42	3.17	2.66	15.4	9.88	4.27	11.1	3.26	3.17	1.46	2.38
Annual	28.1	24.4	27.0	111	26.2	61.1	33.5	16.8	15.4	10.4	39.2

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	100

Terms and abbreviations are given in Table 3.5.

Table 3.23 Monthly results

Site: Lombok

Country: Indonesia

Code: IDA007

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	16.5	15.4	3.36	20.6	4.80	17.8	5.57	6.55	6.16	8.37	10.9	4.96	1.11	128
Feb	7.75	6.90	1.02	30.0	<0.8	14.2	18.4	6.82	6.52	3.42	12.1	4.92	0.816	159
Mar	9.51	8.46	2.43	32.9	<0.8	17.5	16.3	7.07	6.70	1.90	24.2	4.62	1.31	211
Apr	6.58	5.43	4.49	47.3	1.38	19.2	29.8	3.87	3.45	2.98	10.3	4.99	1.14	138
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	15.7	11.3	56.2	54.6	8.52	72.2	8.91	10.8	9.27	8.16	15.1	4.82	2.27	42.5
July	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Aug	6.93	5.34	6.99	20.7	1.98	26.4	5.84	7.33	6.76	6.66	3.02	5.52	0.830	35.9
Sept	8.74	6.76	1.14	33.5	<0.8	32.7	4.80	8.32	7.61	7.71	7.76	5.11	1.11	48.0
Oct	8.26	7.71	<0.5	21.8	66.2	9.00	34.6	4.44	4.25	2.69	20.4	4.69	1.35	33.9
Nov	37.9	36.4	52.9	34.1	26.6	25.9	19.2	13.8	13.2	7.62	45.9	4.34	3.63	280
Dec	7.60	6.35	<0.5	22.3	<0.8	20.7	2.87	4.06	3.62	4.06	19.4	4.71	0.947	526
Annual	14.1	12.7	12.1	29.7	6.97	21.8	12.5	7.00	6.53	4.84	21.7	4.66	1.53	1602
Max.	43.7	42.7	119	82.1	66.2	72.2	59.8	16.6	16.2	10.5	102	5.62	5.25	
Min.	4.24	3.28	<0.5	11.4	<0.8	8.16	1.77	3.25	2.90	1.58	2.40	3.99	0.540	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	2.12	1.98	0.432	2.64	0.616	2.29	0.715	0.841	0.791	1.07	1.41
Feb	1.23	1.10	0.162	4.77	0.0789	2.25	2.92	1.08	1.04	0.543	1.92
Mar	2.01	1.78	0.513	6.93	0.109	3.69	3.43	1.49	1.41	0.401	5.11
Apr	0.905	0.746	0.617	6.51	0.190	2.64	4.10	0.531	0.474	0.410	1.42
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	0.666	0.481	2.39	2.32	0.362	3.07	0.379	0.460	0.394	0.347	0.643
July	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	0.249	0.192	0.251	0.742	0.0712	0.949	0.210	0.263	0.243	0.239	0.108
Sept	0.419	0.325	0.0549	1.61	0.0217	1.57	0.230	0.399	0.365	0.370	0.373
Oct	0.279	0.261	<0.01	0.738	2.24	0.305	1.17	0.150	0.144	0.0909	0.691
Nov	10.6	10.2	14.8	9.56	7.45	7.27	5.38	3.86	3.71	2.14	12.9
Dec	3.99	3.34	0.157	11.7	0.0289	10.9	1.51	2.14	1.90	2.14	10.2
Annual	22.5	20.4	19.4	47.6	11.2	34.9	20.0	11.2	10.5	7.75	34.7

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	--	--	--	--	--	--	--	--	--	--	--	--	--	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.24 Monthly results

Site: Rishiri

Country: Japan

Code: JPA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	*	*	*	123
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	38.5
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	27.0
Apr	5.94	4.81	10.6	22.0	6.24	18.8	2.04	4.41	4.01	2.67	2.44	5.61	0.794	83.5
May	19.6	13.1	27.8	129	40.6	107	4.56	9.13	6.83	13.2	2.75	5.56	2.72	73.0
June	15.6	13.4	32.0	40.3	46.5	35.4	2.23	4.70	3.93	4.77	7.68	5.11	1.81	116
July	12.5	9.74	19.6	52.7	27.1	46.3	1.82	2.17	1.17	5.65	9.75	5.01	1.76	64.5
Aug	9.95	7.79	16.8	40.6	20.5	35.9	1.22	1.46	0.681	4.21	11.0	4.96	1.46	164
Sept	8.84	2.85	6.40	113	6.86	99.4	2.50	3.64	1.49	11.5	4.24	5.37	2.06	74.2
Oct	11.9	3.47	6.55	152	6.19	139	3.45	4.39	1.39	16.1	7.37	5.13	2.73	124
Nov	16.1	4.94	8.38	217	10.4	186	4.92	5.43	1.42	21.4	8.67	5.06	3.55	156
Dec	41.0	13.7	20.7	512	20.8	452	11.6	12.6	2.79	51.5	19.5	4.71	8.60	53.5
Annual	14.3	7.66	15.8	126	19.8	110	3.39	4.73	2.34	12.9	8.08	5.09	2.57	1096
Max.	50.7	37.9	112	658	60.8	582	14.0	62.4	59.2	66.4	20.9	5.68	10.8	
Min.	4.24	2.49	5.23	17.5	4.34	14.2	0.729	1.34	0.475	1.86	2.07	4.68	0.619	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	*
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	0.496	0.401	0.884	1.84	0.521	1.57	0.171	0.369	0.335	0.223	0.204
May	1.43	0.958	2.03	9.41	2.96	7.80	0.333	0.667	0.498	0.962	0.201
June	1.80	1.55	3.70	4.65	5.37	4.09	0.258	0.543	0.454	0.551	0.887
July	0.808	0.628	1.26	3.40	1.75	2.98	0.117	0.140	0.0752	0.364	0.629
Aug	1.63	1.27	2.74	6.64	3.36	5.88	0.199	0.238	0.111	0.688	1.79
Sept	0.656	0.211	0.475	8.39	0.509	7.37	0.185	0.270	0.110	0.856	0.314
Oct	1.47	0.430	0.812	18.8	0.768	17.2	0.428	0.545	0.172	1.99	0.914
Nov	2.52	0.770	1.31	33.9	1.62	29.0	0.768	0.848	0.221	3.34	1.35
Dec	2.19	0.735	1.11	27.4	1.12	24.2	0.620	0.672	0.149	2.75	1.04
Annual	15.7	8.40	17.3	138	21.7	121	3.72	5.18	2.57	14.2	8.86

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	95.8
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	99.7

Terms and abbreviations are given in Table 3.5.

Table 3.25 Monthly results

Site: Ochiishi

Country: Japan

Code: JPA002

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.*
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	*	*	*	23.0
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	16.5
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	10.5
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	96.0
May	*	*	*	*	*	*	*	*	*	*	*	*	*	84.0
June	*	*	*	*	*	*	*	*	*	*	*	*	*	42.5
July	*	*	*	*	*	*	*	*	*	*	*	*	*	20.5
Aug	*	*	*	*	*	*	*	*	*	*	*	*	*	162
Sept	*	*	*	*	*	*	*	*	*	*	*	*	*	269
Oct	*	*	*	*	*	*	*	*	*	*	*	*	*	108
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	70.5
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	10.0
Annual	*	*	*	*	*	*	*	*	*	*	*	*	*	912
Max.	*	*	*	*	*	*	*	*	*	*	*	*	*	
Min.	*	*	*	*	*	*	*	*	*	*	*	*	*	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	*
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	*	*	*	*	*	*	*	*	*	*	*
Aug	*	*	*	*	*	*	*	*	*	*	*
Sept	*	*	*	*	*	*	*	*	*	*	*
Oct	*	*	*	*	*	*	*	*	*	*	*
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	*	*	*	*	*	*	*	*	*	*	*

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Terms and abbreviations are given in Table 3.5.

*Due to the lack of original precipitation data, those of the nearest meteorological station are alternatively put for the reference.

Table 3.26 Monthly results

Site: Sado-seki

Country: Japan

Code: JPA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	24.9	8.24	19.9	319	16.9	277	6.23	7.47	1.49	31.6	13.0	4.89	4.69	88.8
Feb	19.3	6.71	8.11	241	5.90	208	4.97	9.28	4.77	23.9	5.60	5.25	3.52	57.4
Mar	30.6	11.7	19.7	364	23.2	313	7.56	15.2	8.47	36.2	5.81	5.24	5.92	56.0
Apr	10.6	7.12	12.2	65.7	15.4	57.2	1.95	7.40	6.16	7.28	3.16	5.50	1.52	109
May	10.4	4.15	8.05	122	7.84	104	3.39	3.73	1.48	12.1	4.41	5.36	2.19	103
June	6.23	4.29	10.2	37.7	13.5	32.2	1.16	2.26	1.57	3.78	3.10	5.51	1.04	48.5
July	7.83	4.56	11.9	61.5	9.66	54.2	1.50	2.40	1.23	6.24	7.15	5.15	1.49	127
Aug	13.4	7.06	18.4	122	11.2	106	2.25	3.58	1.29	12.2	11.3	4.95	2.75	10.0
Sept	4.75	2.84	6.23	36.8	4.07	31.8	0.860	1.01	0.327	3.50	4.14	5.38	0.927	345
Oct	6.15	3.67	8.24	47.0	4.63	41.2	1.20	1.55	0.662	4.54	4.53	5.34	1.21	137
Nov	30.1	6.92	11.6	453	10.2	385	8.95	9.67	1.35	43.9	6.46	5.19	6.84	92.5
Dec	36.0	9.86	25.9	498	22.3	433	10.2	15.2	5.79	47.8	8.88	5.05	7.95	101
Annual	13.8	5.45	11.5	160	10.1	138	3.46	5.23	2.24	15.7	5.73	5.24	2.76	1275
Max.	248	48.5	147	4512	151	3867	81.3	88.6	54.4	443	66.1	6.54	35.9	
Min.	1.10	0.666	2.10	8.40	<0.8	7.20	0.300	0.300	<0.2	0.900	0.288	4.18	0.350	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	2.21	0.732	1.77	28.4	1.50	24.6	0.553	0.663	0.132	2.81	1.16
Feb	1.11	0.385	0.465	13.8	0.338	12.0	0.285	0.532	0.274	1.37	0.321
Mar	1.71	0.653	1.10	20.4	1.30	17.5	0.423	0.853	0.474	2.03	0.325
Apr	1.15	0.776	1.33	7.16	1.68	6.24	0.212	0.807	0.672	0.793	0.345
May	1.08	0.427	0.829	12.5	0.807	10.7	0.350	0.385	0.152	1.25	0.454
June	0.302	0.208	0.495	1.83	0.656	1.56	0.0562	0.110	0.0760	0.183	0.150
July	0.996	0.581	1.51	7.83	1.23	6.89	0.191	0.306	0.157	0.793	0.910
Aug	0.134	0.0706	0.184	1.22	0.112	1.06	0.0225	0.0358	0.0129	0.122	0.113
Sept	1.64	0.979	2.15	12.7	1.40	11.0	0.297	0.350	0.113	1.21	1.43
Oct	0.840	0.501	1.12	6.41	0.632	5.62	0.164	0.212	0.0903	0.620	0.619
Nov	2.79	0.640	1.07	41.9	0.940	35.6	0.828	0.895	0.125	4.06	0.598
Dec	3.64	0.996	2.62	50.3	2.26	43.8	1.03	1.53	0.585	4.83	0.897
Annual	17.6	6.94	14.6	204	12.8	176	4.41	6.67	2.86	20.0	7.30

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	97.4	97.4	97.4	100
Feb	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	95.8	95.8	95.8	100
Mar	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	94.8	94.8	94.8	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.4	99.4	99.4	100

Terms and abbreviations are given in Table 3.5.

Table 3.27 Monthly results

Site: Happo

Country: Japan

Code: JPA005

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	5.00	4.54	5.21	9.13	5.53	7.67	0.421	0.873	0.708	1.03	8.74	5.06	0.653	174
Feb	2.88	2.82	2.98	1.25	3.54	1.00	0.333	0.782	0.760	0.371	6.02	5.22	0.378	167
Mar	8.58	7.92	13.0	12.1	21.2	11.0	0.664	7.85	7.61	2.38	3.03	5.52	0.800	106
Apr	3.61	3.50	6.55	2.09	5.60	1.82	0.300	4.71	4.67	0.925	2.97	5.53	0.402	228
May	1.50	1.45	2.90	1.20	2.50	0.800	<0.3	0.700	0.683	0.300	4.37	5.36	0.280	203
June	2.77	2.74	4.81	0.774	5.69	0.472	<0.3	1.31	1.30	<0.3	5.27	5.28	0.353	429
July	2.73	2.67	5.51	1.68	4.67	0.900	<0.3	0.400	0.381	<0.3	8.09	5.09	0.439	512
Aug	5.19	5.15	5.25	2.86	7.34	0.631	<0.3	0.333	0.319	<0.3	11.1	4.95	0.642	124
Sept	1.44	1.40	2.80	1.06	1.78	0.747	<0.3	0.249	0.232	<0.3	5.65	5.25	0.324	349
Oct	1.10	1.07	2.00	0.800	<0.8	0.500	<0.3	0.300	0.289	<0.3	4.90	5.31	0.260	100
Nov	2.40	2.35	2.90	1.30	1.80	0.900	<0.3	0.400	0.381	<0.3	7.41	5.13	0.400	175
Dec	4.00	3.51	5.40	9.40	5.30	8.20	0.400	0.900	0.723	0.900	10.0	5.00	0.660	378
Annual	3.03	2.90	4.74	2.67	4.81	2.04	<0.3	1.27	1.23	0.456	6.39	5.19	0.430	2944
Max.	25.8	22.3	79.6	88.9	118	75.9	4.23	24.5	24.1	8.27	27.5	6.14	2.25	
Min.	0.403	0.360	0.797	<0.5	<0.8	0.400	<0.3	0.200	<0.2	<0.3	0.724	4.56	0.238	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.870	0.790	0.907	1.59	0.962	1.33	0.0732	0.152	0.123	0.180	1.52
Feb	0.480	0.470	0.497	0.209	0.591	0.167	0.0556	0.130	0.127	0.0619	1.01
Mar	0.911	0.841	1.38	1.29	2.25	1.17	0.0705	0.833	0.808	0.252	0.321
Apr	0.823	0.798	1.49	0.477	1.28	0.415	0.0684	1.07	1.06	0.211	0.678
May	0.305	0.295	0.589	0.244	0.508	0.162	0.0406	0.142	0.139	0.0609	0.886
June	1.19	1.17	2.06	0.332	2.44	0.202	0.0561	0.562	0.558	0.0946	2.26
July	1.40	1.37	2.82	0.858	2.39	0.461	0.0512	0.205	0.195	0.102	4.14
Aug	0.644	0.639	0.651	0.355	0.910	0.0782	0.0165	0.0413	0.0396	0.0289	1.38
Sept	0.503	0.487	0.977	0.369	0.620	0.260	0.0460	0.0866	0.0810	0.0697	1.97
Oct	0.110	0.107	0.200	0.0800	0.0500	0.0500	0.0100	0.0300	0.0289	0.0200	0.490
Nov	0.419	0.409	0.506	0.227	0.314	0.157	0.0175	0.0698	0.0664	0.0349	1.29
Dec	1.51	1.33	2.04	3.55	2.00	3.10	0.151	0.340	0.273	0.340	3.78
Annual	8.91	8.55	14.0	7.87	14.2	6.00	0.607	3.75	3.62	1.34	18.8

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	100
Feb	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	97.7	97.7	97.7	100
Mar	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.5	97.5	97.5	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	100
Annual	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.2	91.2	91.2	100

Terms and abbreviations are given in Table 3.5.

Table 3.28 Monthly results

Site: Ijira

Country: Japan

Code: JPA006

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	6.35	4.56	10.4	36.1	6.58	29.6	0.829	1.27	0.626	3.47	16.6	4.78	1.22	214
Feb	7.93	7.38	12.4	11.3	10.3	9.17	0.691	1.00	0.806	1.25	18.5	4.73	1.06	392
Mar	8.27	6.82	12.8	28.4	13.0	24.1	0.974	4.92	4.40	3.50	7.73	5.11	1.03	257
Apr	4.87	4.43	8.39	8.96	8.23	7.39	0.489	1.89	1.73	1.13	9.29	5.03	0.648	885
May	6.08	5.53	11.9	10.6	11.2	9.11	0.461	1.55	1.36	1.28	12.8	4.89	0.845	669
June	5.25	5.05	9.17	4.43	9.07	3.47	<0.3	0.894	0.819	0.451	11.1	4.95	0.677	619
July	5.80	5.62	11.0	3.93	10.1	2.96	0.376	1.30	1.24	0.502	13.3	4.88	0.782	444
Aug	6.20	6.01	13.5	5.10	14.0	3.10	0.400	2.40	2.33	0.800	11.1	4.95	0.730	86.2
Sept	4.52	4.07	6.80	9.15	7.08	7.49	<0.3	1.22	1.05	1.02	8.80	5.06	0.622	599
Oct	4.14	3.62	8.70	10.5	6.16	8.57	0.328	1.07	0.882	1.16	10.6	4.98	0.691	260
Nov	4.80	3.19	6.48	33.2	4.19	26.6	0.628	1.48	0.904	3.29	9.05	5.04	0.910	79.5
Dec	6.68	3.93	10.6	61.6	7.60	45.6	1.11	2.38	1.39	5.80	12.0	4.92	1.47	89.5
Annual	5.68	5.09	9.86	12.1	9.07	9.88	0.471	1.59	1.38	1.36	11.6	4.94	0.798	4593
Max.	15.9	13.6	30.9	79.4	25.9	66.5	1.80	8.40	7.86	7.20	33.3	5.35	2.37	
Min.	2.30	1.94	3.50	3.00	3.20	2.00	<0.3	0.600	0.219	0.300	4.44	4.48	0.388	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.36	0.976	2.23	7.73	1.41	6.34	0.177	0.271	0.134	0.744	3.56
Feb	3.11	2.89	4.86	4.43	4.03	3.60	0.271	0.394	0.316	0.491	7.25
Mar	2.12	1.75	3.29	7.29	3.32	6.18	0.250	1.26	1.13	0.898	1.98
Apr	4.31	3.92	7.43	7.93	7.28	6.54	0.433	1.67	1.53	1.00	8.22
May	4.07	3.70	7.97	7.09	7.47	6.10	0.308	1.04	0.908	0.858	8.54
June	3.25	3.12	5.68	2.74	5.61	2.15	0.132	0.554	0.507	0.279	6.88
July	2.58	2.50	4.89	1.75	4.49	1.31	0.167	0.579	0.550	0.223	5.91
Aug	0.535	0.518	1.16	0.440	1.21	0.267	0.0345	0.207	0.201	0.0690	0.959
Sept	2.71	2.44	4.07	5.48	4.24	4.48	0.155	0.727	0.630	0.612	5.27
Oct	1.08	0.941	2.26	2.72	1.60	2.23	0.0853	0.278	0.229	0.301	2.75
Nov	0.381	0.254	0.515	2.64	0.333	2.12	0.0499	0.118	0.0719	0.261	0.719
Dec	0.598	0.352	0.950	5.51	0.681	4.08	0.0990	0.213	0.125	0.519	1.07
Annual	26.1	23.4	45.3	55.7	41.7	45.4	2.16	7.31	6.33	6.26	53.1

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.29 Monthly results

Site: Oki

Country: Japan

Code: JPA007

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	*	*	*	177
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	127
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	67.7
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	47.4
May	*	*	*	*	*	*	*	*	*	*	*	*	*	77.2
June	*	*	*	*	*	*	*	*	*	*	*	*	*	199
July	*	*	*	*	*	*	*	*	*	*	*	*	*	76.0
Aug	*	*	*	*	*	*	*	*	*	*	*	*	*	31.8
Sept	*	*	*	*	*	*	*	*	*	*	*	*	*	231
Oct	*	*	*	*	*	*	*	*	*	*	*	*	*	246
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	34.1
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	96.3
Annual	*	*	*	*	*	*	*	*	*	*	*	*	*	1409
Max.	*	*	*	*	*	*	*	*	*	*	*	*	*	
Min.	*	*	*	*	*	*	*	*	*	*	*	*	*	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	*
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	*	*	*	*	*	*	*	*	*	*	*
Aug	*	*	*	*	*	*	*	*	*	*	*
Sept	*	*	*	*	*	*	*	*	*	*	*
Oct	*	*	*	*	*	*	*	*	*	*	*
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	*	*	*	*	*	*	*	*	*	*	*

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	83.8
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	50.0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	100
June	0	0	0	0	0	0	0	0	0	0	0	0	0	100
July	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Sept	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	0	0	0	0	0	0	0	0	0	0	0	0	0	78.3

Terms and abbreviations are given in Table 3.5.

Table 3.30 Monthly results

Site: Yusuhara

Country: Japan

Code: JPA009

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	17.7	12.5	21.4	99.3	18.3	86.4	2.61	4.32	2.46	9.97	28.0	4.55	2.70	57.0
Feb	9.33	8.89	7.77	9.27	9.25	7.39	1.36	1.31	1.15	1.60	17.5	4.76	1.12	168
Mar	14.8	13.9	9.05	16.9	12.0	13.7	1.31	3.26	2.96	2.70	17.8	4.75	1.39	129
Apr	8.82	8.41	7.92	8.65	10.5	6.87	0.998	1.45	1.30	1.07	9.68	5.01	0.884	401
May	2.67	2.47	2.65	3.80	1.91	3.36	<0.3	0.493	0.421	0.456	5.86	5.23	0.382	246
June	4.39	4.25	3.65	3.13	2.47	2.27	<0.3	0.423	0.374	0.319	8.62	5.06	0.535	316
July	5.03	4.89	3.03	3.56	1.84	2.27	<0.3	0.239	<0.2	<0.3	9.42	5.03	0.595	242
Aug	3.42	3.28	6.22	2.22	5.43	2.31	<0.3	0.572	0.522	0.477	8.40	5.08	0.613	134
Sept	3.98	3.01	2.35	19.2	0.933	16.1	0.451	0.542	<0.2	1.87	4.91	5.31	0.639	732
Oct	7.01	3.96	6.29	58.1	1.79	50.6	1.16	1.37	0.274	5.62	7.85	5.11	1.39	178
Nov	11.5	9.05	14.0	50.1	9.70	41.1	2.56	2.81	1.92	4.91	14.4	4.84	1.71	77.0
Dec	42.0	29.4	110	235	74.6	209	6.12	18.2	13.6	24.7	37.2	4.43	6.76	10.0
Annual	6.39	5.52	5.66	17.3	4.93	14.5	0.717	1.07	0.761	1.84	9.15	5.04	0.843	2690
Max.	192	172	309	910	554	807	51.3	68.0	50.6	83.3	57.5	5.65	16.2	
Min.	0.867	0.797	1.81	1.38	<0.8	0.800	<0.3	0.209	<0.2	<0.3	2.22	4.24	0.226	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.01	0.714	1.22	5.66	1.04	4.93	0.149	0.247	0.140	0.569	1.60
Feb	1.57	1.49	1.31	1.56	1.55	1.24	0.228	0.220	0.193	0.268	2.93
Mar	1.91	1.80	1.17	2.17	1.55	1.76	0.169	0.420	0.382	0.348	2.30
Apr	3.54	3.37	3.18	3.47	4.21	2.75	0.400	0.581	0.521	0.429	3.88
May	0.656	0.606	0.650	0.933	0.469	0.824	0.0443	0.121	0.103	0.112	1.44
June	1.39	1.35	1.15	0.992	0.782	0.719	0.0550	0.134	0.118	0.101	2.73
July	1.21	1.18	0.733	0.860	0.444	0.548	0.0521	0.0576	0.0458	0.0681	2.27
Aug	0.458	0.440	0.833	0.297	0.727	0.309	0.0383	0.0765	0.0699	0.0638	1.12
Sept	2.91	2.21	1.72	14.0	0.684	11.8	0.330	0.397	0.143	1.37	3.60
Oct	1.25	0.706	1.12	10.4	0.318	9.01	0.207	0.243	0.0487	1.00	1.40
Nov	0.888	0.697	1.08	3.86	0.747	3.17	0.198	0.217	0.148	0.378	1.11
Dec	0.420	0.294	1.10	2.35	0.746	2.09	0.0612	0.182	0.136	0.247	0.372
Annual	17.2	14.8	15.2	46.4	13.3	39.0	1.93	2.89	2.05	4.94	24.6

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	89.4	89.4	89.4	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	99.2	99.2	99.2	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	66.7
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.7	99.7	99.7	96.1

Terms and abbreviations are given in Table 3.5.

Table 3.31 Monthly results

Site: Hedo

Country: Japan

Code: JPA010

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.*
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	*	*	*	41.0
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	91.5
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	91.5
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	464
May	*	*	*	*	*	*	*	*	*	*	*	*	*	313
June	*	*	*	*	*	*	*	*	*	*	*	*	*	580
July	*	*	*	*	*	*	*	*	*	*	*	*	*	108
Aug	*	*	*	*	*	*	*	*	*	*	*	*	*	47.0
Sept	*	*	*	*	*	*	*	*	*	*	*	*	*	636
Oct	*	*	*	*	*	*	*	*	*	*	*	*	*	276
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	628
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	85.0
Annual	*	*	*	*	*	*	*	*	*	*	*	*	*	3361
Max.	*	*	*	*	*	*	*	*	*	*	*	*	*	
Min.	*	*	*	*	*	*	*	*	*	*	*	*	*	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	*
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	*	*	*	*	*	*	*	*	*	*	*
Aug	*	*	*	*	*	*	*	*	*	*	*
Sept	*	*	*	*	*	*	*	*	*	*	*
Oct	*	*	*	*	*	*	*	*	*	*	*
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	*	*	*	*	*	*	*	*	*	*	*

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Terms and abbreviations are given in Table 3.5.

*Due to the lack of original precipitation data, those of the nearest meteorological station are alternatively put for the reference.

Table 3.32 Monthly results

Site: Ogasawara

Country: Japan

Code: JPA011

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	14.4	3.92	5.85	205	2.79	173	3.97	4.28	0.611	19.7	9.50	5.02	2.22	28.8
Feb	10.2	3.76	3.59	125	4.45	107	2.63	2.36	0.332	11.9	7.31	5.14	2.09	66.1
Mar	16.7	5.10	7.47	224	9.66	192	4.87	5.69	1.54	22.1	9.26	5.03	3.55	26.0
Apr	8.51	4.40	10.3	80.0	7.44	68.2	1.91	3.69	2.21	9.03	13.3	4.88	1.93	40.0
May	8.34	4.47	8.70	74.0	5.32	64.2	1.62	4.64	3.25	8.80	11.1	4.95	1.77	10.0
June	2.50	1.22	1.10	23.8	<0.8	21.3	0.600	1.40	0.940	2.30	5.62	5.25	0.650	199
July	5.38	2.13	7.26	60.6	<0.8	54.0	1.37	2.35	1.19	6.25	11.6	4.94	1.43	24.0
Aug	18.0	2.17	1.80	299	1.00	263	5.50	6.40	0.725	29.7	6.17	5.21	4.59	232
Sept	3.52	0.429	1.01	56.6	<0.8	51.2	1.10	1.49	0.382	5.66	4.99	5.30	1.08	62.0
Oct	6.04	0.350	0.813	102	<0.8	94.3	2.13	2.67	0.635	10.8	5.08	5.29	1.79	236
Nov	11.0	1.26	2.34	183	<0.8	161	3.53	3.86	0.387	18.1	6.73	5.17	2.96	135
Dec	4.44	1.14	1.97	61.9	<0.8	54.7	1.30	1.92	0.742	6.20	6.21	5.21	1.20	175
Annual	8.61	1.59	2.27	132	1.11	116	2.60	3.27	0.765	13.2	6.44	5.19	2.20	1233
Max.	179	27.0	59.5	2983	55.4	2523	55.0	60.4	8.85	281	33.1	5.39	8.66	
Min.	2.10	<0.3	<0.5	9.90	<0.8	11.3	0.500	0.600	<0.2	1.30	4.07	4.48	0.480	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.414	0.113	0.168	5.91	0.0802	4.99	0.114	0.123	0.0176	0.566	0.273
Feb	0.673	0.249	0.237	8.27	0.295	7.05	0.174	0.156	0.0220	0.790	0.484
Mar	0.434	0.133	0.194	5.81	0.251	5.00	0.127	0.148	0.0399	0.574	0.241
Apr	0.341	0.176	0.411	3.20	0.298	2.73	0.0765	0.147	0.0885	0.361	0.532
May	0.0834	0.0447	0.0870	0.740	0.0532	0.642	0.0162	0.0464	0.0325	0.0880	0.111
June	0.496	0.241	0.218	4.72	0.0199	4.23	0.119	0.278	0.187	0.457	1.12
July	0.129	0.0510	0.174	1.45	0.0126	1.30	0.0330	0.0565	0.0285	0.150	0.277
Aug	4.18	0.504	0.418	69.4	0.232	60.9	1.28	1.48	0.168	6.89	1.43
Sept	0.218	0.0266	0.0628	3.51	<0.01	3.17	0.0683	0.0923	0.0237	0.351	0.309
Oct	1.42	0.0825	0.192	24.0	0.0648	22.3	0.503	0.631	0.150	2.55	1.20
Nov	1.48	0.170	0.316	24.7	0.0316	21.7	0.477	0.522	0.0523	2.44	0.909
Dec	0.777	0.200	0.345	10.8	0.0638	9.57	0.228	0.337	0.130	1.08	1.09
Annual	10.6	1.96	2.81	163	1.37	144	3.21	4.03	0.944	16.3	7.94

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	90.4	90.4	90.4	100
Feb	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	81.2	81.2	81.2	100
Mar	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	92.3	92.3	92.3	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.6	98.6	98.6	100

Terms and abbreviations are given in Table 3.5.

Table 3.33 Monthly results

Site: Tokyo

Country: Japan

Code: JPA012

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	5.70	4.97	9.77	14.2	17.2	12.1	0.475	2.70	2.44	1.48	5.20	5.28	0.775	34.0
Feb	7.09	6.32	17.6	15.5	25.9	12.8	0.617	3.53	3.25	1.76	5.26	5.28	0.939	89.5
Mar	5.79	5.49	13.6	6.14	18.9	5.01	0.487	4.19	4.08	0.900	5.41	5.27	0.729	132
Apr	12.7	9.70	17.7	57.7	22.4	49.9	1.46	6.89	5.82	6.86	8.32	5.08	1.74	163
May	9.41	7.96	13.3	27.7	17.7	24.2	0.772	4.15	3.63	3.64	10.1	5.00	1.23	191
June	3.33	3.10	8.34	4.48	8.24	3.93	<0.3	1.43	1.35	0.654	8.83	5.05	0.618	279
July	11.3	11.0	26.9	6.19	27.0	4.66	0.314	4.30	4.20	1.01	22.3	4.65	1.59	134
Aug	7.99	6.88	10.2	20.9	14.6	18.4	0.474	2.65	2.26	2.23	9.41	5.03	0.998	254
Sept	5.23	3.95	5.60	23.9	10.7	21.3	0.522	1.88	1.42	2.39	5.21	5.28	0.777	222
Oct	6.34	5.44	12.6	18.0	19.2	14.9	0.480	2.42	2.10	1.87	5.88	5.23	0.861	191
Nov	7.61	5.79	13.2	33.9	17.1	30.2	0.738	3.01	2.36	3.31	7.89	5.10	1.19	41.0
Dec	18.2	15.0	62.4	64.1	50.7	53.5	1.60	16.6	15.4	7.30	*	*	*	0.6
Annual	7.30	6.25	12.6	20.2	16.6	17.5	0.568	3.20	2.82	2.34	8.74	5.06	1.01	1730
Max.	45.1	41.2	86.4	76.0	101	67.5	3.80	133	131	11.7	24.5	6.22	3.16	
Min.	1.30	1.27	2.70	1.00	6.90	0.500	<0.3	0.300	0.289	<0.3	0.603	4.61	0.320	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.194	0.169	0.332	0.484	0.584	0.413	0.0162	0.0918	0.0828	0.0503	0.177
Feb	0.635	0.566	1.58	1.39	2.32	1.15	0.0553	0.316	0.291	0.158	0.471
Mar	0.763	0.723	1.79	0.809	2.49	0.660	0.0642	0.552	0.538	0.119	0.713
Apr	2.07	1.58	2.89	9.41	3.64	8.13	0.238	1.12	0.948	1.12	1.36
May	1.80	1.52	2.54	5.29	3.37	4.61	0.148	0.793	0.693	0.696	1.93
June	0.928	0.863	2.32	1.25	2.30	1.09	0.0600	0.399	0.375	0.182	2.46
July	1.52	1.48	3.60	0.829	3.62	0.624	0.0421	0.576	0.563	0.136	2.99
Aug	2.02	1.74	2.59	5.31	3.71	4.66	0.120	0.673	0.572	0.564	2.39
Sept	1.16	0.879	1.25	5.31	2.39	4.74	0.116	0.418	0.316	0.531	1.16
Oct	1.21	1.04	2.41	3.43	3.67	2.85	0.0917	0.462	0.401	0.357	1.12
Nov	0.312	0.237	0.540	1.39	0.702	1.24	0.0303	0.123	0.0967	0.136	0.323
Dec	0.0111	<0.01	0.0381	0.0392	0.0310	0.0327	<0.01	0.0101	<0.01	<0.01	*
Annual	12.6	10.8	21.9	35.0	28.8	30.2	0.983	5.54	4.88	4.05	15.1

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	93.3	93.3	93.3	100
Mar	100	100	100	100	100	100	100	100	100	100	98.0	98.0	98.0	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	0	0	0	100
Annual	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.5	99.5	99.5	100

Terms and abbreviations are given in Table 3.5.

Table 3.34 Monthly results

Site: Niigata-maki

Country: Japan

Code: JPA013

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	25.1	12.8	28.4	240	28.4	204	4.69	6.96	2.55	24.6	19.1	4.72	4.45	159
Feb	16.7	6.73	8.24	198	9.54	165	3.90	7.54	3.98	20.4	6.61	5.18	3.10	105
Mar	27.8	11.4	21.8	324	29.1	271	6.48	14.9	9.02	32.4	6.68	5.18	5.24	85.1
Apr	**	**	**	**	**	**	**	**	**	**	**	**	**	**
May	**	**	**	**	**	**	**	**	**	**	**	**	**	**
June	**	**	**	**	**	**	**	**	**	**	**	**	**	**
July	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Aug	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Sept	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Oct	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Nov	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Dec	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Annual	23.2	10.8	21.2	245	23.0	206	4.82	8.74	4.28	24.9	12.8	4.89	4.21	349
Max.	250	64.1	124	4307	85.5	3574	80.9	87.6	61.9	420	95.5	6.45	39.6	
Min.	1.60	1.00	2.40	5.50	0.800	4.40	<0.3	0.600	0.386	1.40	0.355	4.02	0.410	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	3.99	2.04	4.52	38.2	4.51	32.4	0.745	1.11	0.405	3.90	3.03
Feb	1.75	0.707	0.865	20.8	1.00	17.3	0.409	0.793	0.419	2.15	0.694
Mar	2.36	0.974	1.85	27.6	2.48	23.0	0.552	1.26	0.767	2.75	0.568
Apr	**	**	**	**	**	**	**	**	**	**	**
May	**	**	**	**	**	**	**	**	**	**	**
June	**	**	**	**	**	**	**	**	**	**	**
July	**	**	**	**	**	**	**	**	**	**	**
Aug	**	**	**	**	**	**	**	**	**	**	**
Sept	**	**	**	**	**	**	**	**	**	**	**
Oct	**	**	**	**	**	**	**	**	**	**	**
Nov	**	**	**	**	**	**	**	**	**	**	**
Dec	**	**	**	**	**	**	**	**	**	**	**
Annual	8.09	3.75	7.39	85.4	8.04	71.9	1.68	3.05	1.50	8.70	4.48

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	96.9	96.9	96.9	100
Feb	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.1	87.1	87.1	100
Mar	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.6	74.6	74.6	77.4
Apr	**	**	**	**	**	**	**	**	**	**	**	**	**	0
May	**	**	**	**	**	**	**	**	**	**	**	**	**	0
June	**	**	**	**	**	**	**	**	**	**	**	**	**	0
July	**	**	**	**	**	**	**	**	**	**	**	**	**	0
Aug	**	**	**	**	**	**	**	**	**	**	**	**	**	0
Sept	**	**	**	**	**	**	**	**	**	**	**	**	**	0
Oct	**	**	**	**	**	**	**	**	**	**	**	**	**	0
Nov	**	**	**	**	**	**	**	**	**	**	**	**	**	0
Dec	**	**	**	**	**	**	**	**	**	**	**	**	**	0
Annual	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	88.5	88.5	88.5	23.0

Terms and abbreviations are given in Table 3.5.

Table 3.35 Monthly results

Site: Tsushima

Country: Japan

Code: JPA014

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	18.4	11.1	26.8	144	22.2	121	3.23	4.11	1.59	13.8	18.7	4.73	3.11	75.5
Feb	16.2	11.0	10.8	102	15.0	86.5	2.86	2.98	1.11	9.77	14.9	4.83	2.44	153
Mar	22.6	17.4	42.6	98.2	41.9	87.5	3.10	14.1	12.2	11.3	9.55	5.02	2.79	54.5
Apr	15.5	13.3	11.5	43.2	16.2	36.7	2.89	2.92	2.12	4.23	13.6	4.87	1.68	262
May	8.57	6.47	10.9	41.5	8.24	34.9	3.89	2.61	1.85	4.68	6.60	5.18	1.18	58.5
June	4.79	4.38	6.57	9.07	5.42	6.92	0.555	0.522	0.373	0.667	7.29	5.14	0.646	341
July	4.67	3.85	10.5	16.9	9.19	13.6	0.581	0.919	0.624	1.50	6.46	5.19	0.719	243
Aug	*	*	*	*	*	*	*	*	*	*	*	*	*	129
Sept	12.0	4.85	12.2	134	7.47	118	3.47	3.35	0.802	13.1	7.14	5.15	2.49	319
Oct	6.64	4.56	5.50	40.6	2.25	34.6	0.811	1.19	0.438	3.63	6.26	5.20	1.06	330
Nov	14.3	6.76	7.70	147	5.96	126	2.89	3.67	0.957	14.0	7.97	5.10	2.63	52.0
Dec	24.0	20.7	73.0	58.5	44.1	55.0	1.92	12.2	11.0	7.16	36.3	4.44	3.54	5.5
Annual	9.97	7.22	10.9	53.4	10.1	45.6	1.78	2.30	1.32	5.14	9.22	5.04	1.45	2022
Max.	83.6	72.9	213	639	191	532	14.2	144	140	60.4	55.3	5.72	9.54	
Min.	3.30	2.14	2.60	8.20	1.10	4.60	0.400	0.500	<0.2	0.600	1.90	4.26	0.550	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.39	0.841	2.02	10.8	1.67	9.13	0.244	0.310	0.120	1.04	1.41
Feb	2.47	1.68	1.65	15.5	2.29	13.2	0.437	0.454	0.169	1.49	2.27
Mar	1.23	0.946	2.32	5.35	2.28	4.77	0.169	0.770	0.667	0.613	0.520
Apr	4.05	3.47	3.01	11.3	4.23	9.61	0.758	0.764	0.557	1.11	3.57
May	0.502	0.378	0.637	2.43	0.482	2.04	0.228	0.153	0.108	0.274	0.386
June	1.63	1.49	2.24	3.09	1.85	2.36	0.189	0.178	0.127	0.227	2.49
July	1.13	0.933	2.55	4.11	2.23	3.31	0.141	0.223	0.151	0.364	1.57
Aug	*	*	*	*	*	*	*	*	*	*	*
Sept	3.82	1.55	3.89	42.8	2.38	37.6	1.11	1.07	0.256	4.19	2.28
Oct	2.19	1.50	1.81	13.4	0.743	11.4	0.268	0.391	0.145	1.20	2.07
Nov	0.745	0.352	0.400	7.64	0.310	6.53	0.150	0.191	0.0498	0.726	0.414
Dec	0.132	0.114	0.402	0.322	0.243	0.302	0.0106	0.0669	0.0603	0.0394	0.200
Annual	20.2	14.6	22.0	108	20.4	92.2	3.61	4.65	2.67	10.4	18.6

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	88.7	88.7	88.7	100
Feb	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.0	99.0	99.0	100
Mar	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	96.3	96.3	96.3	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Sept	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	90.9	90.9	90.9	100
Annual	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	83.8	83.8	83.8	100

Terms and abbreviations are given in Table 3.5.

Table 3.36 Monthly results

Site: Vientiane

Country: Lao PDR

Code: LAA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	6.25	*	11.0	5.76	*	*	*	*	*	*	5.36	5.27	12.0	573
July	2.83	*	6.08	4.21	*	*	*	*	*	*	8.09	5.09	4.40	320
Aug	2.21	*	4.94	5.68	*	*	*	*	*	*	2.13	5.67	4.37	749
Sept	3.22	*	5.11	4.79	*	*	*	*	*	*	3.69	5.43	4.74	1216
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	3.52	*	6.35	5.15	*	*	*	*	*	*	4.11	5.39	6.06	2857
Max.	14.4	*	25.0	25.1	*	*	*	*	*	*	17.0	6.97	26.7	
Min.	<0.3	*	<0.5	3.62	*	*	*	*	*	*	0.106	4.77	2.60	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	3.58	*	6.28	3.30	*	*	*	*	*	*	3.07
July	0.905	*	1.94	1.35	*	*	*	*	*	*	2.59
Aug	1.65	*	3.70	4.25	*	*	*	*	*	*	1.59
Sept	3.92	*	6.21	5.83	*	*	*	*	*	*	4.48
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	10.1	*	18.1	14.7	*	*	*	*	*	*	11.7

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	--	--	--	--	--	--	--	--	--	--	--	--	--	100
June	100	0	100	100	0	0	0	0	0	0	100	100	100	100
July	100	0	100	100	0	0	0	0	0	0	100	100	100	100
Aug	100	0	100	100	0	0	0	0	0	0	100	100	100	100
Sept	100	0	100	100	0	0	0	0	0	0	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	0	100	100	0	0	0	0	0	0	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.37 Monthly results

Site: Petaling Jaya

Country: Malaysia

Code: MYA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	7.17	6.67	28.1	11.0	25.4	8.25	1.99	5.80	5.62	1.12	11.1	4.95	1.26	165
Feb	9.32	8.88	39.9	9.02	28.4	7.37	1.75	5.82	5.66	1.32	25.9	4.59	1.89	364
Mar	15.2	14.7	42.4	11.9	33.3	8.94	2.26	6.07	5.88	1.49	32.3	4.49	2.25	480
Apr	13.1	12.8	40.6	9.19	25.6	5.41	2.25	3.66	3.54	0.549	40.8	4.39	2.46	313
May	9.38	9.20	31.9	4.96	20.4	2.87	1.16	3.17	3.11	0.308	29.5	4.53	1.74	501
June	14.3	14.1	35.1	8.02	25.1	3.54	1.34	4.08	4.01	0.557	33.5	4.48	2.13	265
July	9.70	9.33	14.3	9.64	5.04	6.13	2.67	2.92	2.79	0.577	23.3	4.63	1.34	124
Aug	8.04	7.68	25.2	7.18	11.1	5.99	1.85	2.28	2.15	0.566	31.4	4.50	1.78	277
Sept	18.5	17.9	27.1	12.5	15.9	9.91	1.71	3.42	3.21	1.10	40.1	4.40	2.28	177
Oct	12.9	12.6	27.9	8.47	18.4	4.91	1.08	2.69	2.59	0.390	30.1	4.52	1.82	332
Nov	5.06	4.96	19.9	4.46	10.6	1.71	0.415	2.36	2.32	1.37	18.0	4.74	1.05	465
Dec	7.01	6.84	19.2	7.65	24.4	2.87	1.30	8.06	8.00	5.55	14.7	4.83	1.42	268
Annual	10.6	10.3	30.8	8.21	21.3	5.30	1.54	4.17	4.06	1.21	27.9	4.55	1.80	3731
Max.	59.0	55.1	77.6	64.0	76.4	63.8	18.1	16.7	16.6	9.75	72.4	5.60	5.73	
Min.	1.46	1.39	<0.5	2.44	<0.8	0.810	<0.3	0.300	0.255	<0.3	2.51	4.14	0.520	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.18	1.10	4.64	1.82	4.20	1.36	0.330	0.957	0.928	0.185	1.84
Feb	3.39	3.23	14.5	3.28	10.3	2.68	0.637	2.12	2.06	0.481	9.40
Mar	7.30	7.04	20.4	5.70	16.0	4.29	1.08	2.91	2.82	0.714	15.5
Apr	4.09	3.99	12.7	2.87	8.00	1.69	0.704	1.14	1.11	0.172	12.7
May	4.70	4.61	16.0	2.48	10.2	1.44	0.579	1.59	1.56	0.154	14.8
June	3.79	3.74	9.32	2.13	6.67	0.938	0.356	1.08	1.06	0.148	8.88
July	1.20	1.16	1.77	1.20	0.625	0.761	0.331	0.362	0.346	0.0715	2.89
Aug	2.23	2.13	6.97	1.99	3.07	1.66	0.513	0.632	0.596	0.157	8.69
Sept	3.28	3.18	4.80	2.21	2.81	1.76	0.302	0.606	0.569	0.195	7.10
Oct	4.29	4.19	9.28	2.82	6.12	1.63	0.358	0.894	0.859	0.129	10.0
Nov	2.36	2.31	9.27	2.08	4.94	0.796	0.193	1.10	1.08	0.636	8.37
Dec	1.88	1.83	5.13	2.05	6.53	0.767	0.347	2.16	2.14	1.49	3.92
Annual	39.7	38.5	115	30.6	79.5	19.8	5.74	15.6	15.1	4.53	104

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100

Terms and abbreviations are given in Table 3.5.

Table 3.38 Monthly results

Site: Tanah Rata

Country: Malaysia

Code: MYA002

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	0.818	0.468	0.551	5.38	<0.8	5.80	2.18	1.01	0.881	<0.3	4.70	5.33	0.287	118
Feb	10.9	10.5	10.8	5.58	14.4	6.59	2.31	3.45	3.31	0.554	16.0	4.80	1.18	46.6
Mar	7.56	7.07	11.5	6.74	19.2	8.13	1.93	7.66	7.48	0.927	3.85	5.41	0.698	85.4
Apr	5.02	4.81	8.48	3.97	12.1	3.46	1.56	2.73	2.66	<0.3	6.09	5.22	0.550	124
May	3.37	3.20	6.07	2.96	9.69	2.88	1.82	1.26	1.20	<0.3	9.16	5.04	0.560	304
June	3.65	3.47	5.59	5.78	5.96	3.05	1.61	3.28	3.22	<0.3	12.1	4.92	0.597	293
July	3.64	3.14	5.47	6.23	5.75	8.20	1.64	1.28	1.11	0.436	8.30	5.08	0.557	103
Aug	5.37	4.98	6.62	3.62	24.4	6.38	4.36	2.38	2.24	<0.3	6.61	5.18	0.767	332
Sept	3.49	3.27	3.18	4.26	4.58	3.56	2.06	2.18	2.11	<0.3	9.90	5.00	0.529	348
Oct	3.78	3.43	4.84	3.14	4.97	5.77	2.65	1.60	1.47	<0.3	17.1	4.77	0.849	433
Nov	2.01	1.90	4.65	2.20	4.26	1.94	1.44	0.582	0.540	<0.3	6.26	5.20	0.438	469
Dec	4.28	4.20	5.38	1.92	3.53	1.31	0.860	1.85	1.82	0.858	14.5	4.84	0.690	342
Annual	3.80	3.56	5.36	3.64	8.08	3.98	2.07	1.97	1.88	<0.3	10.2	4.99	0.623	2999
Max.	18.6	17.9	29.2	28.8	68.8	23.0	8.79	24.0	23.8	2.08	28.2	6.52	1.51	
Min.	0.330	<0.3	<0.5	<0.5	<0.8	0.810	0.410	<0.2	<0.2	<0.3	0.302	4.55	0.190	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.0968	0.0554	0.0652	0.636	0.0759	0.686	0.258	0.119	0.104	<0.01	0.555
Feb	0.510	0.491	0.504	0.260	0.670	0.307	0.108	0.161	0.154	0.0258	0.746
Mar	0.646	0.604	0.983	0.576	1.64	0.694	0.165	0.654	0.639	0.0791	0.329
Apr	0.624	0.598	1.06	0.494	1.50	0.430	0.194	0.340	0.330	0.0338	0.758
May	1.03	0.972	1.85	0.900	2.94	0.875	0.554	0.383	0.365	0.0754	2.78
June	1.07	1.02	1.64	1.69	1.75	0.893	0.472	0.962	0.942	0.0630	3.54
July	0.374	0.323	0.562	0.640	0.591	0.843	0.168	0.132	0.114	0.0448	0.854
Aug	1.78	1.65	2.20	1.20	8.11	2.11	1.44	0.789	0.743	0.0490	2.19
Sept	1.21	1.14	1.11	1.48	1.59	1.24	0.715	0.759	0.732	0.0617	3.44
Oct	1.64	1.49	2.10	1.36	2.15	2.50	1.15	0.693	0.638	0.0205	7.42
Nov	0.945	0.891	2.18	1.03	2.00	0.909	0.674	0.273	0.254	0.108	2.94
Dec	1.46	1.44	1.84	0.656	1.21	0.447	0.295	0.633	0.623	0.294	4.98
Annual	11.4	10.7	16.1	10.9	24.2	11.9	6.19	5.90	5.64	0.855	30.5

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.39 Monthly results

Site: Danum Valley

Country: Malaysia

Code: MYA003

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	*	*	*	217
Feb	1.50	0.621	<0.5	21.8	<0.8	14.6	1.73	4.17	3.85	2.87	5.75	5.24	0.470	247
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	109
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	111
May	1.58	0.355	<0.5	89.8	<0.8	20.3	33.2	8.50	8.06	22.9	7.59	5.12	1.82	345
June	0.923	0.758	<0.5	4.66	<0.8	2.74	3.83	5.25	5.19	1.48	9.81	5.01	0.628	342
July	2.09	1.85	0.555	4.51	<0.8	3.98	1.40	2.17	2.08	0.957	6.20	5.21	0.563	336
Aug	1.48	1.37	<0.5	3.44	<0.8	1.84	1.10	1.38	1.34	0.651	5.56	5.25	0.342	243
Sept	2.47	2.11	<0.5	5.91	<0.8	6.06	9.26	1.66	1.53	1.59	5.33	5.27	0.453	196
Oct	2.62	2.45	<0.5	4.20	8.62	2.74	12.3	4.23	4.17	1.95	3.75	5.43	0.458	347
Nov	<0.3	<0.3	3.55	4.49	1.26	1.20	0.740	0.330	0.304	<0.3	3.98	5.40	0.300	421
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	298
Annual	1.74	1.44	<0.5	11.1	2.11	5.03	7.39	3.61	3.50	2.82	6.23	5.21	0.571	3212
Max.	4.93	4.22	3.55	89.8	17.8	20.3	33.2	27.8	27.7	22.9	12.6	6.17	1.82	
Min.	<0.3	<0.3	<0.5	1.00	<0.8	0.610	0.610	0.330	0.304	<0.3	0.676	4.90	0.150	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	*
Feb	0.371	0.154	0.0742	5.39	<0.01	3.60	0.428	1.03	0.953	0.709	1.42
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	0.545	0.122	0.100	31.0	<0.01	7.01	11.5	2.93	2.78	7.91	2.62
June	0.316	0.259	0.0289	1.60	<0.01	0.937	1.31	1.80	1.78	0.507	3.36
July	0.704	0.623	0.186	1.52	0.0553	1.34	0.472	0.728	0.699	0.322	2.08
Aug	0.359	0.333	0.0311	0.836	0.0273	0.447	0.267	0.335	0.325	0.158	1.35
Sept	0.484	0.413	0.0450	1.16	0.141	1.19	1.81	0.326	0.300	0.311	1.04
Oct	0.909	0.852	<0.01	1.46	2.99	0.951	4.28	1.47	1.45	0.677	1.30
Nov	0.0884	0.0580	1.49	1.89	0.531	0.505	0.312	0.139	0.128	<0.01	1.68
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	5.59	4.62	1.11	35.8	6.77	16.2	23.7	11.6	11.2	9.07	20.0

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Feb	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	100
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	100
May	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	100
Aug	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	100
Nov	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	100

Terms and abbreviations are given in Table 3.5.

Table 3.40 Monthly results

Site: Kuching

Country: Malaysia

Code: MYA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	1.91	1.43	<0.5	7.35	2.53	8.02	3.32	1.95	1.78	0.650	3.80	5.42	0.360	717
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	661
Mar	1.55	1.20	<0.5	4.11	<0.8	5.87	2.07	2.12	1.99	0.600	3.63	5.44	0.340	629
Apr	1.14	0.954	<0.5	5.89	<0.8	3.58	1.11	5.53	5.45	0.308	4.38	5.36	0.374	173
May	0.886	0.795	<0.5	3.93	0.909	2.33	0.939	2.73	2.68	<0.3	3.79	5.42	0.277	550
June	1.97	1.78	<0.5	5.86	<0.8	3.26	1.26	5.27	5.20	0.333	5.09	5.29	0.367	302
July	*	*	*	*	*	*	*	*	*	*	*	*	*	137
Aug	2.45	2.18	4.37	19.8	2.81	4.37	1.12	4.28	4.18	0.373	4.84	5.32	0.448	716
Sept	0.818	0.454	<0.5	10.5	1.48	6.03	3.36	6.49	6.36	0.923	3.94	5.40	0.426	96.6
Oct	<0.3	<0.3	<0.5	2.93	<0.8	1.31	<0.3	3.89	3.86	<0.3	5.50	5.26	0.340	389
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	351
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	265
Annual	1.63	1.40	1.64	10.4	1.57	4.01	1.38	3.82	3.73	0.353	4.36	5.36	0.372	4986
Max.	24.6	21.6	60.0	190	29.6	49.0	23.3	45.4	44.4	5.47	8.13	6.70	2.38	
Min.	<0.3	<0.3	<0.5	1.78	<0.8	<0.3	<0.3	0.860	0.823	<0.3	0.200	5.09	0.210	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.37	1.02	0.100	5.27	1.81	5.75	2.38	1.40	1.27	0.466	2.73
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	0.974	0.752	0.0629	2.58	<0.01	3.69	1.30	1.33	1.25	0.377	2.28
Apr	0.197	0.165	<0.01	1.02	0.110	0.620	0.192	0.958	0.945	0.0534	0.759
May	0.488	0.437	0.0685	2.16	0.500	1.28	0.517	1.50	1.48	0.0712	2.08
June	0.595	0.536	0.0523	1.77	<0.01	0.982	0.380	1.59	1.57	0.101	1.54
July	*	*	*	*	*	*	*	*	*	*	*
Aug	1.75	1.56	3.13	14.2	2.01	3.13	0.805	3.06	2.99	0.267	3.47
Sept	0.0790	0.0439	0.0197	1.02	0.143	0.583	0.325	0.627	0.614	0.0892	0.380
Oct	0.0584	0.0277	0.0311	1.14	<0.01	0.510	0.0740	1.51	1.50	0.0973	2.14
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	8.12	7.00	8.18	52.1	7.84	20.0	6.87	19.1	18.6	1.76	21.7

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	100
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Mar	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	100
July	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	97.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3	100
Oct	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	100
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	100

Terms and abbreviations are given in Table 3.5.

Table 3.41 Monthly results

Site: Gunung Brinchang

Country: Malaysia

Code: MYA005

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 3.5.

Table 3.42 Monthly results

Site: Khan-Uul

Country: Mongolia

Code: MNA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	38.1	37.3	47.0	10.7	33.6	14.2	2.33	52.8	52.5	5.19	0.624	6.20	2.00	19.6
June	19.6	19.3	18.1	3.85	31.9	4.67	3.69	28.7	28.6	3.18	1.42	5.85	1.07	72.8
July	11.3	11.1	17.1	2.56	40.7	3.11	0.847	14.7	14.6	1.69	0.862	6.06	0.797	58.0
Aug	20.8	20.3	22.7	4.06	24.7	8.89	1.33	24.9	24.7	2.36	1.56	5.81	1.06	59.9
Sept	86.6	86.3	65.8	8.82	69.8	5.43	2.59	77.0	76.9	10.3	1.80	5.74	3.19	7.5
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	21.7	21.3	23.3	4.35	33.7	6.30	2.12	27.8	27.6	2.98	1.25	5.90	1.15	218
Max.	135	134	161	17.5	142	45.2	11.3	234	234	26.3	10.7	6.90	5.37	
Min.	8.10	8.00	3.70	1.69	<0.8	1.30	0.510	9.50	9.47	0.820	0.126	4.97	0.540	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.747	0.730	0.920	0.210	0.659	0.278	0.0456	1.03	1.03	0.102	0.0122
June	1.43	1.41	1.32	0.280	2.33	0.340	0.269	2.09	2.08	0.231	0.104
July	0.654	0.643	0.993	0.148	2.36	0.180	0.0491	0.853	0.849	0.0977	0.0500
Aug	1.24	1.21	1.36	0.243	1.48	0.532	0.0795	1.49	1.48	0.141	0.0931
Sept	0.647	0.645	0.492	0.0659	0.522	0.0405	0.0193	0.575	0.574	0.0773	0.0135
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	4.72	4.64	5.08	0.947	7.35	1.37	0.462	6.05	6.02	0.650	0.272

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.43 Monthly results

Site: Terelj

Country: Mongolia

Code: MNA002

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	53.4	48.4	11.4	4.02	16.6	83.5	1.92	12.5	10.7	1.93	0.587	6.23	1.03	4.6
June	11.1	10.2	8.47	2.28	28.4	14.7	3.25	20.2	19.9	2.68	0.939	6.03	0.756	35.4
July	21.5	19.8	10.9	2.52	25.5	28.2	1.02	9.55	8.94	0.920	0.763	6.12	0.625	41.8
Aug	22.6	21.0	12.4	2.75	23.6	27.4	1.30	8.79	8.20	1.22	0.903	6.04	0.931	66.3
Sept	21.8	21.5	23.1	6.77	25.5	3.91	15.1	18.5	18.4	5.35	2.14	5.67	1.20	2.3
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	20.5	19.0	11.2	2.68	25.1	26.0	1.91	11.9	11.4	1.56	0.882	6.05	0.812	150
Max.	77.1	69.4	26.3	7.62	52.1	128	15.1	38.7	36.9	5.35	3.55	6.64	1.89	
Min.	4.48	4.30	3.23	0.850	2.22	1.30	0.510	4.49	3.72	0.410	0.229	5.45	0.370	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.243	0.221	0.0520	0.0183	0.0755	0.380	<0.01	0.0571	0.0489	<0.01	<0.01
June	0.392	0.361	0.300	0.0808	1.00	0.521	0.115	0.715	0.704	0.0949	0.0332
July	0.901	0.829	0.456	0.105	1.07	1.18	0.0427	0.399	0.374	0.0384	0.0319
Aug	1.50	1.39	0.823	0.183	1.57	1.82	0.0862	0.583	0.544	0.0806	0.0599
Sept	0.0503	0.0497	0.0533	0.0156	0.0589	<0.01	0.0349	0.0426	0.0424	0.0124	<0.01
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	3.09	2.85	1.68	0.403	3.77	3.91	0.287	1.80	1.71	0.235	0.133

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.44 Monthly results

Site: Yangon

Country: Myanmar

Code: MMA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	18.9	17.3	18.1	31.8	24.7	27.0	15.1	6.26	5.68	4.94	0.126	6.90	2.63	2.7
Apr	13.8	11.9	19.2	38.4	66.1	30.8	8.34	14.4	13.8	3.87	0.126	6.90	2.20	2.9
May	7.55	6.97	9.04	20.8	19.6	9.51	7.22	15.9	15.7	3.51	0.207	6.68	0.584	294
June	9.82	8.67	12.9	26.5	20.0	19.1	5.90	7.54	7.13	3.16	0.170	6.77	0.643	458
July	5.60	4.64	8.16	25.6	9.25	15.9	1.93	7.16	6.82	2.10	0.227	6.64	0.511	805
Aug	10.7	10.1	5.41	16.9	5.96	9.49	1.44	6.19	5.99	1.70	0.253	6.60	0.437	300
Sept	6.75	6.17	9.08	13.8	7.29	9.52	1.57	5.38	5.18	1.50	0.222	6.65	0.362	646
Oct	12.4	12.0	4.87	50.7	4.53	6.21	19.8	5.23	5.10	0.755	0.302	6.52	0.653	384
Nov	7.04	6.75	6.37	31.2	2.03	4.75	9.53	7.16	7.06	1.66	0.224	6.65	0.470	78.5
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	8.14	7.40	8.45	25.2	10.4	12.2	5.47	7.36	7.10	2.05	0.227	6.64	0.519	2972
Max.	22.8	21.6	19.2	82.6	66.1	39.2	31.2	35.7	35.2	8.93	0.316	6.90	2.63	
Min.	3.10	1.54	3.40	12.1	<0.8	3.91	0.690	3.52	3.43	0.370	0.126	6.50	0.310	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.0510	0.0466	0.0489	0.0859	0.0667	0.0729	0.0409	0.0169	0.0153	0.0133	<0.01
Apr	0.0400	0.0346	0.0557	0.111	0.192	0.0894	0.0242	0.0418	0.0399	0.0112	<0.01
May	2.22	2.05	2.66	6.13	5.77	2.80	2.13	4.68	4.62	1.03	0.0610
June	4.50	3.97	5.92	12.1	9.17	8.74	2.70	3.45	3.27	1.45	0.0779
July	4.51	3.74	6.57	20.6	7.45	12.8	1.55	5.77	5.49	1.69	0.183
Aug	3.21	3.03	1.62	5.08	1.79	2.85	0.431	1.86	1.80	0.510	0.0761
Sept	4.36	3.99	5.87	8.91	4.71	6.15	1.01	3.48	3.35	0.971	0.144
Oct	4.75	4.61	1.87	19.5	1.74	2.38	7.61	2.01	1.96	0.290	0.116
Nov	0.552	0.530	0.500	2.45	0.159	0.373	0.748	0.562	0.554	0.130	0.0176
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	24.2	22.0	25.1	74.9	31.1	36.3	16.2	21.9	21.1	6.09	0.675

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.45 Monthly results

Site: Manila Observatory

Country: Philippines

Code: PHA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	9.86	9.39	15.2	19.9	40.6	9.83	2.62	15.7	15.4	3.97	0.208	6.68	1.24	53.3
Feb	33.3	30.8	34.9	46.7	*	41.9	7.90	32.5	31.6	10.2	*	*	*	0.8
Mar	6.52	5.94	12.1	7.40	46.8	9.61	1.64	15.5	15.3	3.95	2.82	5.55	0.850	46.7
Apr	41.5	35.8	85.3	52.3	116	93.1	17.0	102	100	11.7	*	*	*	1.5
May	31.8	31.2	33.3	14.8	70.7	10.8	2.01	17.9	17.7	3.59	7.87	5.10	2.37	49.2
June	33.4	33.0	27.2	10.6	40.8	6.75	0.501	8.69	8.55	2.00	49.7	4.30	2.65	142
July	10.9	8.57	9.85	43.0	13.1	37.9	2.09	8.83	8.01	5.44	4.60	5.34	1.04	284
Aug	24.0	23.0	25.5	16.2	42.6	16.5	1.63	14.3	14.0	3.72	3.29	5.48	1.47	668
Sept	13.5	12.4	8.59	18.1	19.0	17.6	1.02	5.38	4.99	2.23	7.45	5.13	1.06	240
Oct	13.7	12.6	23.7	22.0	22.1	17.6	1.02	7.22	6.84	2.88	5.49	5.26	1.10	387
Nov	15.7	14.8	17.8	19.7	25.0	14.9	3.36	8.13	7.81	2.89	4.61	5.34	1.03	137
Dec	31.1	30.8	60.7	30.1	58.7	5.32	1.64	7.76	7.65	0.561	1.19	5.92	1.16	43.2
Annual	18.7	17.6	21.0	21.3	31.7	18.4	1.59	10.5	10.1	3.40	7.65	5.12	1.34	2053
Max.	52.0	51.7	115	85.4	116	93.1	17.0	102	100	11.7	77.6	7.24	3.52	
Min.	0.452	<0.3	<0.5	1.05	<0.8	<0.3	<0.3	2.30	1.81	<0.3	0.0575	4.11	0.502	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.526	0.501	0.809	1.06	2.17	0.524	0.140	0.835	0.823	0.212	0.0111
Feb	0.0279	0.0258	0.0293	0.0392	*	0.0351	<0.01	0.0273	0.0265	<0.01	*
Mar	0.304	0.277	0.565	0.345	2.19	0.449	0.0764	0.722	0.712	0.184	0.132
Apr	0.0637	0.0551	0.131	0.0803	0.178	0.143	0.0261	0.157	0.154	0.0180	*
May	1.56	1.53	1.64	0.729	3.47	0.529	0.0989	0.881	0.870	0.176	0.387
June	4.73	4.68	3.86	1.50	5.79	0.957	0.0711	1.23	1.21	0.284	7.05
July	3.08	2.44	2.80	12.2	3.72	10.8	0.595	2.51	2.28	1.55	1.31
Aug	16.1	15.4	17.0	10.8	28.4	11.1	1.09	9.56	9.32	2.49	2.20
Sept	3.24	2.98	2.06	4.34	4.55	4.23	0.245	1.29	1.20	0.534	1.79
Oct	5.29	4.88	9.19	8.53	8.55	6.82	0.395	2.80	2.65	1.12	2.12
Nov	2.15	2.02	2.43	2.70	3.43	2.04	0.461	1.12	1.07	0.396	0.633
Dec	1.34	1.33	2.62	1.30	2.54	0.230	0.0710	0.335	0.330	0.0242	0.0516
Annual	38.4	36.1	43.2	43.7	65.0	37.8	3.27	21.5	20.6	6.99	15.7

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	0	100	100	100	100	100	0	0	0	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	0	0	0	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	99.9	99.9	99.9	100

Terms and abbreviations are given in Table 3.5.

Table 3.46 Monthly results

Site: Los Baños

Country: Philippines

Code: PHA002

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	12.0	4.83	18.8	109	89.3	119	6.91	10.0	7.43	15.9	0.0846	7.07	0.971	21.9
Feb	5.34	2.18	6.00	59.5	*	52.4	4.60	13.6	12.5	<0.3	0.229	6.64	1.19	9.1
Mar	26.1	5.56	15.6	26.9	38.4	40.3	12.6	11.5	10.6	6.26	1.12	5.95	3.57	12.6
Apr	31.3	29.3	28.4	44.5	36.1	33.1	8.19	16.2	15.5	7.97	28.8	4.54	3.15	13.1
May	5.41	5.16	3.72	4.86	11.6	4.12	0.405	3.58	3.49	1.55	4.96	5.30	0.467	210
June	47.2	46.5	34.5	20.1	18.1	12.8	2.22	6.59	6.31	2.38	61.5	4.21	3.41	191
July	11.4	11.1	9.35	6.03	38.5	4.85	10.6	4.06	3.96	1.36	1.05	5.98	0.826	104
Aug	33.9	33.0	10.3	15.4	39.0	14.5	4.84	2.74	2.42	2.06	41.7	4.38	2.24	161
Sept	8.14	7.35	4.88	3.26	4.19	9.69	1.31	2.66	2.45	1.08	10.4	4.98	0.654	255
Oct	8.12	7.71	6.97	9.17	7.70	6.89	1.16	2.77	2.62	1.48	2.74	5.56	0.544	222
Nov	8.54	7.13	6.62	25.7	56.0	16.6	1.22	0.497	0.469	3.22	0.578	6.24	0.996	58.8
Dec	6.37	5.14	7.76	36.9	8.13	20.4	4.76	<0.2	<0.2	2.06	1.36	5.87	0.656	307
Annual	15.5	14.5	10.6	17.5	17.7	13.6	3.17	3.15	2.93	2.04	15.2	4.82	1.19	1564
Max.	95.0	67.3	93.9	447	126	410	40.2	78.6	75.5	56.8	87.1	7.26	11.9	
Min.	0.540	<0.3	2.03	<0.5	<0.8	<0.3	<0.3	<0.2	<0.2	<0.3	0.0550	4.06	0.135	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.263	0.106	0.413	2.38	1.96	2.61	0.151	0.219	0.163	0.348	<0.01
Feb	0.0485	0.0198	0.0545	0.540	*	0.476	0.0418	0.123	0.113	<0.01	<0.01
Mar	0.328	0.0699	0.196	0.338	0.482	0.507	0.159	0.144	0.133	0.0787	0.0140
Apr	0.411	0.385	0.373	0.585	0.474	0.435	0.108	0.213	0.204	0.105	0.379
May	1.13	1.08	0.779	1.02	2.43	0.863	0.0849	0.750	0.731	0.324	1.04
June	9.00	8.85	6.58	3.83	3.45	2.44	0.423	1.26	1.20	0.454	11.7
July	1.19	1.15	0.972	0.627	4.00	0.504	1.10	0.422	0.411	0.141	0.109
Aug	5.46	5.32	1.66	2.48	6.28	2.34	0.780	0.441	0.391	0.332	6.72
Sept	2.08	1.87	1.24	0.831	1.07	2.47	0.335	0.679	0.626	0.276	2.66
Oct	1.80	1.71	1.55	2.03	1.71	1.53	0.258	0.614	0.581	0.329	0.607
Nov	0.502	0.419	0.389	1.51	3.29	0.977	0.0719	0.0292	0.0276	0.189	0.0340
Dec	1.96	1.58	2.38	11.3	2.50	6.26	1.46	0.0593	0.0268	0.631	0.416
Annual	24.2	22.6	16.6	27.4	27.7	21.3	4.95	4.92	4.59	3.20	23.8

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	76.4	76.4	76.4	100
Feb	85.7	85.7	85.7	85.7	0	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	100
Mar	100	79.2	100	100	71.8	79.2	79.2	79.2	79.2	79.2	92.6	92.6	92.6	100
Apr	100	100	100	100	100	100	100	100	100	100	90.5	90.5	90.5	100
May	100	100	100	100	99.6	100	100	100	100	100	99.6	99.6	99.6	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	99.4	100	100	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	94.2	100	100	100	94.2	94.2	94.2	94.2	94.2	95.9	95.9	95.9	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.9	99.4	99.9	99.9	99.1	99.4	99.4	99.4	99.4	99.4	99.1	99.1	99.1	100

Terms and abbreviations are given in Table 3.5.

Table 3.47 Monthly results

Site: Mt. Sto. Tomas

Country: Philippines

Code: PHA003

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	7.83	7.24	19.2	32.9	<0.8	9.79	3.40	9.08	8.87	<0.3	0.479	6.32	1.75	6.2
Feb	3.24	*	10.7	17.7	*	*	*	*	*	*	0.269	6.57	1.18	57.7
Mar	3.84	3.78	<0.5	19.8	6.04	1.09	4.04	5.86	5.84	<0.3	0.288	6.54	1.14	15.8
Apr	**	**	**	**	**	**	**	**	**	**	**	**	**	**
May	11.5	11.5	5.72	8.12	17.8	0.555	4.56	1.52	1.51	<0.3	4.23	5.37	1.34	329
June	10.9	10.9	7.68	8.40	11.3	<0.3	4.69	0.622	0.620	<0.3	0.534	6.27	1.01	313
July	3.99	3.68	1.61	13.1	2.52	5.16	5.43	1.69	1.58	<0.3	2.50	5.60	0.773	359
Aug	6.12	5.88	5.81	16.2	4.28	3.85	5.06	3.12	3.04	3.84	1.85	5.73	0.797	312
Sept	2.46	2.31	1.48	12.3	3.73	2.54	7.02	14.8	14.8	2.41	0.549	6.26	0.671	680
Oct	3.39	2.90	2.94	15.6	3.91	8.13	2.78	3.25	3.08	4.27	0.891	6.05	0.385	498
Nov	1.41	0.934	1.84	13.5	1.42	7.93	1.46	1.67	1.62	2.26	1.04	5.98	0.230	296
Dec	4.69	4.43	12.7	10.8	<0.8	4.35	3.81	9.61	9.51	11.9	0.248	6.61	0.958	8.9
Annual	5.09	4.89	3.66	12.8	5.91	4.08	4.69	5.21	5.14	2.03	1.45	5.84	0.732	2875
Max.	26.8	26.8	19.2	33.7	28.9	18.1	16.8	91.5	91.5	11.9	16.6	6.82	1.75	
Min.	0.656	<0.3	<0.5	<0.5	<0.8	<0.3	0.614	<0.2	<0.2	<0.3	0.151	4.78	0.194	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.0486	0.0449	0.119	0.205	<0.01	0.0608	0.0211	0.0564	0.0551	<0.01	<0.01
Feb	0.187	*	0.619	1.02	*	*	*	*	*	*	0.0155
Mar	0.0605	0.0595	<0.01	0.312	0.0952	0.0171	0.0637	0.0924	0.0920	<0.01	<0.01
Apr	**	**	**	**	**	**	**	**	**	**	**
May	3.78	3.77	1.88	2.67	5.83	0.182	1.50	0.499	0.497	<0.01	1.39
June	3.41	3.41	2.41	2.63	3.55	0.0307	1.47	0.195	0.194	<0.01	0.167
July	1.43	1.32	0.577	4.72	0.904	1.85	1.95	0.606	0.566	<0.01	0.898
Aug	1.91	1.83	1.81	5.06	1.34	1.20	1.58	0.974	0.949	1.20	0.577
Sept	1.67	1.57	1.00	8.34	2.54	1.72	4.77	10.1	10.0	1.64	0.373
Oct	1.69	1.44	1.46	7.77	1.95	4.04	1.38	1.62	1.53	2.13	0.443
Nov	0.419	0.277	0.546	4.01	0.420	2.35	0.433	0.495	0.481	0.671	0.308
Dec	0.0416	0.0392	0.112	0.0959	<0.01	0.0385	0.0337	0.0851	0.0842	0.106	<0.01
Annual	14.6	14.0	10.5	36.8	17.0	11.7	13.5	15.0	14.8	5.83	4.18

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	0	100	100	0	0	0	0	0	0	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	**	**	**	**	**	**	**	**	**	**	**	**	**	**
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	100	100	100	100
Annual	99.9	97.9	99.9	99.9	97.9	97.9	97.9	97.9	97.9	97.9	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.48 Monthly results

Site: Ganghwa

Country: R of Korea

Code: KRA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	26.2	24.7	89.1	33.5	117	24.9	4.87	11.2	10.6	5.64	13.9	4.86	2.71	23.1
Feb	15.0	14.5	25.0	14.2	46.9	6.75	2.47	4.73	4.58	1.46	5.24	5.28	1.19	56.4
Mar	11.2	10.1	24.4	25.5	40.3	18.1	0.692	20.1	19.7	3.32	0.646	6.19	1.68	17.0
Apr	18.0	16.5	39.6	32.9	73.0	23.6	1.55	23.4	22.9	4.89	0.823	6.08	2.26	28.1
May	13.0	12.0	31.7	26.8	41.5	16.5	2.47	6.87	6.51	3.09	41.2	4.38	2.22	55.0
June	15.8	14.7	35.7	28.8	53.7	17.8	46.0	14.5	14.1	8.48	2.04	5.69	2.29	49.5
July	7.02	4.88	9.14	48.3	10.9	35.5	8.38	2.44	1.82	4.07	4.73	5.33	1.15	260
Aug	8.87	5.74	19.2	65.4	23.7	51.9	7.36	4.17	3.05	6.15	6.00	5.22	1.77	44.7
Sept	13.1	12.4	47.2	19.5	71.0	11.8	15.6	7.44	7.18	3.33	3.79	5.42	2.00	49.1
Oct	7.57	7.10	16.2	17.7	8.05	7.91	25.7	1.34	1.17	1.04	12.0	4.92	1.06	26.3
Nov	15.0	10.6	20.1	94.3	23.0	73.7	3.95	7.14	5.55	8.32	6.28	5.20	2.32	26.3
Dec	28.1	23.5	173	66.6	125	75.6	7.36	16.8	15.2	8.15	81.3	4.09	6.28	4.4
Annual	11.3	9.57	24.7	39.9	34.0	28.6	10.6	6.41	5.85	4.34	8.66	5.06	1.64	640
Max.	145	139	261	273	307	252	294	100	98.4	55.4	93.3	6.95	12.5	
Min.	0.723	0.495	2.11	6.16	<0.8	<0.3	<0.3	<0.2	<0.2	<0.3	0.112	4.03	0.420	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.606	0.571	2.06	0.775	2.71	0.575	0.113	0.258	0.245	0.130	0.322
Feb	0.844	0.821	1.41	0.801	2.65	0.381	0.140	0.267	0.259	0.0821	0.296
Mar	0.191	0.173	0.417	0.435	0.687	0.309	0.0118	0.343	0.336	0.0565	0.0110
Apr	0.505	0.465	1.11	0.925	2.05	0.664	0.0436	0.658	0.644	0.137	0.0231
May	0.715	0.661	1.74	1.47	2.28	0.906	0.136	0.378	0.358	0.170	2.27
June	0.782	0.729	1.77	1.43	2.66	0.879	2.28	0.716	0.697	0.420	0.101
July	1.83	1.27	2.38	12.6	2.85	9.23	2.18	0.635	0.473	1.06	1.23
Aug	0.396	0.257	0.858	2.92	1.06	2.32	0.329	0.186	0.136	0.275	0.268
Sept	0.645	0.610	2.32	0.957	3.49	0.579	0.768	0.365	0.353	0.164	0.186
Oct	0.199	0.186	0.426	0.464	0.211	0.208	0.675	0.0352	0.0307	0.0272	0.315
Nov	0.394	0.278	0.529	2.48	0.603	1.94	0.104	0.188	0.146	0.218	0.165
Dec	0.124	0.104	0.762	0.294	0.551	0.333	0.0325	0.0742	0.0670	0.0359	0.358
Annual	7.23	6.12	15.8	25.5	21.8	18.3	6.81	4.10	3.74	2.77	5.54

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.49 Monthly results

Site: Jeju

Country: R of Korea

Code: KRA002

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	42.8	15.0	53.7	485	63.9	460	11.0	27.5	17.5	46.4	1.14	5.94	8.23	15.7
Apr	37.4	24.6	62.1	178	55.3	214	9.29	11.2	6.58	16.8	3.32	5.48	4.67	48.9
May	17.5	9.96	13.0	115	9.58	125	1.78	3.28	0.714	10.2	2.70	5.57	2.59	135
June	20.3	16.7	18.7	23.8	15.6	59.0	0.337	14.2	12.9	3.06	1.07	5.97	1.44	288
July	32.7	3.13	51.3	570	31.9	519	9.48	15.3	4.10	50.1	5.61	5.25	8.62	138
Aug	23.2	9.83	43.0	216	49.3	223	4.62	5.53	0.911	18.2	4.30	5.37	5.53	42.0
Sept	30.3	21.9	24.3	104	37.0	138	2.47	4.44	1.45	12.8	3.19	5.50	3.99	60.7
Oct	39.7	25.4	22.3	241	36.3	237	4.74	5.70	1.02	21.8	6.11	5.21	5.38	84.0
Nov	18.2	11.3	14.0	120	14.0	136	1.88	2.90	0.741	10.1	1.58	5.80	2.51	208
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	24.7	14.0	25.6	174	23.7	185	3.34	9.01	5.25	15.9	2.79	5.55	3.68	1019
Max.	80.7	51.1	155	1290	113	1047	35.2	39.4	27.5	113	14.8	6.43	19.3	
Min.	7.30	<0.3	2.30	1.66	2.82	24.5	<0.3	0.374	<0.2	0.469	0.372	4.83	0.430	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.672	0.236	0.842	7.62	1.00	7.22	0.173	0.432	0.275	0.728	0.0179
Apr	1.83	1.20	3.04	8.69	2.70	10.4	0.454	0.547	0.322	0.821	0.162
May	2.36	1.34	1.76	15.5	1.29	16.9	0.241	0.443	0.0963	1.37	0.365
June	5.83	4.81	5.38	6.84	4.48	17.0	0.0969	4.07	3.72	0.878	0.309
July	4.50	0.431	7.05	78.4	4.39	71.3	1.30	2.10	0.564	6.89	0.771
Aug	0.976	0.413	1.81	9.05	2.07	9.36	0.194	0.232	0.0382	0.766	0.181
Sept	1.84	1.33	1.47	6.34	2.25	8.37	0.150	0.269	0.0883	0.777	0.194
Oct	3.33	2.13	1.87	20.3	3.05	19.9	0.398	0.479	0.0853	1.83	0.513
Nov	3.78	2.34	2.90	25.0	2.92	28.3	0.390	0.601	0.154	2.10	0.329
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	25.1	14.2	26.1	178	24.2	189	3.40	9.18	5.34	16.2	2.84

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.50 Monthly results

Site: Imsil

Country: R of Korea

Code: KRA003

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	23.9	20.1	70.5	51.0	45.8	64.0	3.04	8.64	7.26	7.30	3.64	5.44	1.64	18.0
Feb	5.77	4.47	12.7	5.05	12.0	21.6	<0.3	0.962	0.542	<0.3	0.420	6.38	0.522	71.5
Mar	10.3	8.55	24.5	17.5	22.8	29.5	1.34	15.6	15.0	4.04	0.480	6.32	0.975	16.5
Apr	9.17	7.68	22.8	8.76	14.8	24.7	1.63	5.88	5.34	1.45	0.474	6.32	0.692	87.5
May	9.65	7.90	28.4	8.88	24.0	29.1	1.77	2.48	1.85	0.837	0.350	6.46	1.00	80.5
June	4.80	3.71	12.0	2.90	11.8	18.0	0.305	0.902	0.513	0.328	0.734	6.13	0.466	111
July	6.06	4.66	17.9	6.93	22.9	23.1	<0.3	1.02	0.565	0.570	0.869	6.06	0.671	448
Aug	11.4	10.5	22.0	3.40	44.3	14.7	0.732	1.40	1.08	0.595	0.463	6.33	1.29	52.5
Sept	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Oct	18.8	16.8	22.6	20.7	24.8	34.2	1.36	2.82	2.19	1.75	6.60	5.18	1.83	3.5
Nov	10.4	6.44	16.5	69.4	14.2	65.9	2.07	3.30	1.87	6.28	0.525	6.28	1.04	37.7
Dec	13.6	8.53	50.8	77.0	18.8	84.4	1.54	5.70	3.88	7.41	1.91	5.72	1.28	0.5
Annual	7.45	5.92	19.5	10.1	21.4	25.3	0.665	2.12	1.60	1.06	0.768	6.11	0.745	927
Max.	43.4	41.7	169	201	139	163	7.19	44.7	43.5	20.7	9.12	7.09	3.40	
Min.	1.19	<0.3	4.03	0.790	2.76	11.4	<0.3	<0.2	<0.2	<0.3	0.0813	5.04	0.250	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.431	0.361	1.27	0.918	0.825	1.15	0.0548	0.156	0.131	0.131	0.0655
Feb	0.413	0.320	0.906	0.361	0.858	1.55	<0.01	0.0688	0.0387	0.0165	0.0300
Mar	0.170	0.141	0.404	0.288	0.376	0.487	0.0221	0.258	0.247	0.0666	<0.01
Apr	0.803	0.672	1.99	0.766	1.29	2.16	0.143	0.514	0.468	0.127	0.0415
May	0.777	0.636	2.28	0.715	1.94	2.34	0.143	0.200	0.149	0.0674	0.0282
June	0.532	0.412	1.34	0.322	1.31	2.00	0.0339	0.100	0.0569	0.0365	0.0814
July	2.71	2.09	8.03	3.10	10.2	10.3	0.0914	0.457	0.253	0.255	0.389
Aug	0.598	0.552	1.15	0.178	2.33	0.770	0.0384	0.0736	0.0569	0.0312	0.0243
Sept	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct	0.0659	0.0587	0.0793	0.0724	0.0869	0.120	<0.01	<0.01	<0.01	<0.01	0.0231
Nov	0.393	0.243	0.621	2.62	0.537	2.49	0.0780	0.124	0.0706	0.237	0.0198
Dec	<0.01	<0.01	0.0254	0.0385	<0.01	0.0422	<0.01	<0.01	<0.01	<0.01	<0.01
Annual	6.90	5.49	18.1	9.37	19.8	23.5	0.617	1.96	1.48	0.978	0.711

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.51 Monthly results

Site: Listvyanka

Country: Russia

Code: RUA002

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	19.8	19.6	36.6	3.34	6.74	3.91	3.31	23.1	23.0	5.14	9.82	5.01	1.37	5.1
Feb	24.6	24.2	48.7	3.82	8.35	6.11	3.76	36.4	36.3	7.83	6.02	5.22	1.82	4.5
Mar	29.1	28.6	41.9	2.55	4.65	7.99	4.02	52.6	52.4	9.49	0.974	6.01	1.82	17.6
Apr	30.9	30.6	26.1	2.37	22.2	4.35	2.70	23.1	23.0	5.72	9.14	5.04	1.51	19.2
May	23.2	22.9	14.7	3.03	22.3	4.27	10.6	12.8	12.7	6.03	5.65	5.25	1.31	59.1
June	11.6	11.5	9.31	1.51	8.33	1.13	5.43	7.37	7.35	2.72	9.28	5.03	0.824	89.3
July	12.2	12.1	12.2	0.908	9.68	1.18	4.86	7.93	7.90	3.50	9.23	5.03	0.878	51.7
Aug	15.6	15.5	11.7	1.94	15.8	1.42	3.75	7.79	7.76	3.18	12.4	4.91	0.990	92.0
Sept	12.4	12.2	7.62	2.76	4.55	2.75	6.41	11.6	11.5	4.55	2.64	5.58	0.728	44.1
Oct	28.7	28.5	11.8	4.51	11.3	2.74	34.3	26.4	26.4	14.2	2.30	5.64	1.82	22.4
Nov	20.8	20.6	26.2	2.76	10.6	4.06	4.78	18.3	18.2	4.54	10.3	4.99	1.53	15.9
Dec	11.0	10.4	36.3	5.38	5.07	9.79	3.10	20.6	20.4	5.08	6.24	5.20	1.31	18.7
Annual	17.1	16.9	15.4	2.34	12.1	2.84	6.93	13.6	13.5	4.77	7.95	5.10	1.10	440
Max.	102	99.9	133	38.0	167	37.0	381	155	155	75.0	27.5	6.79	8.00	
Min.	2.94	2.89	2.60	0.560	<0.8	0.435	<0.3	3.74	3.73	0.800	0.162	4.56	0.313	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.101	0.0999	0.187	0.0170	0.0344	0.0200	0.0169	0.118	0.117	0.0262	0.0501
Feb	0.111	0.109	0.219	0.0172	0.0376	0.0275	0.0169	0.164	0.163	0.0352	0.0271
Mar	0.512	0.504	0.737	0.0449	0.0818	0.141	0.0707	0.925	0.922	0.167	0.0171
Apr	0.593	0.587	0.500	0.0455	0.426	0.0835	0.0518	0.444	0.442	0.110	0.175
May	1.37	1.35	0.868	0.179	1.32	0.252	0.625	0.756	0.751	0.356	0.334
June	1.03	1.03	0.831	0.134	0.743	0.101	0.485	0.658	0.656	0.242	0.828
July	0.628	0.625	0.631	0.0469	0.501	0.0611	0.251	0.410	0.408	0.181	0.477
Aug	1.44	1.43	1.08	0.178	1.46	0.130	0.345	0.717	0.714	0.292	1.14
Sept	0.545	0.537	0.336	0.122	0.200	0.121	0.283	0.510	0.508	0.201	0.117
Oct	0.643	0.639	0.265	0.101	0.253	0.0614	0.768	0.592	0.591	0.319	0.0516
Nov	0.331	0.328	0.417	0.0438	0.169	0.0645	0.0759	0.290	0.289	0.0722	0.163
Dec	0.205	0.194	0.679	0.101	0.0948	0.183	0.0579	0.385	0.381	0.0950	0.117
Annual	7.51	7.43	6.75	1.03	5.31	1.25	3.05	5.97	5.94	2.10	3.49

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.52 Monthly results

Site: Irkutsk

Country: Russia

Code: RUA003

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	36.9	35.8	38.5	19.4	26.9	17.8	4.05	48.8	48.4	9.65	1.69	5.77	2.29	5.6
Feb	36.9	35.0	22.1	26.4	29.0	30.4	4.73	49.9	49.2	11.3	0.348	6.46	2.48	10.6
Mar	184	164	71.8	335	52.6	329	17.6	233	226	49.7	0.0880	7.06	14.2	2.2
Apr	33.6	32.5	18.3	17.3	25.0	18.1	5.51	46.3	45.9	8.25	1.75	5.76	1.88	39.8
May	19.9	19.7	10.8	3.27	12.6	2.59	5.22	13.0	12.9	5.88	18.0	4.74	1.37	30.4
June	19.6	19.4	15.0	5.66	19.8	2.88	4.05	15.7	15.7	5.69	7.97	5.10	1.27	48.2
July	20.4	20.3	15.7	1.39	11.5	1.15	1.46	13.9	13.9	3.10	20.5	4.69	1.46	130
Aug	12.4	12.4	11.3	1.21	2.77	0.859	1.98	10.4	10.4	2.28	9.02	5.04	0.845	119
Sept	20.2	20.2	8.88	0.893	8.45	0.928	11.8	10.4	10.4	3.03	17.6	4.76	1.23	57.8
Oct	46.4	46.1	31.0	6.97	21.2	4.46	43.6	42.1	42.0	10.3	2.43	5.61	2.39	18.6
Nov	23.8	23.1	20.7	10.6	16.6	10.9	5.77	33.3	33.1	8.83	2.19	5.66	1.71	24.8
Dec	34.5	33.1	33.3	19.8	30.6	24.4	3.74	51.0	50.4	13.1	0.402	6.40	2.62	17.5
Annual	22.2	21.8	15.7	6.35	13.0	6.08	5.55	20.6	20.5	5.03	11.6	4.93	1.47	505
Max.	409	362	128	826	114	787	197	524	507	103	39.8	7.58	37.9	
Min.	3.44	3.41	2.31	<0.5	1.29	0.435	<0.3	2.50	2.46	0.820	0.0263	4.40	0.338	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.207	0.201	0.215	0.109	0.151	0.0997	0.0227	0.273	0.271	0.0540	<0.01
Feb	0.391	0.371	0.235	0.280	0.307	0.322	0.0502	0.529	0.522	0.120	<0.01
Mar	0.405	0.362	0.158	0.738	0.116	0.724	0.0387	0.512	0.496	0.109	<0.01
Apr	1.34	1.29	0.730	0.690	0.996	0.722	0.219	1.84	1.83	0.329	0.0697
May	0.605	0.600	0.328	0.0993	0.384	0.0786	0.159	0.395	0.393	0.179	0.547
June	0.946	0.937	0.724	0.273	0.955	0.139	0.195	0.758	0.755	0.274	0.384
July	2.65	2.64	2.04	0.180	1.49	0.149	0.189	1.81	1.80	0.402	2.67
Aug	1.48	1.48	1.35	0.145	0.331	0.103	0.237	1.25	1.24	0.273	1.08
Sept	1.17	1.17	0.513	0.0516	0.488	0.0536	0.682	0.600	0.598	0.175	1.02
Oct	0.865	0.860	0.578	0.130	0.394	0.0831	0.812	0.785	0.784	0.192	0.0453
Nov	0.590	0.574	0.514	0.263	0.411	0.270	0.143	0.826	0.821	0.219	0.0543
Dec	0.604	0.578	0.583	0.347	0.535	0.427	0.0654	0.892	0.883	0.229	<0.01
Annual	11.2	11.0	7.95	3.20	6.54	3.07	2.80	10.4	10.3	2.54	5.88

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	100	100	100	100
Mar	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.53 Monthly results

Site: Primorskaya

Country: Russia

Code: RUA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	2.40	5.62	*	6.0
Feb	63.6	59.6	34.5	50.2	43.8	66.1	18.7	49.7	48.3	19.3	2.27	5.64	3.37	5.5
Mar	38.5	38.2	15.5	18.1	65.4	5.20	5.40	16.7	16.6	4.90	1.15	5.94	1.78	68.0
Apr	33.3	30.1	19.8	59.5	58.3	52.4	5.21	19.4	18.2	5.60	2.32	5.63	2.23	45.4
May	28.9	26.9	16.5	61.3	87.4	32.4	12.8	8.02	7.32	3.82	2.74	5.56	2.19	89.5
June	20.6	19.7	10.5	42.8	38.0	15.9	16.6	8.18	7.84	5.12	3.38	5.47	1.49	96.5
July	9.25	8.85	7.44	18.4	26.4	6.62	7.23	3.29	3.14	1.21	3.64	5.44	0.843	172
Aug	31.3	30.1	7.21	53.2	70.3	20.2	15.1	7.65	7.21	4.00	1.68	5.78	1.81	94.4
Sept	82.6	79.6	15.0	158	93.6	49.8	175	6.01	4.94	6.31	1.74	5.76	4.97	81.2
Oct	18.2	16.8	4.85	34.9	29.2	23.2	12.0	8.15	7.65	7.01	1.88	5.73	1.23	71.4
Nov	24.9	23.1	3.82	57.9	34.9	28.5	13.2	16.4	15.8	6.76	2.01	5.70	1.77	63.2
Dec	57.8	53.1	2.79	148	73.7	79.0	29.0	34.1	32.4	19.1	2.75	5.56	3.85	7.4
Annual	24.4	23.1	10.2	44.8	47.1	21.8	17.9	9.34	8.87	4.46	2.49	5.60	1.66	800
Max.	154	146	34.8	297	200	268	279	49.7	48.6	56.4	15.5	6.86	8.51	
Min.	4.30	3.80	1.60	5.10	4.40	3.00	2.00	0.200	<0.2	0.400	0.138	4.81	0.440	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	0.0144
Feb	0.350	0.328	0.190	0.276	0.241	0.364	0.103	0.273	0.265	0.106	0.0125
Mar	2.62	2.60	1.05	1.23	4.45	0.354	0.367	1.14	1.13	0.333	0.0785
Apr	1.51	1.37	0.897	2.70	2.65	2.38	0.237	0.880	0.829	0.254	0.106
May	2.58	2.41	1.48	5.48	7.82	2.90	1.14	0.718	0.655	0.342	0.246
June	1.99	1.90	1.01	4.13	3.67	1.54	1.60	0.789	0.756	0.494	0.327
July	1.59	1.52	1.28	3.17	4.54	1.14	1.24	0.565	0.540	0.209	0.625
Aug	2.95	2.84	0.680	5.03	6.64	1.91	1.43	0.722	0.681	0.377	0.158
Sept	6.71	6.46	1.22	12.8	7.60	4.04	14.2	0.488	0.401	0.512	0.141
Oct	1.30	1.20	0.346	2.49	2.08	1.66	0.855	0.582	0.546	0.501	0.134
Nov	1.57	1.46	0.241	3.66	2.20	1.80	0.835	1.04	1.00	0.427	0.127
Dec	0.428	0.393	0.0207	1.10	0.545	0.585	0.214	0.253	0.240	0.141	0.0203
Annual	19.5	18.5	8.19	35.8	37.7	17.4	14.3	7.48	7.10	3.57	1.99

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	0	0	0	0	0	0	0	0	0	0	100	100	0	100
Feb	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	100	100	52.7	100
Mar	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	100	100	61.3	100
Apr	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	100	100	86.6	100
May	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8	100	100	88.8	100
June	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4	100	100	84.4	100
July	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	100	100	96.0	100
Aug	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100	100	18.0	100
Sept	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	100	100	31.0	100
Oct	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	100	100	92.0	100
Nov	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	100	100	98.1	100
Dec	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	100	100	71.6	100
Annual	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	100	100	73.1	100

Terms and abbreviations are given in Table 3.5.

Table 3.54 Monthly results

Site: Bangkok

Country: Thailand

Code: THA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	*	*	*	*	*	*	*	*	*	*	17.4	4.76	1.99	44.1
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	*	*	*	*	*	*	*	*	*	*	1.16	5.93	1.17	116
June	*	*	*	*	*	*	*	*	*	*	1.15	5.94	0.608	151
July	*	*	*	*	*	*	*	*	*	*	0.557	6.25	0.705	185
Aug	*	*	*	*	*	*	*	*	*	*	0.604	6.22	0.781	187
Sept	*	*	*	*	*	*	*	*	*	*	1.17	5.93	1.13	188
Oct	*	*	*	*	*	*	*	*	*	*	2.71	5.57	0.691	310
Nov	*	*	*	*	*	*	*	*	*	*	1.26	5.90	2.16	64.4
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	*	*	*	*	*	*	*	*	*	*	1.95	5.71	0.929	1245
Max.	*	*	*	*	*	*	*	*	*	*	17.4	7.30	2.16	
Min.	*	*	*	*	*	*	*	*	*	*	0.0501	4.76	0.340	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	*	*	*	*	*	*	*	*	*	*	0.766
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	*	*	*	*	*	*	*	*	*	*	0.135
June	*	*	*	*	*	*	*	*	*	*	0.174
July	*	*	*	*	*	*	*	*	*	*	0.103
Aug	*	*	*	*	*	*	*	*	*	*	0.113
Sept	*	*	*	*	*	*	*	*	*	*	0.220
Oct	*	*	*	*	*	*	*	*	*	*	0.838
Nov	*	*	*	*	*	*	*	*	*	*	0.0811
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	*	*	*	*	*	*	*	*	*	*	2.43

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	0	0	0	0	0	0	0	0	0	0	100	100	100	100
June	0	0	0	0	0	0	0	0	0	0	100	100	100	100
July	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Aug	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Sept	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Oct	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Nov	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	0	0	0	0	0	0	0	0	0	0	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.55 Monthly results

Site: Samutprakarn

Country: Thailand

Code: THA002

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	*	*	*	*	*	*	*	*	*	*	2.18	5.66	0.998	103
June	*	*	*	*	*	*	*	*	*	*	0.955	6.02	0.710	5.5
July	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	*	*	*	*	*	*	*	*	*	*	0.525	6.28	0.680	13.1
Oct	*	*	*	*	*	*	*	*	*	*	2.86	5.54	1.09	314
Nov	*	*	*	*	*	*	*	*	*	*	0.646	6.19	2.26	8.1
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	*	*	*	*	*	*	*	*	*	*	2.57	5.59	1.07	444
Max.	*	*	*	*	*	*	*	*	*	*	16.6	6.79	2.80	
Min.	*	*	*	*	*	*	*	*	*	*	0.162	4.78	0.370	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	*	*	*	*	*	*	*	*	*	*	0.224
June	*	*	*	*	*	*	*	*	*	*	<0.01
July	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sept	*	*	*	*	*	*	*	*	*	*	<0.01
Oct	*	*	*	*	*	*	*	*	*	*	0.899
Nov	*	*	*	*	*	*	*	*	*	*	<0.01
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	*	*	*	*	*	*	*	*	*	*	1.14

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	0	0	0	0	0	0	0	0	0	0	100	100	100	100
June	0	0	0	0	0	0	0	0	0	0	100	100	100	100
July	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Sept	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Oct	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Nov	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	0	0	0	0	0	0	0	0	0	0	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.56 Monthly results

Site: Pathumthani

Country: Thailand

Code: THA003

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	59.1	54.3	208	58.4	230	80.1	9.75	107	106	11.1	0.331	6.48	7.39	2.2
Mar	36.3	33.9	89.4	4.51	188	40.2	9.24	24.1	23.2	4.98	1.35	5.87	3.95	1.1
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	7.20	6.89	27.5	6.29	42.2	5.13	1.43	4.50	4.39	0.711	3.07	5.51	0.920	207
June	3.62	3.27	7.30	6.95	27.4	5.76	0.959	3.30	3.18	1.04	0.365	6.44	0.631	240
July	3.54	3.33	8.79	4.81	23.3	3.49	0.811	2.76	2.68	0.660	1.01	6.00	0.544	258
Aug	5.62	5.39	21.0	6.19	37.9	3.79	0.914	7.09	7.01	0.943	0.519	6.29	0.958	105
Sept	3.71	3.59	9.14	3.24	22.7	1.90	0.648	3.08	3.03	0.862	0.334	6.48	0.563	363
Oct	5.81	5.68	21.7	4.76	23.7	2.16	0.809	3.64	3.60	0.581	0.352	6.45	0.595	134
Nov	11.3	11.2	33.3	7.64	58.0	2.51	2.00	11.0	10.9	0.924	0.182	6.74	1.36	33.1
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	4.86	4.64	14.7	5.25	29.3	3.74	0.947	4.03	3.95	0.832	0.902	6.04	0.694	1343
Max.	59.1	54.3	208	144	230	80.1	81.8	107	106	11.1	19.1	8.30	7.39	
Min.	1.34	0.967	2.94	1.32	12.7	0.722	<0.3	0.356	0.273	<0.3	0.0050	4.72	0.302	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.131	0.120	0.459	0.129	0.508	0.177	0.0215	0.237	0.233	0.0246	<0.01
Mar	0.0385	0.0360	0.0948	<0.01	0.199	0.0426	<0.01	0.0255	0.0246	<0.01	<0.01
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	1.49	1.43	5.69	1.30	8.72	1.06	0.296	0.932	0.909	0.147	0.635
June	0.867	0.784	1.75	1.66	6.55	1.38	0.230	0.792	0.762	0.249	0.0874
July	0.914	0.859	2.27	1.24	6.01	0.901	0.209	0.711	0.692	0.170	0.260
Aug	0.591	0.567	2.20	0.651	3.99	0.399	0.0960	0.745	0.737	0.0991	0.0545
Sept	1.35	1.30	3.32	1.18	8.24	0.692	0.235	1.12	1.10	0.313	0.121
Oct	0.780	0.763	2.92	0.639	3.18	0.290	0.109	0.490	0.483	0.0781	0.0473
Nov	0.375	0.370	1.10	0.253	1.92	0.0832	0.0663	0.364	0.362	0.0306	<0.01
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	6.53	6.23	19.8	7.06	39.3	5.02	1.27	5.41	5.30	1.12	1.21

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100

Terms and abbreviations are given in Table 3.5.

Table 3.57 Monthly results

Site: Khanchanaburi

Country: Thailand

Code: THA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 3.5.

Table 3.58 Monthly results

Site: Hanoi

Country: Vietnam

Code: VNA001

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	121	117	156	89.4	89.1	75.6	21.8	139	137	10.4	7.03	5.15	7.16	49.4
Feb	214	208	147	195	282	103	33.7	187	184	16.4	0.121	6.92	12.0	23.4
Mar	158	156	114	250	119	36.5	171	186	185	6.00	0.342	6.47	10.1	22.1
Apr	93.5	90.9	268	313	71.2	42.0	252	182	181	4.47	16.5	4.78	11.7	31.4
May	97.5	96.6	137	96.8	10.9	15.3	229	103	102	3.00	2.70	5.57	6.69	357
June	32.6	31.9	48.5	57.7	40.1	12.1	35.6	44.4	44.1	1.28	0.739	6.13	2.56	334
July	21.8	21.4	110	83.3	47.8	6.35	109	42.1	42.0	1.02	2.05	5.69	3.55	615
Aug	21.4	19.8	78.9	38.4	32.2	26.5	22.4	34.9	34.4	1.06	3.81	5.42	2.36	467
Sept	16.9	16.1	54.6	11.2	11.1	12.6	5.68	31.5	31.3	0.544	9.06	5.04	1.61	783
Oct	42.0	40.7	85.3	86.6	13.6	22.0	93.5	67.6	67.2	2.90	1.92	5.72	3.81	51.9
Nov	111	110	59.6	61.8	85.8	19.4	16.3	110	109	3.05	14.0	4.85	5.48	3.1
Dec	15.2	15.1	51.8	3.84	40.1	1.87	3.66	23.3	23.3	0.493	2.19	5.66	1.32	3.0
Annual	37.2	36.2	87.2	58.4	31.7	16.4	70.8	52.1	51.8	1.59	4.51	5.35	3.36	2741
Max.	327	317	520	395	369	252	645	296	294	20.3	89.1	7.14	17.9	
Min.	5.74	5.58	11.8	3.33	1.05	1.26	1.33	17.7	17.7	0.370	0.0724	4.05	0.750	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	5.98	5.76	7.72	4.42	4.40	3.73	1.07	6.87	6.79	0.514	0.347
Feb	5.01	4.87	3.44	4.57	6.61	2.41	0.788	4.36	4.31	0.383	<0.01
Mar	3.49	3.45	2.53	5.52	2.63	0.806	3.78	4.10	4.09	0.133	<0.01
Apr	2.93	2.85	8.42	9.84	2.23	1.32	7.92	5.72	5.69	0.140	0.517
May	34.8	34.5	48.8	34.5	3.88	5.45	81.8	36.7	36.6	1.07	0.962
June	10.9	10.7	16.2	19.3	13.4	4.05	11.9	14.8	14.8	0.428	0.247
July	13.4	13.2	67.9	51.2	29.4	3.91	67.1	25.9	25.8	0.629	1.26
Aug	9.97	9.22	36.8	17.9	15.0	12.4	10.4	16.3	16.0	0.495	1.78
Sept	13.2	12.6	42.7	8.81	8.72	9.89	4.45	24.7	24.5	0.426	7.10
Oct	2.18	2.11	4.42	4.50	0.706	1.14	4.85	3.51	3.49	0.151	0.0998
Nov	0.345	0.342	0.185	0.191	0.266	0.0602	0.0504	0.340	0.338	<0.01	0.0435
Dec	0.0456	0.0453	0.156	0.0115	0.120	<0.01	0.0110	0.0699	0.0698	<0.01	<0.01
Annual	102	99.1	239	160	86.9	45.0	194	143	142	4.35	12.4

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	100
Feb	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	100
Mar	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	100
Apr	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	100
Annual	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100

Terms and abbreviations are given in Table 3.5.

Table 3.59 Monthly results

Site: Hoa Binh

Country: Vietnam

Code: VNA002

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	65.9	64.1	90.8	52.1	36.5	29.5	22.9	56.9	56.2	15.6	38.6	4.41	5.08	32.4
Feb	14.1	13.9	37.2	8.77	30.2	3.52	7.47	15.0	14.9	1.97	5.13	5.29	1.29	5.7
Mar	95.4	93.2	103	32.8	104	35.5	15.1	77.0	76.3	6.81	2.20	5.66	4.43	15.7
Apr	46.0	44.6	102	20.7	76.5	24.3	10.3	46.6	46.1	5.61	1.84	5.73	3.12	37.2
May	13.7	13.5	39.1	4.73	26.8	3.50	2.82	14.6	14.5	2.96	8.59	5.07	1.26	360
June	6.48	6.28	20.3	3.15	16.5	3.36	1.20	10.4	10.3	1.14	1.24	5.91	0.636	246
July	6.17	6.09	6.55	0.863	10.8	1.41	1.43	4.54	4.51	0.707	3.63	5.44	0.459	677
Aug	4.31	4.22	10.0	1.55	13.9	1.48	1.86	8.94	8.90	0.829	0.368	6.43	0.475	428
Sept	6.06	6.01	9.55	3.63	15.5	0.801	3.26	5.12	5.10	0.762	2.04	5.69	0.514	633
Oct	13.3	13.0	26.9	10.5	23.4	5.14	1.42	17.1	17.0	1.58	1.56	5.81	1.01	83.8
Nov	15.9	15.2	23.4	10.6	17.7	10.5	2.14	19.1	18.9	1.08	1.10	5.96	1.03	14.6
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	9.12	8.95	17.7	3.96	17.7	2.83	2.64	9.65	9.59	1.44	3.49	5.46	0.751	2532
Max.	142	140	135	66.3	153	37.4	32.6	99.9	99.3	17.9	69.2	6.74	6.30	
Min.	1.59	1.54	4.45	0.621	7.26	0.522	0.818	2.69	2.68	0.411	0.182	4.16	0.270	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	2.13	2.08	2.94	1.69	1.18	0.956	0.742	1.84	1.82	0.507	1.25
Feb	0.0805	0.0793	0.212	0.0500	0.172	0.0201	0.0426	0.0855	0.0850	0.0113	0.0292
Mar	1.50	1.46	1.62	0.514	1.63	0.557	0.238	1.21	1.20	0.107	0.0345
Apr	1.71	1.66	3.81	0.769	2.85	0.904	0.383	1.73	1.71	0.209	0.0685
May	4.93	4.86	14.1	1.70	9.63	1.26	1.01	5.24	5.21	1.06	3.09
June	1.59	1.54	4.98	0.775	4.07	0.826	0.294	2.55	2.53	0.281	0.305
July	4.18	4.12	4.43	0.584	7.33	0.955	0.965	3.07	3.05	0.479	2.46
Aug	1.85	1.81	4.28	0.665	5.95	0.633	0.796	3.82	3.81	0.355	0.157
Sept	3.84	3.80	6.04	2.30	9.82	0.507	2.06	3.24	3.23	0.482	1.29
Oct	1.12	1.09	2.26	0.880	1.96	0.431	0.119	1.43	1.42	0.132	0.131
Nov	0.231	0.222	0.341	0.155	0.258	0.153	0.0313	0.279	0.276	0.0158	0.0161
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	23.1	22.7	44.9	10.0	44.8	7.17	6.68	24.4	24.3	3.64	8.83

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	100
Mar	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	100
Nov	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100

Terms and abbreviations are given in Table 3.5.

Table 3.60 Monthly results

Site: Cuc Phuong

Country: Vietnam

Code: VNA003

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	61.1	54.4	125	130	133	111	17.9	144	142	24.1	0.208	6.68	7.33	52.9
Feb	59.6	56.4	95.8	64.8	104	53.0	7.42	56.1	55.0	12.7	1.96	5.71	4.24	35.6
Mar	40.8	37.0	74.3	30.0	70.2	63.4	28.7	205	204	16.2	0.0992	7.00	6.86	80.1
Apr	45.3	42.2	85.1	59.8	78.7	50.6	10.3	108	107	15.2	0.793	6.10	4.83	30.9
May	26.8	25.7	37.6	24.4	89.3	17.8	18.6	27.1	26.7	5.57	1.06	5.98	2.39	226
June	41.3	36.1	121	95.7	143	86.5	48.1	133	131	22.9	0.749	6.13	6.79	167
July	4.75	4.54	12.2	7.92	14.5	3.61	1.19	13.3	13.3	4.24	1.30	5.89	0.701	574
Aug	15.1	14.1	164	17.3	47.7	16.1	7.40	104	103	23.5	1.52	5.82	3.90	210
Sept	4.19	3.81	7.35	4.60	8.57	6.34	1.80	14.9	14.8	4.84	1.04	5.98	0.695	753
Oct	19.5	17.9	32.1	28.2	49.9	26.4	5.12	35.8	35.3	10.5	1.63	5.79	2.14	79.8
Nov	41.5	39.2	68.8	33.4	121	37.1	12.7	12.1	11.3	1.98	0.628	6.20	2.69	26.8
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	8.0
Annual	15.0	13.8	43.5	21.6	41.7	20.1	9.06	44.6	44.2	9.07	1.11	5.96	2.15	2244
Max.	93.1	87.5	270	152	298	139	83.6	240	238	36.1	3.98	7.20	10.9	
Min.	1.26	1.09	5.22	3.44	6.04	0.913	0.614	6.96	6.34	1.52	0.0631	5.40	0.450	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	3.23	2.88	6.60	6.87	7.06	5.87	0.946	7.64	7.52	1.28	0.0110
Feb	2.12	2.01	3.41	2.31	3.71	1.89	0.264	2.00	1.96	0.453	0.0699
Mar	3.27	2.96	5.95	2.40	5.62	5.08	2.30	16.4	16.3	1.30	<0.01
Apr	1.40	1.30	2.63	1.85	2.43	1.56	0.319	3.35	3.31	0.470	0.0245
May	6.05	5.81	8.51	5.53	20.2	4.02	4.20	6.13	6.05	1.26	0.239
June	6.91	6.04	20.2	16.0	23.9	14.5	8.04	22.2	21.9	3.83	0.125
July	2.73	2.60	7.01	4.54	8.31	2.07	0.683	7.65	7.61	2.43	0.744
Aug	3.17	2.96	34.5	3.63	10.0	3.37	1.56	21.8	21.7	4.93	0.319
Sept	3.15	2.87	5.53	3.47	6.46	4.77	1.36	11.2	11.1	3.64	0.782
Oct	1.56	1.43	2.56	2.25	3.98	2.11	0.409	2.86	2.81	0.842	0.130
Nov	1.11	1.05	1.84	0.896	3.24	0.995	0.340	0.325	0.304	0.0532	0.0168
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	33.7	31.0	97.6	48.4	93.6	45.0	20.3	100	99.1	20.4	2.48

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	100
Feb	72.2	72.2	72.2	72.2	72.2	72.2	72.2	72.2	72.2	72.2	72.2	72.2	72.2	100
Mar	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	100
Apr	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	100
July	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	100

Terms and abbreviations are given in Table 3.5.

Table 3.61 Monthly results

Site: Da Nang

Country: Vietnam

Code: VNA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	37.7	27.0	10.8	286	155	176	87.2	53.2	49.4	45.6	0.582	6.24	8.42	37.2
Feb	54.9	47.1	22.4	168	93.9	131	67.9	85.0	82.2	25.7	0.661	6.18	6.59	8.2
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	0.9
Apr	55.5	51.6	15.4	96.8	77.6	63.9	11.9	45.6	44.2	30.8	1.17	5.93	4.02	4.4
May	19.1	17.4	8.02	75.4	29.4	28.2	32.8	30.6	30.0	10.8	1.61	5.79	2.24	207
June	41.2	38.8	22.3	76.0	174	41.0	33.0	54.6	53.7	17.9	0.619	6.21	4.92	26.3
July	14.4	12.0	2.93	64.7	47.7	38.5	13.8	26.7	25.9	12.7	1.16	5.94	2.18	160
Aug	23.4	21.7	6.72	56.5	75.5	27.8	23.8	46.5	45.9	14.8	1.07	5.97	3.07	61.1
Sept	12.0	6.83	4.45	110	11.9	86.5	56.6	31.4	29.5	8.92	1.68	5.78	2.86	370
Oct	8.81	7.30	2.28	36.0	25.1	24.9	8.44	13.4	12.8	9.43	1.80	5.74	1.26	727
Nov	8.73	6.19	1.97	78.3	17.6	42.2	8.59	19.1	18.2	8.51	1.73	5.76	1.56	564
Dec	20.0	10.5	7.30	180	34.8	158	10.7	20.1	16.7	32.9	1.61	5.79	3.91	440
Annual	13.5	9.71	4.35	89.7	29.6	63.6	19.8	22.4	21.1	14.2	1.63	5.79	2.33	2606
Max.	67.2	65.2	27.2	489	338	333	148	95.3	94.2	67.8	2.09	7.25	12.2	
Min.	3.28	2.95	1.19	26.7	7.60	5.40	3.71	9.20	9.08	4.30	0.0562	5.68	0.590	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.40	1.01	0.403	10.6	5.76	6.57	3.24	1.98	1.84	1.70	0.0216
Feb	0.451	0.386	0.184	1.38	0.770	1.07	0.557	0.697	0.674	0.211	<0.01
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	0.244	0.227	0.0679	0.426	0.341	0.281	0.0523	0.201	0.194	0.135	<0.01
May	3.95	3.60	1.66	15.6	6.07	5.83	6.79	6.32	6.20	2.23	0.333
June	1.08	1.02	0.588	2.00	4.58	1.08	0.869	1.44	1.41	0.471	0.0163
July	2.30	1.93	0.469	10.4	7.65	6.17	2.21	4.28	4.15	2.04	0.186
Aug	1.43	1.33	0.411	3.45	4.61	1.70	1.45	2.84	2.80	0.904	0.0652
Sept	4.45	2.53	1.65	40.6	4.42	32.0	20.9	11.6	10.9	3.30	0.620
Oct	6.40	5.31	1.66	26.2	18.3	18.1	6.13	9.72	9.32	6.85	1.31
Nov	4.92	3.49	1.11	44.1	9.90	23.8	4.84	10.8	10.2	4.80	0.975
Dec	8.79	4.61	3.21	79.3	15.3	69.4	4.73	8.84	7.34	14.5	0.707
Annual	35.3	25.3	11.3	234	77.0	166	51.5	58.5	54.9	37.0	4.25

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	93.3	100
Feb	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	100
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100
June	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	100
July	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	100

Terms and abbreviations are given in Table 3.5.

Table 3.62 Monthly results

Site: Can Tho

Country: Vietnam

Code: VNA005

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	35.3	34.1	4.20	29.5	20.5	19.9	6.94	12.9	12.5	9.60	3.80	5.42	1.33	42.0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	24.7	23.5	4.20	28.8	21.4	18.6	8.54	14.1	13.7	7.84	2.88	5.54	1.27	18.0
May	30.5	29.5	4.07	26.6	19.3	16.8	5.86	13.0	12.6	7.75	2.32	5.63	1.29	93.0
June	26.5	25.5	4.30	28.9	18.0	17.8	8.35	13.9	13.6	8.24	0.997	6.00	1.24	134
July	27.7	26.6	4.26	29.7	22.7	18.2	8.59	15.0	14.6	7.76	1.24	5.91	1.23	383
Aug	23.7	22.8	3.94	29.0	19.2	14.7	7.72	15.7	15.4	8.57	1.40	5.85	1.14	254
Sept	25.1	24.1	3.97	29.3	21.6	15.7	7.41	13.5	13.2	8.24	1.17	5.93	1.23	257
Oct	26.3	25.2	3.62	28.2	18.3	17.8	6.96	15.0	14.6	8.47	0.904	6.04	1.20	405
Nov	26.2	25.1	4.38	31.1	18.3	17.2	8.30	15.5	15.2	8.97	0.786	6.10	1.32	71.0
Dec	28.0	26.9	3.81	29.7	17.8	18.7	8.69	17.6	17.2	7.55	0.862	6.06	1.21	103
Annual	26.6	25.5	3.99	29.0	19.9	17.2	7.71	14.8	14.5	8.23	1.25	5.90	1.22	1760
Max.	36.0	34.9	5.50	38.4	28.6	22.8	12.0	19.0	18.5	11.3	3.80	6.31	1.67	
Min.	18.0	17.2	3.20	15.4	16.9	12.0	5.24	11.3	10.9	6.39	0.490	5.42	1.09	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	1.48	1.43	0.176	1.24	0.861	0.837	0.291	0.541	0.523	0.403	0.160
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.444	0.424	0.0756	0.519	0.384	0.334	0.154	0.254	0.247	0.141	0.0519
May	2.83	2.74	0.378	2.47	1.79	1.56	0.545	1.21	1.17	0.721	0.216
June	3.56	3.41	0.576	3.87	2.41	2.39	1.12	1.87	1.82	1.10	0.134
July	10.6	10.2	1.63	11.4	8.69	6.97	3.29	5.75	5.60	2.97	0.473
Aug	6.01	5.79	1.00	7.36	4.89	3.73	1.96	3.99	3.91	2.18	0.355
Sept	6.44	6.20	1.02	7.52	5.56	4.02	1.91	3.47	3.39	2.12	0.302
Oct	10.7	10.2	1.47	11.4	7.39	7.20	2.82	6.08	5.93	3.43	0.366
Nov	1.86	1.78	0.311	2.21	1.30	1.22	0.589	1.10	1.08	0.637	0.0558
Dec	2.88	2.77	0.392	3.06	1.83	1.93	0.895	1.81	1.77	0.777	0.0888
Annual	46.8	45.0	7.03	51.0	35.1	30.2	13.6	26.1	25.4	14.5	2.20

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.63 Monthly results

Site: Ho Chi Minh

Country: Vietnam

Code: VNA006

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	39.5	38.5	12.7	33.4	30.4	16.8	11.2	16.2	15.8	10.6	2.19	5.66	1.78	9.0
Mar	35.5	34.3	16.7	42.3	31.3	18.5	11.1	19.5	19.1	10.4	1.10	5.96	1.71	76.0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	31.2	30.1	13.5	34.7	31.5	18.5	10.8	17.9	17.5	11.4	0.560	6.25	1.72	289
June	37.9	36.7	11.7	24.4	30.5	19.2	11.6	16.3	15.9	10.4	1.03	5.99	1.55	368
July	36.0	34.9	13.3	21.7	30.3	17.9	10.5	18.5	18.1	10.2	0.862	6.06	1.76	202
Aug	34.1	32.9	13.5	35.2	31.0	20.3	11.0	16.6	16.2	10.0	1.05	5.98	1.76	322
Sept	28.1	27.0	13.3	36.8	29.1	18.6	11.1	18.2	17.8	9.89	0.842	6.07	1.60	346
Oct	36.4	35.1	13.3	41.1	36.0	20.7	10.9	17.8	17.3	9.71	0.778	6.11	1.70	295
Nov	34.3	33.1	15.1	34.7	33.9	19.7	11.3	17.8	17.4	10.6	0.892	6.05	1.67	189
Dec	39.9	38.7	11.2	14.7	35.8	18.7	10.5	17.7	17.3	11.3	0.479	6.32	1.52	23.0
Annual	34.0	32.9	13.3	33.0	31.6	19.3	11.1	17.6	17.1	10.3	0.876	6.06	1.67	2119
Max.	47.9	46.6	22.2	50.0	40.3	26.7	14.7	24.8	24.3	15.5	2.19	6.47	1.82	
Min.	21.2	20.1	8.18	14.5	19.7	15.4	9.55	13.9	13.4	8.77	0.339	5.66	1.37	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.356	0.346	0.114	0.301	0.274	0.151	0.101	0.145	0.142	0.0950	0.0197
Mar	2.69	2.61	1.27	3.21	2.38	1.40	0.840	1.48	1.45	0.792	0.0833
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	9.02	8.70	3.90	10.0	9.09	5.34	3.12	5.17	5.06	3.30	0.162
June	13.9	13.5	4.29	8.98	11.2	7.05	4.28	6.00	5.85	3.84	0.378
July	7.26	7.05	2.68	4.37	6.13	3.62	2.13	3.74	3.66	2.05	0.174
Aug	11.0	10.6	4.34	11.3	9.97	6.53	3.56	5.34	5.20	3.22	0.339
Sept	9.73	9.34	4.60	12.7	10.1	6.44	3.85	6.30	6.16	3.42	0.291
Oct	10.7	10.4	3.94	12.1	10.6	6.11	3.22	5.24	5.11	2.86	0.230
Nov	6.47	6.25	2.86	6.56	6.42	3.72	2.14	3.37	3.29	2.00	0.169
Dec	0.917	0.891	0.258	0.339	0.823	0.429	0.242	0.408	0.398	0.259	0.0110
Annual	72.1	69.6	28.2	70.0	67.0	40.8	23.5	37.2	36.3	21.8	1.86

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.64 Monthly results

Site: Yen Bai

Country: Vietnam

Code: VNA007

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	17.2	16.8	50.6	16.7	28.2	5.62	4.30	26.1	26.0	1.35	11.7	4.93	1.81	54.0
Feb	18.2	17.9	80.1	12.9	18.1	4.74	1.99	21.4	21.3	0.987	66.1	4.18	3.54	11.7
Mar	10.1	9.79	43.4	17.3	22.7	6.05	1.38	11.5	11.4	0.658	27.5	4.56	1.94	52.2
Apr	36.8	35.8	96.0	27.5	36.7	15.3	11.6	48.2	47.9	1.82	36.7	4.44	3.78	36.2
May	30.4	29.5	103	16.9	34.2	16.4	4.73	35.4	35.1	1.24	59.0	4.23	4.29	290
June	14.6	13.8	26.9	7.81	36.3	12.4	1.43	19.9	19.7	0.523	0.609	6.22	1.19	326
July	9.87	9.71	16.3	3.09	23.7	2.58	1.92	6.72	6.66	0.495	3.49	5.46	0.729	439
Aug	8.37	8.28	16.0	3.55	21.1	1.46	1.73	5.96	5.93	0.541	2.89	5.54	0.649	576
Sept	10.4	10.3	40.5	3.74	26.5	1.61	1.22	12.1	12.1	0.599	15.3	4.81	1.44	575
Oct	9.25	9.09	26.0	3.52	37.2	2.70	1.11	9.98	9.92	0.724	0.601	6.22	0.864	254
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	7.87	7.64	22.3	5.22	22.5	3.74	0.997	13.4	13.3	1.97	0.479	6.32	0.790	13.6
Annual	13.0	12.7	36.0	6.44	28.0	5.21	2.06	14.0	13.9	0.685	12.8	4.89	1.43	2627
Max.	49.2	48.7	178	35.4	58.6	23.8	15.9	63.1	62.7	2.01	151	6.75	8.63	
Min.	4.30	4.25	9.85	1.47	10.6	0.739	0.921	3.12	2.96	0.370	0.178	3.82	0.420	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2024	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.927	0.909	2.73	0.901	1.52	0.304	0.232	1.41	1.40	0.0731	0.633
Feb	0.213	0.209	0.937	0.151	0.211	0.0555	0.0233	0.250	0.249	0.0115	0.773
Mar	0.530	0.511	2.27	0.906	1.18	0.316	0.0721	0.600	0.594	0.0343	1.44
Apr	1.33	1.30	3.48	0.996	1.33	0.555	0.419	1.75	1.73	0.0658	1.33
May	8.84	8.55	29.9	4.90	9.92	4.77	1.37	10.3	10.2	0.360	17.1
June	4.75	4.51	8.78	2.55	11.9	4.05	0.466	6.50	6.42	0.170	0.199
July	4.33	4.26	7.13	1.36	10.4	1.13	0.844	2.95	2.92	0.217	1.53
Aug	4.82	4.77	9.21	2.04	12.1	0.840	0.998	3.43	3.42	0.312	1.67
Sept	5.98	5.92	23.3	2.15	15.2	0.925	0.702	6.97	6.95	0.344	8.80
Oct	2.35	2.31	6.59	0.893	9.45	0.685	0.280	2.53	2.52	0.184	0.152
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.107	0.104	0.304	0.0710	0.305	0.0509	0.0136	0.182	0.181	0.0268	<0.01
Annual	34.2	33.3	94.6	16.9	73.5	13.7	5.42	36.9	36.6	1.80	33.6

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2024	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.65 Annual precipitation amount and precipitation amount-weighted average concentration in 2024

Country	Name of sites (Codes)	Precip. mm y ⁻¹	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹
Cambodia	Phnom Penh (KHA001)	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	Haifu (CNA003)	1043	23.1	23.0	42.6	5.58	87.1	2.87	3.40	25.3	25.3	2.37	0.774	6.11	2.00
	Jinyunshan (CNA004)	772	25.9	25.7	45.1	4.97	75.0	2.12	3.12	19.9	19.9	2.58	7.39	5.13	1.98
	Shizhan (CNA005)	686	20.2	19.4	31.3	15.3	56.5	14.0	7.31	43.3	43.0	3.67	0.156	6.81	2.08
	Jiwozi (CNA007)	582	34.6	33.5	32.8	14.5	9.93	18.7	12.5	72.7	72.3	6.07	0.218	6.66	2.35
	Hongwen (CNA008)	1059	11.5	10.7	17.8	19.8	29.9	13.3	1.56	7.37	7.08	2.78	5.19	5.28	1.04
	Xiaoping (CNA009)	1079	10.8	10.3	20.5	13.2	27.9	7.84	1.83	7.74	7.57	2.22	2.62	5.58	0.956
	Xiang Zhou (CNA010)	2311	8.38	7.31	20.8	20.4	25.3	17.8	1.09	5.69	5.30	2.50	4.93	5.31	1.08
	Zhuxiandong (CNA011)	1797	8.78	7.25	22.7	26.6	19.8	25.3	1.83	8.73	8.19	3.17	5.50	5.26	1.21
	Wuzhishan(CNA013)	873	2.73	2.36	4.74	8.42	9.68	6.07	5.09	4.63	4.51	0.969	0.629	6.20	0.560
	Lijiang(CNA014)	301	7.42	7.32	8.91	13.7	42.2	1.62	19.7	18.2	18.2	5.14	0.506	6.30	0.827
Indonesia	Jakarta (IDA001)	1690	24.4	23.1	22.2	38.5	26.1	22.5	10.8	30.3	29.8	5.63	10.4	4.98	2.01
	Kototabang (IDA003)	2710	10.7	10.5	5.60	7.20	12.8	3.69	6.41	5.46	5.38	1.44	16.6	4.78	0.987
	Maros (IDA005)	1770	5.34	4.52	6.52	23.2	10.4	13.7	8.73	9.00	8.70	2.06	4.88	5.31	0.719
	Jembrana(IDA006)	1963	14.3	12.4	13.8	56.7	13.3	31.2	17.1	8.53	7.86	5.31	20.0	4.70	1.80
	Lombok(IDA007)	1602	14.1	12.7	12.1	29.7	6.97	21.8	12.5	7.00	6.53	4.84	21.7	4.66	1.53
Japan	Rishiri (JPA001)	1096	14.3	7.66	15.8	126	19.8	110	3.39	4.73	2.34	12.9	8.08	5.09	2.57
	Ochiishi (JPA002)	912	*	*	*	*	*	*	*	*	*	*	*	*	*
	Sado-seki (JPA004)	1275	13.8	5.45	11.5	160	10.1	138	3.46	5.23	2.24	15.7	5.73	5.24	2.76
	Happo (JPA005)	2944	3.03	2.90	4.74	2.67	4.81	2.04	<0.3	1.27	1.23	0.456	6.39	5.19	0.430
	Ijira (JPA006)	4593	5.68	5.09	9.86	12.1	9.07	9.88	0.471	1.59	1.38	1.36	11.6	4.94	0.798
	Oki (JPA007)	1409	*	*	*	*	*	*	*	*	*	*	*	*	*
	Yusuhara (JPA009)	2690	6.39	5.52	5.66	17.3	4.93	14.5	0.717	1.07	0.761	1.84	9.15	5.04	0.843
	Hedo (JPA010)	3361	*	*	*	*	*	*	*	*	*	*	*	*	*
	Ogasawara (JPA011)	1233	8.61	1.59	2.27	132	1.11	116	2.60	3.27	0.765	13.2	6.44	5.19	2.20
	Tokyo (JPA012)	1730	7.30	6.25	12.6	20.2	16.6	17.5	0.568	3.20	2.82	2.34	8.74	5.06	1.01
	Niigata-maki(JPA013)	349	23.2	10.8	21.2	245	23.0	206	4.82	8.74	4.28	24.9	12.8	4.89	4.21
	Tsushima(JPA014)	2022	9.97	7.22	10.9	53.4	10.1	45.6	1.78	2.30	1.32	5.14	9.22	5.04	1.45
Lao PDR	Vientiane (LAA001)	2857	3.52	*	6.35	5.15	*	*	*	*	*	*	4.11	5.39	6.06
Malaysia	Petaling Jaya (MYA001)	3731	10.6	10.3	30.8	8.21	21.3	5.30	1.54	4.17	4.06	1.21	27.9	4.55	1.80
	Tanah Rata(MYA002)	2999	3.80	3.56	5.36	3.64	8.08	3.98	2.07	1.97	1.88	<0.3	10.2	4.99	0.623
	Danum Valley (MYA003)	3212	1.74	1.44	<0.5	11.1	2.11	5.03	7.39	3.61	3.50	2.82	6.23	5.21	0.571
	Kuching (MYA004)	4986	1.63	1.40	1.64	10.4	1.57	4.01	1.38	3.82	3.73	0.353	4.36	5.36	0.372
	Gunung Brinchang(MYA005)	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Khan-Uul (MNA004)	218	21.7	21.3	23.3	4.35	33.7	6.30	2.12	27.8	27.6	2.98	1.25	5.90	1.15
	Terelj (MNA002)	150	20.5	19.0	11.2	2.68	25.1	26.0	1.91	11.9	11.4	1.56	0.882	6.05	0.812
Myanmar	Yangon (MMA001)	2972	8.14	7.40	8.45	25.2	10.4	12.2	5.47	7.36	7.10	2.05	0.227	6.64	0.519
Philippines	Manila Observatory(PHA001)	2053	18.7	17.6	21.0	21.3	31.7	18.4	1.59	10.5	10.1	3.40	7.65	5.12	1.34
	Los Baños (PHA002)	1564	15.5	14.5	10.6	17.5	17.7	13.6	3.17	3.15	2.93	2.04	15.2	4.82	1.19
	Mt. Sto. Tomas (PHA003)	2875	5.09	4.89	3.66	12.8	5.91	4.08	4.69	5.21	5.14	2.03	1.45	5.84	0.732
R of Korea	Ganghwa (KRA001)	640	11.3	9.57	24.7	39.9	34.0	28.6	10.6	6.41	5.85	4.34	8.66	5.06	1.64
	Jeju (KRA002)	1019	24.7	14.0	25.6	174	23.7	185	3.34	9.01	5.25	15.9	2.79	5.55	3.68
	Imsil (KRA003)	927	7.45	5.92	19.5	10.1	21.4	25.3	0.665	2.12	1.60	1.06	0.768	6.11	0.745
Russia	Listvyanka (RUA002)	440	17.1	16.9	15.4	2.34	12.1	2.84	6.93	13.6	13.5	4.77	7.95	5.10	1.10
	Irkutsk (RUA003)	505	22.2	21.8	15.7	6.35	13.0	6.08	5.55	20.6	20.5	5.03	11.6	4.93	1.47
	Primorskaya (RUA004)	800	24.4	23.1	10.2	44.8	47.1	21.8	17.9	9.34	8.87	4.46	2.49	5.60	1.66
Thailand	Bangkok (THA001)	1245	*	*	*	*	*	*	*	*	*	*	1.95	5.71	0.929
	Samutprakarn (THA002)	444	*	*	*	*	*	*	*	*	*	*	2.57	5.59	1.07
	Pathumthani (THA003)	1343	4.86	4.64	14.7	5.25	29.3	3.74	0.947	4.03	3.95	0.832	0.902	6.04	0.694
	Khanchanaburi (THA004)	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi (VNA001)	2741	37.2	36.2	87.2	58.4	31.7	16.4	70.8	52.1	51.8	1.59	4.51	5.35	3.36
	Hoa Binh (VNA002)	2532	9.12	8.95	17.7	3.96	17.7	2.83	2.64	9.65	9.59	1.44	3.49	5.46	0.751
	Cuc Phuong (VNA003)	2244	15.0	13.8	43.5	21.6	41.7	20.1	9.06	44.6	44.2	9.07	1.11	5.96	2.15
	Da Nang (VNA004)	2606	13.5	9.71	4.35	89.7	29.6	63.6	19.8	22.4	21.1	14.2	1.63	5.79	2.33
	Can Tho (VNA005)	1760	26.6	25.5	3.99	29.0	19.9	17.2	7.71	14.8	14.5	8.23	1.25	5.90	1.22
	Ho Chi Minh (VNA006)	2119	34.0	32.9	13.3	33.0	31.6	19.3	11.1	17.6	17.1	10.3	0.876	6.06	1.67
	Yen Bai (VNA007)	2627	13.0	12.7	36.0	6.44	28.0	5.21	2.06	14.0	13.9	0.685	12.8	4.89	1.43

Terms and abbreviations are given in Table 3.5.

Table 3.66 Annual wet depositions in 2024

Country	Name of sites (Codes)	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
		mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹	mmol m ⁻² y ⁻¹
Cambodia	Phnom Penh (KHA001)	***	***	***	***	***	***	***	***	***	***	***
China	Haifu (CNA003)	24.1	24.0	44.5	5.82	90.8	2.99	3.55	26.4	26.3	2.48	0.807
	Jinyunshan (CNA004)	19.9	19.9	34.8	3.83	57.9	1.64	2.41	15.4	15.3	1.99	5.70
	Shizhan (CNA005)	13.9	13.3	21.4	10.5	38.8	9.58	5.01	29.7	29.5	2.52	0.107
	Jiwozi (CNA007)	20.1	19.5	19.1	8.44	5.78	10.9	7.26	42.3	42.1	3.53	0.127
	Hongwen (CNA008)	12.2	11.4	18.8	20.9	31.7	14.1	1.65	7.81	7.50	2.94	5.50
	Xiaoping (CNA009)	11.6	11.1	22.1	14.2	30.1	8.45	1.97	8.34	8.16	2.39	2.82
	Xiang Zhou (CNA010)	19.4	16.9	48.1	47.1	58.4	41.2	2.53	13.1	12.3	5.79	11.4
	Zhuxiandong (CNA011)	15.8	13.0	40.8	47.9	35.6	45.5	3.29	15.7	14.7	5.70	9.88
	Wuzhishan(CNA013)	2.38	2.06	4.14	7.35	8.45	5.30	4.45	4.05	3.93	0.846	0.549
	Lijiang(CNA014)	2.23	2.20	2.68	4.12	12.7	0.488	5.93	5.48	5.47	1.55	0.152
Indonesia	Jakarta (IDA001)	41.2	39.0	37.5	65.0	44.1	38.0	18.3	51.1	50.3	9.52	17.5
	Kototabang (IDA003)	29.0	28.4	15.2	19.5	34.8	10.0	17.4	14.8	14.6	3.89	45.1
	Maros (IDA005)	9.46	8.00	11.5	41.0	18.5	24.2	15.5	15.9	15.4	3.64	8.63
	Jembrana(IDA006)	28.1	24.4	27.0	111	26.2	61.1	33.5	16.8	15.4	10.4	39.2
	Lombok(IDA007)	22.5	20.4	19.4	47.6	11.2	34.9	20.0	11.2	10.5	7.75	34.7
Japan	Rishiri (JPA001)	15.7	8.40	17.3	138	21.7	121	3.72	5.18	2.57	14.2	8.86
	Ochiishi (JPA002)	*	*	*	*	*	*	*	*	*	*	*
	Sado-seki (JPA004)	17.6	6.94	14.6	204	12.8	176	4.41	6.67	2.86	20.0	7.30
	Happo (JPA005)	8.91	8.55	14.0	7.87	14.2	6.00	0.607	3.75	3.62	1.34	18.8
	Ijira (JPA006)	26.1	23.4	45.3	55.7	41.7	45.4	2.16	7.31	6.33	6.26	53.1
	Oki (JPA007)	*	*	*	*	*	*	*	*	*	*	*
	Yusuhara (JPA009)	17.2	14.8	15.2	46.4	13.3	39.0	1.93	2.89	2.05	4.94	24.6
	Hedo (JPA010)	*	*	*	*	*	*	*	*	*	*	*
	Ogasawara (JPA011)	10.6	1.96	2.81	163	1.37	144	3.21	4.03	0.944	16.3	7.94
	Tokyo (JPA012)	12.6	10.8	21.9	35.0	28.8	30.2	0.983	5.54	4.88	4.05	15.1
	Niigata-maki(JPA013)	8.09	3.75	7.39	85.4	8.04	71.9	1.68	3.05	1.50	8.70	4.48
	Tsushima(JPA014)	20.2	14.6	22.0	108	20.4	92.2	3.61	4.65	2.67	10.4	18.6
Lao PDR	Vientiane (LAA001)	10.1	*	18.1	14.7	*	*	*	*	*	*	11.7
Malaysia	Petaling Jaya (MYA001)	39.7	38.5	115	30.6	79.5	19.8	5.74	15.6	15.1	4.53	104
	Tanah Rata(MYA002)	11.4	10.7	16.1	10.9	24.2	11.9	6.19	5.90	5.64	0.855	30.5
	Danum Valley (MYA003)	5.59	4.62	1.11	35.8	6.77	16.2	23.7	11.6	11.2	9.07	20.0
	Kuching (MYA004)	8.12	7.00	8.18	52.1	7.84	20.0	6.87	19.1	18.6	1.76	21.7
	Gunung Brinchang(MYA005)	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Khan-Uul (MNA004)	4.72	4.64	5.08	0.947	7.35	1.37	0.462	6.05	6.02	0.650	0.272
	Terej (MNA002)	3.09	2.85	1.68	0.403	3.77	3.91	0.287	1.80	1.71	0.235	0.133
Myanmar	Yangon (MMA001)	24.2	22.0	25.1	74.9	31.1	36.3	16.2	21.9	21.1	6.09	0.675
Philippines	Manila Observatory(PHA001)	38.4	36.1	43.2	43.7	65.0	37.8	3.27	21.5	20.6	6.99	15.7
	Los Baños (PHA002)	24.2	22.6	16.6	27.4	27.7	21.3	4.95	4.92	4.59	3.20	23.8
	Mt. Sto. Tomas (PHA003)	14.6	14.0	10.5	36.8	17.0	11.7	13.5	15.0	14.8	5.83	4.18
R of Korea	Ganghwa (KRA001)	7.23	6.12	15.8	25.5	21.8	18.3	6.81	4.10	3.74	2.77	5.54
	Jeju (KRA002)	25.1	14.2	26.1	178	24.2	189	3.40	9.18	5.34	16.2	2.84
	Imsil (KRA003)	6.90	5.49	18.1	9.37	19.8	23.5	0.617	1.96	1.48	0.978	0.711
Russia	Listvyanka (RUA002)	7.51	7.43	6.75	1.03	5.31	1.25	3.05	5.97	5.94	2.10	3.49
	Irkutsk (RUA003)	11.2	11.0	7.95	3.20	6.54	3.07	2.80	10.4	10.3	2.54	5.88
	Primorskaya (RUA004)	19.5	18.5	8.19	35.8	37.7	17.4	14.3	7.48	7.10	3.57	1.99
Thailand	Bangkok (THA001)	*	*	*	*	*	*	*	*	*	*	2.43
	Samutprakarn (THA002)	*	*	*	*	*	*	*	*	*	*	1.14
	Pathumthani (THA003)	6.53	6.23	19.8	7.06	39.3	5.02	1.27	5.41	5.30	1.12	1.21
	Khanchanaburi (THA004)	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi (VNA001)	102	99.1	239	160	86.9	45.0	194	143	142	4.35	12.4
	Hoa Binh (VNA002)	23.1	22.7	44.9	10.0	44.8	7.17	6.68	24.4	24.3	3.64	8.83
	Cuc Phuong (VNA003)	33.7	31.0	97.6	48.4	93.6	45.0	20.3	100	99.1	20.4	2.48
	Da Nang (VNA004)	35.3	25.3	11.3	234	77.0	166	51.5	58.5	54.9	37.0	4.25
	Can Tho (VNA005)	46.8	45.0	7.03	51.0	35.1	30.2	13.6	26.1	25.4	14.5	2.20
	Ho Chi Minh (VNA006)	72.1	69.6	28.2	70.0	67.0	40.8	23.5	37.2	36.3	21.8	1.86
	Yen Bai (VNA007)	34.2	33.3	94.6	16.9	73.5	13.7	5.42	36.9	36.6	1.80	33.6

Terms and abbreviations are given in Table 3.5.

Table 3.67 Data completeness for annual summaries in 2024 (%PCL, %TP)

Country	Name of sites (Codes)	Precip.	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC
		%PCL	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP
Cambodia	Phnom Penh (KHA001)	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	Haifu (CNA003)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Jinyunshan (CNA004)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Shizhan (CNA005)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Jiwozi (CNA007)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Hongwen (CNA008)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Xiaoping (CNA009)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Xiang Zhou (CNA010)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuxiandong (CNA011)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Wuzhishan(CNA013)	100	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	100	100	100
	Lijiang(CNA014)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta (IDA001)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Kototabang (IDA003)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Maros (IDA005)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Jembrana(IDA006)	100	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4
	Lombok(IDA007)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Japan	Rishiri (JPA001)	99.7	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8
	Ochiishi (JPA002)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sado-seki (JPA004)	100	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.4	99.4	99.4
	Happo (JPA005)	100	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.2	91.2	91.2
	Ijira (JPA006)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Oki (JPA007)	78.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Yusuhara (JPA009)	96.1	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.7	99.7	99.7
	Hedo (JPA010)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Ogasawara (JPA011)	100	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.6	98.6	98.6
	Tokyo (JPA012)	100	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.5	99.5	99.5
	Niigata-maki(JPA013)	23.0	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	88.5	88.5	88.5
	Tsushima(JPA014)	100	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	83.8	83.8	83.8
Lao PDR	Vientiane (LAA001)	100	100	0.0	100	100	0.0	0.0	0.0	0.0	0.0	0.0	100	100	100
Malaysia	Petaling Jaya (MYA001)	100	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
	Tanah Rata(MYA002)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Danum Valley (MYA003)	100	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
	Kuching (MYA004)	100	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1
	Gunung Brinchang(MYA005)	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Khan-Uul (MNA004)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Terelj (MNA002)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Myanmar	Yangon (MMA001)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Philippines	Manila Observatory(PHA001)	100	100	100	100	100	100	100	100	100	100	100	99.9	99.9	99.9
	Los Baños (PHA002)	100	99.9	99.4	99.9	99.9	99.1	99.4	99.4	99.4	99.4	99.4	99.1	99.1	99.1
	Mt. Sto. Tomas (PHA003)	100	99.9	97.9	99.9	99.9	97.9	97.9	97.9	97.9	97.9	97.9	100	100	100
R of Korea	Ganghwa (KRA001)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Jeju (KRA002)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Imsil (KRA003)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Russia	Listvyanka (RUA002)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk (RUA003)	100	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100
	Primorskaya (RUA004)	100	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	100	100	73.1
Thailand	Bangkok (THA001)	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	100	100
	Samutprakarn (THA002)	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	100	100
	Pathumthani (THA003)	100	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
	Khanchanaburi (THA004)	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi (VNA001)	100	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8
	Hoa Binh (VNA002)	100	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8
	Cuc Phuong (VNA003)	100	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9
	Da Nang (VNA004)	100	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7
	Can Tho (VNA005)	100	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100
	Ho Chi Minh (VNA006)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Yen Bai (VNA007)	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.68 Results of ion balance and conductivity agreement check in 2024

Country	Name of sites (Codes)	Sample (N)	R ₁ (N)	R ₁ (AA)	%	R ₂ (N)	R ₂ (AA)	%	R ₁ &R ₂ (N)	R ₁ &R ₂ (AA)	%
Cambodia	Phnom Penh (KHA001)										
China	Haifu (CNA003)*	105	105	101	96.2	105	105	100	105	101	96.2
	Jinyunshan (CNA004)*	135	135	126	93.3	135	135	100	135	126	93.3
	Shizhan (CNA005)*	37	37	37	100	37	37	100	37	37	100
	Jiwozi (CNA007)*	50	50	50	100	50	50	100	50	50	100
	Hongwen (CNA008)*	75	75	47	62.7	75	75	100	75	47	62.7
	Xiaoping (CNA009)*	96	96	73	76.0	96	96	100	96	73	76.0
	Xiang Zhou (CNA010)*	104	104	72	69.2	104	98	94.2	104	70	67.3
	Zhuxiandong (CNA011)*	84	84	59	70.2	84	79	94.0	84	57	67.9
	Wuzhishan(CNA013)*	25	23	8	34.8	23	7	30.4	23	1	4.3
	Lijiang(CNA014)*	49	49	6	12.2	49	30	61.2	49	5	10.2
Indonesia	Jakarta (IDA001)	30	30	9	30.0	30	23	76.7	30	9	30.0
	Kototabang (IDA003)	36	36	15	41.7	36	33	91.7	36	15	41.7
	Maros (IDA005)	22	22	3	13.6	22	14	63.6	22	3	13.6
	Jembrana(IDA006)	41	38	21	55.3	38	32	84.2	38	18	47.4
	Lombok(IDA007)	28	28	6	21.4	28	23	82.1	28	6	21.4
Japan	Rishiri (JPA001)	62	20	20	100	20	19	95.0	20	19	95.0
	Ochiishi (JPA002)	0	0	0	-	0	0	-	0	0	-
	Sado-seki (JPA004)*	80	56	55	98.2	56	56	100	56	55	98.2
	Happo (JPA005)	67	58	50	86.2	58	58	100	58	50	86.2
	Ijira (JPA006)	32	31	31	100	31	31	100	31	31	100
	Oki (JPA007)	20	0	0	-	0	0	-	0	0	-
	Yusuhara (JPA009)*	60	54	54	100	54	54	100	54	54	100
	Hedo (JPA010)	0	0	0	-	0	0	-	0	0	-
	Ogasawara (JPA011)*	46	34	34	100	34	34	100	34	34	100
	Tokyo (JPA012)*	46	37	33	89.2	37	37	100	37	33	89.2
	Niigata-maki(JPA013)	56	41	41	100	41	41	100	41	41	100
	Tsushima(JPA014)	58	50	50	100	50	50	100	50	50	100
Lao PDR	Vientiane (LAA001)*	30	0	0	-	0	0	-	0	0	-
Malaysia	Petaling Jaya (MYA001)*	52	51	49	96.1	51	50	98.0	51	49	96.1
	Tanah Rata(MYA002)*	50	50	34	68.0	50	47	94.0	50	31	62.0
	Danum Valley (MYA003)*	23	20	5	25.0	20	19	95.0	20	5	25.0
	Kuching (MYA004)*	24	22	4	18.2	22	21	95.5	22	4	18.2
	Gunung Brinchang(MYA005)	***	***	***	***	***	***	***	***	***	***
Mongolia	Khan-Uul (MNA004)	28	28	7	25.0	28	24	85.7	28	6	21.4
	Terelj (MNA002)	28	28	6	21.4	28	25	89.3	28	4	14.3
Myanmar	Yangon (MMA001)	30	30	14	46.7	30	17	56.7	30	11	36.7
Philippines	Manila Observatory(PHA001)*	33	31	16	51.6	31	22	71.0	31	12	38.7
	Los Baños (PHA002)*	34	23	10	43.5	23	12	52.2	23	9	39.1
	Mt. Sto. Tomas (PHA003)	33	31	6	19.4	31	8	25.8	31	4	12.9
R of Korea	Ganghwa (KRA001)	61	61	35	57.4	61	46	75.4	61	30	49.2
	Jeju (KRA002)	53	53	38	71.7	53	38	71.7	53	29	54.7
	Imsil (KRA003)	59	59	27	45.8	59	39	66.1	59	19	32.2
Russia	Listvyanka (RUA002)*	61	60	56	93.3	60	56	93.3	60	55	91.7
	Irkutsk (RUA003)*	95	92	91	98.9	92	91	98.9	92	91	98.9
	Primorskaya (RUA004)*	107	48	47	97.9	48	47	97.9	48	46	95.8
Thailand	Bangkok (THA001)	32	0	0	-	0	0	-	0	0	-
	Samutprakarn (THA002)	19	0	0	-	0	0	-	0	0	-
	Pathumthani (THA003)*	65	65	29	44.6	65	54	83.1	65	26	40.0
	Khanchanaburi (THA004)	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi (VNA001)*	43	39	39	100	39	39	100	39	39	100
	Hoa Binh (VNA002)*	38	36	27	75.0	36	36	100	36	27	75.0
	Cuc Phuong (VNA003)*	49	35	35	100	35	35	100	35	35	100
	Da Nang (VNA004)*	38	31	31	100	31	31	100	31	31	100
	Can Tho (VNA005)*	35	34	28	82.4	34	34	100	34	28	82.4
	Ho Chi Minh (VNA006)*	33	33	33	100	33	33	100	33	33	100
	Yen Bai (VNA007)*	29	29	22	75.9	29	29	100	29	22	75.9

Sites marked with * : R₁ and R₂, calculated including concentrations of additional measured constituents

Terms and abbreviations are given in Table 3.5.

Table 3.69 Annual precipitation from 2010 to 2024

unit: mm y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	1851	1277	1617	1345	1561	1103	1277	1379	***	***	***	***	***	***	***
China	Haifu	CNA003	977	810	1010	1026	1417	1220	1270	1217	1117	1224	1279	1318	1056	1353	1043
	Jinyunshan	CNA004	979	848	1005	1127	1490	1288	1217	1268	935	1037	1231	1530	967	1347	772
	Shizhan	CNA005	459	659	393	441	623	594	415	577	471	465	438	827	456	1056	686
	Jiwozi	CNA007	1155	971	390	649	568	447	369	508	547	582	450	926	419	847	582
	Hongwen	CNA008	1530	843	924	1403	1129	1015	1771	538	978	1027	318	443	857	827	1059
	Xiaoping	CNA009	1518	1531	1291	1979	1364	1557	1851	676	840	1013	795	739	1044	971	1079
	Xiang Zhou	CNA010	1857	1259	1518	2421	1673	1431	2344	1905	2067	1988	1783	2472	2124	2109	2311
	Zhuxiandong	CNA011	1853	1146	***	***	***	1598	2356	1817	2109	2105	2115	2398	2104	2133	1797
	Wuzhishan	CNA013										1495	833	1157	1112	664	873
	Lijiang	CNA014										508	998	614	346	480	301
Indonesia	Jakarta	IDA001	2120	990	2722	2331	3168	2807	1976	1307	1709	1500	2976	2115	1721	***	1690
	Serpong	IDA002	1426	830	894	2324	2882	1770	2929	3197	2117	2199	3132	2241	2668		
	Kototabang	IDA003	2370	2193	2639	2120	2496	2503	2163	2437	2905	2134	2808	2575	2325	***	2710
	Bandung	IDA004	2606	1530	2084	2346	2033	2012	2699	1921	1747	1689	1320	1775	1954		
	Maros	IDA005	2663	3632	2451	4033	2763	2479	1973	2301	3339	1663	1685	1604	4321	***	1770
	Jembrana	IDA006										1589	2234	2573	2705	***	1963
	Lombok	IDA007										1604	1635	2069	2494	***	1602
Japan	Rishiri	JPA001	1072	1232	1172	1170	1033	1092	1299	938	1087	713	1248	1055	1047	1428	1096
	Ochiishi	JPA002	1085	818	871	1059	838	827	1138	836	1124	830	638	807	846	806	912
	Tappi	JPA003	1555	1144	1178	1070	1194	1114	1222	1129	1649						
	Sado-seki	JPA004	1368	1387	1296	1576	1409	867	999	1262	1573	959	1346	1530	1193	1451	1275
	Happo	JPA005	2621	3076	2002	2658	2453	2242	2446	3121	2758	2484	2608	2674	2223	2775	2944
	Ijira	JPA006	3847	3068	2862	2724	3044	3135	3151	2919	3725	2777	3486	4209	4042	4370	4593
	Oki	JPA007	1452	1534	1296	1395	1053	1061	1519	992	1308	1095	1503	1736	1311	1828	1409
	Banryu	JPA008	1471	1432	1208	2024	1516	1458	1829	1471	1662						
	Yusuhara	JPA009	2476	3401	3048	2485	3529	3046	2744	2594	4022	3102	2842	2811	2420	2624	2690
	Hedo	JPA010	2643	1766	2837	1612	2442	1762	1822	1623	2632	2566	1943	2740	3029	2081	3361
	Ogasawara	JPA011	1856	1297	1572	1265	1532	1586	1153	1654	960	1868	1662	1880	1953	1520	1233
	Tokyo	JPA012	1656	1388	1635	1609	1807	1641	1609	1280	1296	1641	1401	1839	1464	1297	1730
	Niigata-maki	JPA013										1522	2103	1777	1663	1745	349
	Tsushima	JPA014										2461	2399	2231	1510	1993	2022
Lao PDR	Vientiane	LAA001	***	***	1322	***	1273	921	713	1337	829	700	***	***	***	1218	2857
Malaysia	Petaling Jaya	MYA001	3517	3607	3412	3570	3708	3751	3432	3125	3848	***	3722	3772	4180	3631	3731
	Tanah Rata	MYA002	2451	3293	2846	2771	2895	2684	2366	3016	2607	***	2875	***	3194	2902	2999
	Danum Valley	MYA003	2370	3787	2958	3202	2848	2025	2987	2964	2489	***	2290	3659	2936	2167	3212
	Kuching	MYA004	4645	4632	3796	4110	3656	4428	5655	3828	3804	***	4095	4430	3979	4306	4986
	Gunung Brinchang	MYA005												571	***	***	***
Mongolia	Ulaanbaatar	MNA001	153	163	170	154	***	150	160	160	170	33.7					
	Terej	MNA002	130	144	117	90.8	***	100	106	105	149	***	117	191	121	130	150
	Khan-Uul	MNA004											161	178	117	168	218
Myanmar	Yangon	MMA001	2280	3151	2570	2692	2872	2432	2180	2813	2940	2962	2235	2075	2461	2615	2972
Philippines	Manila Observatory	PHA001	2676	3657	4461	3516	2628	2499	2519	***	***	2367	2519	2556	2833	3560	2053
	Los Baños	PHA002	2068	2384	2102	2394	2073	1559	1756	***	***	***	***	***	2160	2139	1564
	Mt.Sto.Tomas	PHA003	3610	4608	5730	4392	3641	6108	4426	***	***	***	***	***	620	***	2875
Republic of Korea	Ganghwa	KRA001	1570	1476	748	898	427	589	837	588	628	502	***	688	848	594	640
	Jeju	KRA002	1003	1076	1199	636	1195	1452	1121	714	1035	791	***	1185	234	983	1019
	Imsil	KRA003	1642	1493	1400	1220	1101	719	838	761	1171	1096	***	522	711	601	927
Russia	Mondy	RUA001	90.2	73.5	105	330	123	136	222	191	362	182	58.5	58.6	54.3	***	
	Listvyanka	RUA002	327	478	343	278	279	335	316	315	225	430	416	563	396	452	440
	Irkutsk	RUA003	375	329	443	277	388	291	481	502	442	402	484	591	365	482	505
	Primorskaya	RUA004	673	621	922	723	643	1157	925	635	1023	880	808	726	783	1121	800
Thailand	Bangkok	THA001	2023	2171	1799	1330	1011	1593	1631	1592	1144	630	1427	***	2073	1438	1245
	Samutprakarn	THA002	1880	2103	953	1115	991	1442	1810	1815	1471	899	1086	***	1967	1013	444
	Pathumthani	THA003	1763	1562	1563	1181	1059	1071	1069	1365	1322	804	1423	883	1657	1297	1343
	Khanchanaburi	THA004	1626	1941	2390	1501	979	1093	1059	1178	994	652	***	***	***	***	***
	Mae Hia	THA005	1167	1614	1111	1433	527	747	743	1234	818	754					
	Sakaerat	THA008	1627	1509	1126	1443	427	1385	1083	1692	1129	1141					
Vietnam	Hanoi	VNA001	1236	1817	1798	1945	1661	1273	1661	2071	1900	1290	1577	1994	2478	2038	2741
	Hoa Binh	VNA002	1370	1760	1915	2008	1303	1616	1438	1895	2799	1529	2163	2189	2055	1961	2532
	Cuc Phuong	VNA003	1654	1853	2018	1898	1702	1461	1937	2236	2521	1571	1953	1915	2768	1870	2244
	Da Nang	VNA004	1690	3639	1682	2315	2219	1891	2723	2244	2597	2142	3065	2584	3042	3946	2606
	Can Tho	VNA005					1840	2205	1670	1907	2608	2370	1654	2536	2311	1866	1760
	Ho Chi Minh	VNA006					1916	1420	2553	3444	2480	2262	2529	2289	2306	2017	2119
	Yen Bai	VNA007						1514	1815	2397	1866	1593	1691	1411	1834	1376	2627

Terms and abbreviations are given in Table 3.5.

Table 3.70 Precipitation amount-weighted annual average concentrations of SO₄²⁻ from 2010 to 2024

unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	7.37	9.04	10.5	7.99	6.27	7.04	5.37	11.3	***	***	***	***	***	***	***
China	Haifu	CNA003	139	142	102	106	84.4	50.3	46.9	41.0	41.2	33.5	25.8	26.4	22.9	24.0	23.1
	Jinyunshan	CNA004	151	141	124	81.4	60.4	43.9	40.0	36.5	36.3	35.3	30.9	24.4	24.9	21.6	25.9
	Shizhan	CNA005	100.0	110	109	141	113	82.8	62.5	72.5	47.0	30.3	44.6	34.7	54.7	20.6	20.2
	Jiwozi	CNA007	31.8	62.6	94.5	52.6	69.3	31.6	19.5	35.8	26.6	62.5	15.0	16.9	17.1	18.1	34.6
	Hongwen	CNA008	26.7	31.3	32.2	21.9	27.0	18.5	22.8	31.7	17.7	45.2	30.6	22.0	7.84	8.83	11.5
	Xiaoping	CNA009	27.3	24.9	23.4	22.7	29.6	17.3	13.7	14.6	13.1	12.7	11.7	12.6	6.01	10.9	10.8
	Xiang Zhou	CNA010	19.8	15.5	14.9	19.1	14.3	11.6	16.0	14.1	12.1	10.2	8.70	5.83	6.51	7.81	8.38
	Zhuxiandong	CNA011	17.1	20.4	***	***	***	23.3	18.1	14.1	15.7	11.8	10.6	7.98	7.62	8.29	8.78
	Wuzhishan	CNA013										6.78	4.21	2.69	3.63	2.38	2.73
	Lijiang	CNA014										0.460	37.0	2.18	5.34	3.28	7.42
Indonesia	Jakarta	IDA001	21.9	28.7	20.6	21.9	22.2	17.1	31.1	17.3	34.8	25.4	15.4	27.2	23.4	***	24.4
	Serpong	IDA002	24.4	33.6	29.0	26.5	23.2	31.5	25.9	25.5	33.6	33.8	26.3	30.6	28.7		
	Kototabang	IDA003	6.33	7.77	6.04	6.22	8.52	8.30	5.70	4.48	5.59	6.58	4.33	5.55	4.31	***	10.7
	Bandung	IDA004	27.0	30.8	26.5	30.7	38.8	30.1	31.9	35.0	31.8	43.1	33.3	30.6	33.7		
	Maros	IDA005	10.8	8.26	8.77	6.44	7.56	6.19	10.4	6.34	5.83	6.99	4.90	5.33	5.21	***	5.34
	Jembrana	IDA006										9.30	8.99	8.55	8.32	***	14.3
	Lombok	IDA007										11.6	9.17	9.52	20.3	***	14.1
Japan	Rishiri	JPA001	23.4	21.2	27.8	23.2	20.0	18.2	11.8	24.6	22.5	21.8	18.2	22.0	19.2	12.3	14.3
	Ochiishi	JPA002	23.0	15.2	25.3	32.5	13.0	20.3	12.7	18.0	9.68	8.90	13.0	36.0	*	*	*
	Tappi	JPA003	21.3	27.5	22.3	33.1	26.5	24.7	22.5	22.1	17.4						
	Sado-seki	JPA004	32.3	24.5	29.8	33.5	32.0	34.7	21.4	19.6	15.6	23.1	18.8	117	16.6	15.1	13.8
	Happo	JPA005	6.11	7.00	11.6	8.88	8.00	7.06	5.12	4.66	4.74	5.84	4.12	4.65	4.24	3.96	3.03
	Ijira	JPA006	11.1	13.0	13.6	12.3	12.0	11.7	10.8	10.1	7.43	9.90	7.18	6.08	7.75	8.43	5.68
	Okii	JPA007	40.8	45.6	37.9	47.0	47.8	36.4	31.7	40.7	35.1	21.0	23.7	29.4	*	*	*
	Banryu	JPA008	21.0	21.1	25.9	17.3	21.6	18.3	16.9	16.2	11.6						
	Yusuhara	JPA009	9.64	7.02	10.7	9.07	6.92	6.52	7.58	19.8	5.28	6.46	6.75	4.99	8.12	6.94	6.39
	Hedo	JPA010	20.9	20.5	31.2	22.2	14.3	23.9	17.5	28.0	12.8	12.5	19.3	82.6	10.4	26.0	*
	Ogasawara	JPA011	15.0	15.7	10.2	13.5	12.1	20.8	9.57	12.8	3.99	12.8	7.55	11.8	11.5	12.7	8.61
	Tokyo	JPA012	10.9	15.9	15.6	12.2	13.9	11.7	9.36	11.3	10.6	11.0	8.34	6.96	8.50	7.30	7.30
	Niigata-maki	JPA013										20.7	14.3	17.9	19.5	17.0	23.2
	Tsushima	JPA014										10.5	10.5	10.3	12.3	11.0	9.97
Lao PDR	Vientiane	LAA001	***	***	2.41	***	***	3.19	3.66	*	*	*	***	***	***	3.11	3.52
Malaysia	Petaling Jaya	MYA001	17.1	22.5	17.0	17.8	21.4	21.4	20.2	13.5	15.5	***	11.0	9.56	10.7	12.6	10.6
	Tanah Rata	MYA002	3.25	5.05	4.59	4.77	6.19	6.86	3.92	3.53	4.23	***	5.10	***	2.72	3.87	3.80
	Danum Valley	MYA003	5.08	1.96	2.28	3.17	2.58	3.54	1.65	2.70	3.22	***	7.38	2.46	1.85	2.53	1.74
	Kuching	MYA004	3.57	4.07	4.67	5.01	7.14	4.68	4.07	4.00	4.28	***	7.52	2.86	2.38	2.56	1.63
	Gunung Brinchang	MYA005												2.13	***	***	***
Mongolia	Ulaanbaatar	MNA001	22.2	28.1	***	56.6	***	122	129	34.6	32.1	346					
	Terelj	MNA002	30.5	23.6	***	48.5	***	104	142	13.5	26.7	***	47.9	279	*	51.7	20.5
	Khan-Uul	MNA004											38.8	98.4	*	22.9	21.7
Myanmar	Yangon	MMA001	4.52	6.63	7.48	7.96	4.55	4.62	9.19	11.6	8.09	8.77	6.24	5.31	7.90	8.18	8.14
Philippines	Manila Observatory	PHA001	20.3	18.7	24.1	15.1	18.0	19.0	21.7	***	***	10.2	11.4	18.0	16.1	14.4	18.7
	Los Baños	PHA002	7.39	8.57	12.6	6.60	9.13	13.4	15.4	***	***	***	***	***	15.3	18.2	15.5
	Mt.Sto.Tomas	PHA003	4.94	4.69	7.26	7.71	4.62	4.02	5.52	***	***	***	***	***	3.82	***	5.09
Republic of Korea	Ganghwa	KRA001	26.3	27.2	27.2	36.1	29.3	29.4	18.8	23.5	14.2	26.2	***	15.0	12.5	7.53	11.3
	Jeju	KRA002	19.3	25.5	36.7	40.6	17.2	17.3	43.1	31.6	23.4	21.1	***	31.9	83.5	30.6	24.7
	Imsil	KRA003	19.5	20.7	19.4	18.5	15.2	20.2	13.8	18.6	10.6	15.3	***	17.1	18.2	14.9	7.45
Russia	Mondy	RUA001	6.80	4.53	7.16	3.58	5.47	6.45	3.13	6.43	4.37	4.68	3.62	6.11	4.95	***	
	Listvyanka	RUA002	20.7	22.1	21.4	18.1	17.4	21.0	15.0	22.5	21.2	19.4	14.2	16.2	14.5	18.1	17.1
	Irkutsk	RUA003	33.5	34.4	37.9	36.6	23.2	42.2	23.6	25.7	31.1	28.2	22.6	26.0	26.5	26.5	22.2
	Primorskaya	RUA004	31.9	14.0	20.8	29.2	32.1	21.4	24.0	34.2	29.9	18.7	26.3	21.8	33.6	27.8	24.4
Thailand	Bangkok	THA001	12.0	10.7	10.7	7.09	8.43	7.53	14.1	17.0	15.1	11.6	9.50	***	5.22	7.24	*
	Samutprakarn	THA002	15.6	7.67	10.2	7.67	9.61	7.24	11.8	8.90	10.3	10.6	7.43	***	5.35	6.35	*
	Pathumthani	THA003	8.01	9.45	7.93	9.41	8.23	11.6	10.2	8.91	7.17	10.7	5.61	8.95	7.37	7.04	4.86
	Khanchanaburi	THA004	1.79	5.11	3.72	1.23	3.59	2.34	9.80	3.33	2.66	2.94	***	***	***	***	***
	Mae Hia	THA005	3.32	3.24	4.76	4.13	8.39	4.12	5.45	6.21	4.17	7.08					
	Sakaerat	THA008	7.04	5.30	6.64	7.49	10.8	6.53	6.94	4.93	9.62	7.03					
Vietnam	Hanoi	VNA001	35.4	30.7	28.8	25.9	39.3	39.5	35.8	34.6	44.5	67.8	86.0	39.9	69.8	43.1	37.2
	Hoa Binh	VNA002	26.3	18.0	17.1	19.7	25.2	20.0	26.3	18.9	21.9	15.0	39.8	32.4	21.3	37.3	9.12
	Cuc Phuong	VNA003	20.3	37.6	24.3	26.9	18.5	18.8	16.7	16.2	13.5	22.6	19.5	16.3	15.1	17.4	15.0
	Da Nang	VNA004	16.4	21.1	19.6	24.2	15.8	11.4	11.7	16.5	13.9	24.6	11.2	12.2	12.2	11.1	13.5
	Can Tho	VNA005					8.73	30.7	15.9	16.2	22.7	25.7	24.0	20.3	25.1	25.9	26.6
	Ho Chi Minh	VNA006					24.2	47.6	19.2	23.4	25.6	31.7	24.0	25.3	26.1	29.6	34.0
	Yen Bai	VNA007						22.6	43.6	26.2	25.4	24.4	47.7	40.5	25.4	58.7	13.0

Terms and abbreviations are given in Table 3.5.

Table 3.71 Precipitation amount-weighted annual average concentrations of nss-SO₄²⁻ from 2010 to 2024

unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	7.18	8.83	10.3	7.80	5.81	6.66	5.11	11.0	***	***	***	***	***	***	***
China	Haifu	CNA003	138	142	101	106	84.0	50.1	46.5	40.7	40.9	33.3	25.6	26.2	22.7	23.8	23.0
	Jinyunshan	CNA004	151	140	124	81.2	60.1	43.8	39.8	36.4	36.2	35.1	30.8	24.3	24.7	21.5	25.7
	Shizhan	CNA005	99.5	109	109	132	105	75.9	59.2	70.8	45.8	29.6	43.3	33.6	53.2	19.3	19.4
	Jiwozi	CNA007	31.4	62.1	91.8	45.8	61.8	26.0	19.0	33.8	25.1	57.2	13.7	15.6	16.5	17.4	33.5
	Hongwen	CNA008	25.5	30.2	31.2	21.0	25.8	17.4	21.3	29.5	16.3	44.9	27.7	19.3	6.84	7.82	10.7
	Xiaoping	CNA009	26.2	24.2	22.9	22.0	29.0	16.7	13.3	14.2	12.7	12.6	11.0	12.2	5.61	10.2	10.3
	Xiang Zhou	CNA010	18.6	13.5	12.1	15.9	12.5	8.60	14.7	11.0	8.04	8.94	7.28	4.73	5.12	6.58	7.31
	Zhuxiandong	CNA011	15.9	17.7	***	***	***	19.3	16.2	12.6	10.3	10.3	8.35	6.52	5.93	6.82	7.25
	Wuzhishan	CNA013										6.26	3.80	2.27	3.13	2.06	2.36
	Lijiang	CNA014										0.407	36.9	2.13	5.24	3.19	7.32
Indonesia	Jakarta	IDA001	21.4	28.0	19.8	20.9	20.9	16.3	29.8	16.7	33.8	24.8	14.5	26.2	22.8	***	23.1
	Serpong	IDA002	23.9	33.0	28.4	25.6	22.1	30.7	25.1	24.8	32.5	32.8	25.5	29.3	28.2		
	Kototabang	IDA003	6.04	7.38	5.47	5.71	8.18	8.63	4.96	4.27	5.39	6.30	4.10	5.33	4.11	***	10.5
	Bandung	IDA004	26.4	30.1	25.8	29.9	38.0	29.6	31.2	33.9	30.4	40.4	32.5	30.1	33.0		
	Maros	IDA005	10.0	7.36	7.65	5.28	6.24	5.99	5.58	3.71	5.01	5.86	3.97	4.57	4.53	***	4.52
	Jembrana	IDA006										8.10	7.18	6.61	6.89	***	12.4
	Lombok	IDA007										10.2	7.61	8.35	18.9	***	12.7
Japan	Rishiri	JPA001	13.6	12.9	10.5	11.3	10.2	9.80	7.61	12.2	12.2	10.9	9.83	8.15	9.16	6.78	7.66
	Ochiishi	JPA002	9.65	6.73	8.81	7.18	7.15	9.53	4.37	4.87	5.01	4.84	5.92	18.9	*	*	*
	Tappi	JPA003	14.5	18.5	13.8	17.6	17.1	11.5	12.3	10.7	7.83						
	Sado-seki	JPA004	13.4	15.3	15.3	13.9	15.0	15.1	10.9	10.6	7.60	9.88	8.30	33.6	4.34	6.68	5.45
	Happo	JPA005	5.88	6.80	11.0	8.63	7.68	6.71	4.83	4.36	4.42	5.63	3.86	4.34	3.98	3.67	2.90
	Ijira	JPA006	10.3	12.1	12.4	11.4	11.1	10.8	10.1	9.20	6.55	9.11	6.36	5.10	6.52	7.71	5.09
	Okii	JPA007	16.2	16.7	16.4	16.5	15.0	11.5	11.7	11.5	10.8	11.2	9.94	6.54	*	*	*
	Banryu	JPA008	15.3	14.6	20.3	13.1	16.4	12.8	11.9	10.9	8.21						
	Yusuhara	JPA009	9.11	6.28	9.66	8.47	6.61	5.28	7.10	16.7	4.40	5.64	6.19	3.90	5.95	5.84	5.52
	Hedo	JPA010	5.79	8.26	6.30	8.58	6.03	5.04	5.47	5.94	3.12	4.66	5.60	14.7	2.40	7.70	*
	Ogasawara	JPA011	3.02	3.56	3.35	4.99	4.20	2.39	4.09	2.09	1.23	2.10	4.48	1.90	2.51	4.35	1.59
	Tokyo	JPA012	9.86	13.6	13.8	10.8	12.8	10.6	8.49	8.89	8.51	7.50	7.41	5.79	7.38	6.33	6.25
	Niigata-maki	JPA013										10.1	7.51	6.46	6.86	6.54	10.8
	Tsushima	JPA014										8.69	8.59	8.16	6.20	8.77	7.22
Lao PDR	Vientiane	LAA001	***	***	***	***	***	3.02	3.56	*	*	*	***	***	***	2.92	*
Malaysia	Petaling Jaya	MYA001	16.8	22.2	16.8	17.5	21.1	21.0	19.9	13.2	15.2	***	10.6	9.27	10.5	12.3	10.3
	Tanah Rata	MYA002	3.17	4.93	4.50	4.64	6.02	6.69	3.77	3.38	4.08	***	4.80	***	2.54	3.68	3.56
	Danum Valley	MYA003	4.32	1.72	2.11	2.86	2.25	3.22	1.46	2.56	2.91	***	6.61	2.05	1.56	2.29	1.44
	Kuching	MYA004	3.17	3.53	4.35	4.56	6.58	3.91	3.33	3.44	3.76	***	6.89	2.41	1.99	2.19	1.40
	Gunung Brinchang	MYA005												1.89	***	***	***
Mongolia	Ulaanbaatar	MNA001	22.0	27.7	***	52.0	***	***	119	33.3	29.6	339					
	Terelj	MNA002	29.8	23.2	***	47.7	***	***	127	12.7	23.9	***	44.3	272	*	50.7	19.0
	Khan-Uul	MNA004											35.0	97.3	*	22.7	21.3
Myanmar	Yangon	MMA001	3.90	5.72	6.15	7.33	3.51	4.09	8.24	10.7	6.77	7.67	5.40	4.37	6.97	7.23	7.40
Philippines	Manila Observatory	PHA001	18.9	17.4	23.1	13.4	16.5	17.6	20.7	***	***	9.10	10.8	16.6	14.6	13.0	17.6
	Los Baños	PHA002	6.02	7.40	11.3	5.22	8.20	12.4	14.0	***	***	***	***	***	14.5	17.0	14.5
	Mt.Sto.Tomas	PHA003	4.56	4.43	6.64	7.31	4.24	3.49	4.62	***	***	***	***	***	3.71	***	4.89
Republic of Korea	Ganghwa	KRA001	24.7	25.0	24.4	34.3	26.7	26.7	17.1	21.9	12.4	15.4	***	13.2	11.0	6.43	9.57
	Jeju	KRA002	13.1	16.4	14.1	23.2	10.2	11.2	19.3	15.9	7.55	15.5	***	15.0	31.5	9.79	14.0
	Imsil	KRA003	16.6	18.4	16.3	16.7	13.4	17.3	11.8	16.5	8.33	13.0	***	12.3	13.8	12.2	5.92
Russia	Mondy	RUA001	6.63	4.30	6.90	3.49	5.34	6.35	3.05	6.27	4.24	4.56	3.32	5.94	4.85	***	
	Listvyanka	RUA002	20.5	21.8	21.1	17.7	17.1	20.9	14.7	22.3	20.8	19.1	14.0	15.9	14.2	17.7	16.9
	Irkutsk	RUA003	32.4	33.4	37.3	35.8	22.7	41.4	23.2	25.2	30.6	27.7	22.0	25.6	26.0	25.6	21.8
	Primorskaya	RUA004	30.4	13.2	19.4	27.6	31.1	19.9	22.5	32.6	28.6	17.4	24.2	19.8	31.5	26.5	23.1
Thailand	Bangkok	THA001	11.5	10.3	10.3	6.36	7.88	7.04	13.5	16.7	14.5	11.0	8.54	***	4.94	6.33	*
	Samutprakarn	THA002	14.5	7.33	9.74	6.22	8.85	6.68	11.2	8.47	9.69	10.0	6.69	***	5.05	5.16	*
	Pathumthani	THA003	7.67	9.10	7.10	9.04	7.91	11.2	9.77	8.61	6.87	10.3	5.40	8.75	7.20	6.72	4.64
	Khanchanaburi	THA004	1.60	4.66	3.14	<1.0	3.20	2.00	9.19	3.05	2.17	2.61	***	***	***	***	***
	Mae Hia	THA005	3.16	3.05	4.53	3.83	8.17	3.85	5.04	5.85	3.74	6.59					
	Sakaerat	THA008	6.85	5.05	6.42	7.31	10.3	6.25	6.70	4.80	8.95	6.45					
Vietnam	Hanoi	VNA001	35.0	30.3	28.6	25.4	38.9	39.0	35.2	33.6	43.9	66.3	84.5	39.2	68.4	42.3	36.2
	Hoa Binh	VNA002	26.0	17.9	16.9	19.5	25.1	19.8	26.1	18.7	21.8	14.2	39.3	31.8	21.0	36.7	8.95
	Cuc Phuong	VNA003	19.6	36.8	23.1	25.3	17.9	18.3	15.9	15.1	12.7	21.2	18.4	13.9	13.8	15.9	13.8
	Da Nang	VNA004	13.9	16.8	16.1	15.6	10.8	6.65	7.75	11.6	9.85	18.1	7.76	8.04	8.51	8.78	9.71
	Can Tho	VNA005					7.80	28.9	15.1	15.6	22.1	24.6	22.9	19.5	24.2	24.8	25.5
	Ho Chi Minh	VNA006					22.7	45.5	18.4	22.3	24.8	30.5	22.9	24.2	24.9	28.5	32.9
	Yen Bai	VNA007						22.2	43.0	26.0	25.1	23.7	46.7	39.8	25.1	57.8	12.7

Terms and abbreviations are given in Table 3.5.

Table 3.72 Precipitation amount-weighted annual average concentrations of NO₃⁻ from 2010 to 2024unit: µmol L⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	8.37	8.85	10.7	7.65	8.51	10.4	7.66	10.9	***	***	***	***	***	***	***
China	Haifu	CNA003	77.6	83.1	73.9	73.9	64.1	47.4	52.3	51.8	56.8	50.2	42.9	41.0	40.9	41.9	42.6
	Jinyunshan	CNA004	75.0	77.5	70.4	53.1	45.6	36.4	37.5	36.8	44.6	47.0	42.9	35.7	36.8	32.3	45.1
	Shizhan	CNA005	41.0	17.5	49.4	35.6	98.0	71.9	62.8	25.2	38.5	24.7	24.8	12.9	66.2	22.6	31.3
	Jiwozi	CNA007	12.2	8.24	47.4	8.77	13.8	28.6	5.56	2.55	15.1	37.8	4.81	4.41	10.5	17.7	32.8
	Hongwen	CNA008	29.0	23.6	35.2	20.9	26.4	26.2	31.4	43.7	27.1	39.3	50.0	37.9	18.5	19.4	17.8
	Xiaoping	CNA009	30.3	22.6	26.7	20.7	34.0	24.4	19.3	28.1	25.3	31.3	29.1	30.1	20.6	30.4	20.5
	Xiang Zhou	CNA010	23.9	15.7	15.2	20.4	20.9	18.8	18.2	18.1	17.1	21.6	22.6	13.3	13.4	17.6	20.8
	Zhuxiandong	CNA011	19.7	18.8	***	***	***	29.4	22.2	22.8	19.3	24.2	24.3	19.1	15.8	18.3	22.7
	Wuzhishan	CNA013										9.44	9.77	6.20	7.29	4.93	4.74
	Lijiang	CNA014										4.42	29.7	0.882	6.35	5.75	8.91
Indonesia	Jakarta	IDA001	17.1	29.8	16.2	21.8	20.0	15.3	34.2	18.9	44.3	25.6	16.2	24.6	21.9	***	22.2
	Serpong	IDA002	29.8	35.5	31.5	39.5	36.2	48.1	31.7	31.1	48.0	40.1	29.7	33.7	28.1		
	Kototabang	IDA003	2.37	5.05	4.65	2.86	7.48	3.60	4.16	3.78	7.47	7.60	4.61	5.57	4.49	***	5.60
	Bandung	IDA004	17.9	28.0	21.6	22.0	27.2	23.6	22.6	25.9	23.9	35.8	27.9	19.7	21.7		
	Maros	IDA005	6.35	7.51	9.05	3.65	6.10	6.29	8.79	3.48	7.51	3.16	3.08	5.11	5.90	***	6.52
	Jembrana	IDA006										9.64	23.8	5.42	7.38	***	13.8
	Lombok	IDA007										12.5	8.19	21.0	6.42	***	12.1
Japan	Rishiri	JPA001	14.3	14.1	13.4	13.4	10.2	10.8	10.2	18.7	19.3	17.1	14.1	12.8	15.3	12.8	15.8
	Ochiishi	JPA002	9.47	9.58	9.80	8.83	8.71	11.5	5.62	6.83	7.04	8.05	9.05	42.1	*	*	*
	Tappi	JPA003	17.5	19.8	17.4	25.2	24.1	14.3	17.6	19.5	12.2						
	Sado-seki	JPA004	18.1	19.7	20.0	19.4	19.3	20.8	18.7	18.6	14.1	18.1	13.2	18.9	9.24	12.3	11.5
	Happo	JPA005	6.51	8.17	11.6	8.32	7.80	6.78	5.79	5.96	6.49	8.06	5.54	6.90	6.03	5.73	4.74
	Ijira	JPA006	15.1	15.1	16.7	14.8	14.7	16.7	16.4	15.4	10.4	13.6	11.1	10.2	12.3	10.7	9.86
	Oki	JPA007	24.2	21.2	21.6	24.2	20.3	15.1	16.4	21.0	16.9	19.1	13.2	12.5	*	*	*
	Banryu	JPA008	22.6	19.5	27.8	16.2	21.7	18.0	17.9	22.2	13.6						
	Yusuhara	JPA009	7.70	5.75	8.57	7.03	4.87	7.55	6.96	26.3	4.37	5.64	5.75	6.04	6.33	7.04	5.66
	Hedo	JPA010	6.38	7.69	7.17	8.58	6.88	7.05	7.40	8.76	4.99	6.62	6.83	20.2	4.45	12.2	*
	Ogasawara	JPA011	3.07	2.93	2.88	3.82	3.11	2.41	3.87	2.81	2.08	2.27	2.68	2.36	2.48	2.87	2.27
	Tokyo	JPA012	15.3	21.7	18.8	16.1	16.8	16.3	11.8	14.0	15.4	12.7	13.9	11.7	13.6	12.6	12.6
	Niigata-maki	JPA013										16.9	13.7	13.5	13.6	13.3	21.2
	Tsushima	JPA014										6.76	11.4	11.3	10.2	12.3	10.9
Lao PDR	Vientiane	LAA001	***	***	5.55	***	***	4.12	4.07	*	*	*	***	***	***	7.97	6.35
Malaysia	Petaling Jaya	MYA001	49.5	52.8	43.8	33.5	35.8	43.6	44.1	28.8	36.4	***	25.8	27.8	33.3	32.4	30.8
	Tanah Rata	MYA002	4.40	2.21	3.78	3.78	4.82	7.63	5.97	7.89	5.83	***	6.67	***	5.44	6.77	5.36
	Danum Valley	MYA003	1.42	1.05	0.956	1.97	0.738	1.88	0.888	<0.5	0.945	***	<0.5	1.10	3.76	0.977	<0.5
	Kuching	MYA004	4.91	5.00	3.82	4.52	5.29	3.61	4.16	4.64	5.25	***	3.30	7.42	1.96	1.30	1.64
	Gunung Brinchang	MYA005												4.36	***	***	***
Mongolia	Ulaanbaatar	MNA001	21.4	16.8	***	30.9	***	34.6	36.7	30.4	24.4	56.8					
	Terej	MNA002	27.6	18.0	***	31.8	***	24.0	48.9	43.5	25.5	***	40.0	51.8	*	23.5	11.2
	Khan-Uul	MNA004											43.5	42.0	*	12.4	23.3
Myanmar	Yangon	MMA001	4.96	6.30	8.31	6.72	4.80	8.25	14.9	18.3	9.98	22.1	16.5	15.7	7.32	9.13	8.45
Philippines	Manila Observatory	PHA001	50.5	14.4	18.2	13.9	16.0	13.4	36.4	***	***	13.1	11.3	13.2	17.6	13.9	21.0
	Los Baños	PHA002	31.4	8.35	11.9	7.80	8.22	8.81	38.5	***	***	***	***	***	9.22	7.98	10.6
	Mt.Sto.Tomas	PHA003	4.29	2.56	6.10	8.47	5.07	3.49	5.76	***	***	***	***	***	3.71	***	3.66
Republic of Korea	Ganghwa	KRA001	31.8	27.7	36.4	43.2	36.9	50.5	29.6	41.9	28.6	32.0	***	33.5	23.5	14.2	24.7
	Jeju	KRA002	22.7	27.9	19.3	30.3	18.2	21.6	31.8	39.7	20.5	39.2	***	26.6	76.2	37.3	25.6
	Imsil	KRA003	29.0	27.7	26.2	26.2	28.0	33.8	22.7	34.8	21.1	22.9	***	25.9	47.1	38.3	19.5
Russia	Mondy	RUA001	8.11	4.30	7.99	5.03	4.65	5.29	5.75	9.75	5.30	7.69	3.45	3.31	5.09	***	
	Listvyanka	RUA002	20.2	30.6	19.3	15.7	13.2	15.5	15.0	19.3	17.8	16.0	11.4	9.44	18.1	13.3	15.4
	Irkutsk	RUA003	22.3	20.7	18.3	16.3	12.3	20.7	13.4	14.4	13.2	16.2	11.2	9.95	14.7	14.7	15.7
	Primorskaya	RUA004	21.9	37.8	23.4	18.5	7.66	25.4	22.3	35.0	26.4	21.2	18.4	22.2	23.8	13.4	10.2
Thailand	Bangkok	THA001	26.8	20.6	27.6	12.9	15.3	16.2	31.8	20.2	38.0	28.7	28.6	***	25.2	35.2	*
	Samutprakarn	THA002	15.4	9.81	12.5	5.07	13.0	9.97	18.3	15.7	18.7	19.9	13.9	***	19.0	21.7	*
	Pathumthani	THA003	20.4	19.2	18.8	18.6	14.8	29.1	26.3	28.4	18.3	28.1	17.8	25.1	19.8	17.5	14.7
	Khanchanaburi	THA004	3.76	7.27	6.86	1.93	4.68	4.28	4.93	4.95	4.03	3.20	***	***	***	***	***
	Mae Hia	THA005	7.30	7.26	7.91	9.89	11.7	8.36	12.9	10.1	8.86	14.8					
	Sakaerat	THA008	14.6	9.97	11.2	10.4	24.5	12.8	13.5	10.6	13.6	13.4					
Vietnam	Hanoi	VNA001	20.8	21.7	25.2	26.3	30.6	35.1	28.5	34.8	46.3	77.6	76.4	40.5	77.2	39.6	87.2
	Hoa Binh	VNA002	15.5	14.4	15.4	18.8	25.2	22.3	24.8	22.2	16.4	24.4	42.4	40.3	19.5	39.2	17.7
	Cuc Phuong	VNA003	23.2	27.8	20.1	16.7	10.2	13.4	11.4	14.0	9.19	21.3	18.6	26.4	35.9	46.7	43.5
	Da Nang	VNA004	7.02	15.8	4.79	5.41	5.29	<0.5	2.78	5.39	<0.5	1.88	1.94	3.70	3.87	3.36	4.35
	Can Tho	VNA005					8.38	11.7	3.31	3.83	3.07	16.7	3.88	3.95	3.71	3.77	3.99
	Ho Chi Minh	VNA006					17.9	18.0	7.42	10.8	4.90	18.3	8.78	13.7	14.5	12.1	13.3
	Yen Bai	VNA007						17.8	40.3	24.5	28.9	39.5	74.7	37.8	27.9	48.4	36.0

Terms and abbreviations are given in Table 3.5.

Table 3.73 Precipitation amount-weighted annual average concentrations of CI⁻ from 2010 to 2024unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	4.93	5.89	6.67	7.53	9.08	9.01	6.45	6.09	***	***	***	***	***	***	***
China	Haifu	CNA003	16.2	14.3	11.4	12.7	11.1	7.78	8.34	7.80	8.89	6.82	6.35	5.19	5.51	7.04	5.58
	Jinyunshan	CNA004	16.1	11.9	11.6	7.21	5.70	5.09	4.75	5.34	4.47	4.92	4.69	4.28	4.59	3.85	4.97
	Shizhan	CNA005	22.9	10.7	16.0	50.8	21.1	17.8	14.4	8.93	22.1	13.3	19.5	25.8	21.6	16.2	15.3
	Jiwozi	CNA007	14.6	11.1	31.3	33.9	23.0	14.2	0.787	16.7	14.5	23.9	16.1	8.66	16.7	21.9	14.5
	Hongwen	CNA008	15.0	25.4	23.9	19.3	28.6	25.7	31.2	71.7	62.7	72.3	49.1	33.2	18.4	17.5	19.8
	Xiaoping	CNA009	13.9	17.1	14.5	13.0	13.8	18.5	10.6	21.5	22.5	10.0	14.3	12.1	8.34	13.0	13.2
	Xiang Zhou	CNA010	22.4	29.8	43.4	46.1	23.8	60.2	23.6	61.1	73.3	24.4	28.1	20.8	25.5	23.6	20.4
	Zhuxiandong	CNA011	21.7	18.8	***	***	***	72.4	33.5	29.3	102	28.8	44.6	27.7	31.5	27.9	26.6
	Wuzhishan	CNA013										7.43	8.42	7.41	8.91	5.13	8.42
	Lijiang	CNA014										3.38	20.7	2.07	10.4	3.94	13.7
Indonesia	Jakarta	IDA001	15.4	19.4	13.0	19.3	28.8	17.1	31.2	12.4	21.1	14.9	18.1	20.2	13.5	***	38.5
	Serpong	IDA002	22.4	15.1	24.1	22.7	25.5	22.3	16.0	16.4	23.7	29.9	34.9	25.6	17.7		
	Kototabang	IDA003	9.91	13.9	9.72	27.3	10.6	8.28	33.4	6.28	4.85	5.89	5.03	5.89	4.50	***	7.20
	Bandung	IDA004	8.60	12.4	10.6	15.6	14.7	9.49	9.63	14.9	13.7	21.5	13.1	7.67	11.0		
	Maros	IDA005	21.1	16.1	20.0	36.3	36.2	6.90	154	114	15.5	21.3	28.1	14.3	12.9	***	23.2
	Jembrana	IDA006										31.4	60.7	61.3	34.5	***	56.7
	Lombok	IDA007										23.6	23.3	20.2	24.5	***	29.7
Japan	Rishiri	JPA001	184	156	332	222	184	160	79.8	234	194	209	157	259	187	106	126
	Ochiishi	JPA002	266	180	307	486	112	201	161	258	88.7	77.7	134	323	*	*	*
	Tappi	JPA003	124	167	162	289	176	283	195	215	185						
	Sado-seki	JPA004	351	182	293	355	317	367	199	170	151	250	196	1527	234	160	160
	Happo	JPA005	4.99	4.43	11.6	4.89	6.21	7.00	6.42	6.18	6.57	4.42	5.00	6.37	5.29	5.77	2.67
	Ijira	JPA006	16.2	17.2	24.5	19.5	19.7	19.9	15.2	17.7	18.0	15.7	15.8	19.1	24.4	14.4	12.1
	Oki	JPA007	471	552	411	579	617	473	384	555	473	189	264	434	*	*	*
	Banryu	JPA008	107	125	103	80.8	102	107	92.1	99.8	65.0						
	Yusuhara	JPA009	11.0	14.7	21.8	13.4	6.95	27.4	9.97	60.4	16.6	16.7	11.2	21.2	42.2	21.3	17.3
	Hedo	JPA010	284	232	496	263	157	368	236	429	186	153	271	1353	154	353	*
	Ogasawara	JPA011	211	241	134	166	154	370	106	208	52.8	203	60.8	190	172	160	132
	Tokyo	JPA012	19.4	45.9	35.8	27.7	23.1	22.2	17.2	47.5	39.7	65.8	18.4	22.8	21.6	18.2	20.2
	Niigata-maki	JPA013										210	131	218	248	203	245
	Tsushima	JPA014										34.7	35.9	40.6	118	43.0	53.4
Lao PDR	Vientiane	LAA001	***	***	4.46	***	***	4.97	5.28	*	*	*	***	***	***	3.99	5.15
Malaysia	Petaling Jaya	MYA001	9.26	8.36	7.98	7.66	8.89	10.3	10.3	10.0	9.75	***	9.04	8.76	7.41	7.89	8.21
	Tanah Rata	MYA002	1.91	2.95	3.19	2.96	3.49	3.75	3.30	3.35	4.09	***	4.36	***	3.43	3.58	3.64
	Danum Valley	MYA003	17.1	5.70	4.16	7.52	6.50	7.47	4.90	4.60	7.29	***	14.6	8.74	6.28	5.08	11.1
	Kuching	MYA004	8.04	11.5	6.78	8.82	11.0	14.5	14.5	11.5	10.9	***	14.2	11.0	7.73	6.88	10.4
	Gunung Brinchang	MYA005												7.04	***	***	***
Mongolia	Ulaanbaatar	MNA001	8.49	7.46	***	4.08	***	5.15	4.63	3.56	4.41	13.4					
	Terelj	MNA002	10.6	9.81	***	6.94	***	7.91	9.71	8.67	5.77	***	5.60	11.5	*	6.50	2.68
	Khan-Uul	MNA004											4.60	6.71	*	3.38	4.35
Myanmar	Yangon	MMA001	13.2	15.8	26.6	27.1	19.5	34.4	31.3	35.2	21.8	20.8	22.7	16.8	14.6	17.8	25.2
Philippines	Manila Observatory	PHA001	20.6	29.8	20.2	28.7	26.1	27.3	31.4	***	***	23.3	10.3	30.2	12.1	20.7	21.3
	Los Baños	PHA002	25.3	26.2	21.6	25.8	18.3	92.0	25.2	***	***	***	***	***	14.4	21.1	17.5
	Mt.Sto.Tomas	PHA003	5.07	4.41	6.50	7.11	4.21	7.79	5.46	***	***	***	***	***	7.89	***	12.8
Republic of Korea	Ganghwa	KRA001	43.9	48.5	67.5	36.3	61.6	161	50.1	55.7	42.3	216	***	36.4	29.1	25.6	39.9
	Jeju	KRA002	114	147	455	344	124	109	444	280	293	76.4	***	288	945	391	174
	Imsil	KRA003	44.4	25.3	88.8	22.8	30.7	46.8	29.9	32.1	27.6	28.4	***	70.9	41.7	23.2	10.1
Russia	Mondy	RUA001	3.39	5.28	5.95	3.69	3.57	3.68	1.66	5.29	2.39	1.95	2.20	2.45	0.866	***	
	Listvyanka	RUA002	3.43	6.63	3.28	5.85	3.65	5.45	3.09	4.12	2.93	4.19	3.61	2.27	2.62	4.96	2.34
	Irkutsk	RUA003	23.8	22.0	15.1	19.2	9.86	23.9	9.90	10.2	10.0	10.6	9.05	6.92	7.97	11.4	6.35
	Primorskaya	RUA004	29.4	67.4	29.9	42.7	25.0	25.4	33.4	37.1	21.5	34.6	31.5	59.3	56.1	45.0	44.8
Thailand	Bangkok	THA001	9.33	7.98	8.33	7.24	9.22	7.36	11.1	8.16	14.4	11.8	12.0	***	6.13	9.19	*
	Samutprakarn	THA002	16.2	7.61	9.92	9.16	11.3	9.66	9.41	8.30	10.9	11.4	13.5	***	6.42	11.7	*
	Pathumthani	THA003	5.77	6.82	15.9	6.85	7.88	9.96	8.65	7.48	6.98	9.62	6.09	8.72	5.82	7.34	5.25
	Khanchanaburi	THA004	3.30	8.86	11.6	2.89	6.90	5.69	9.04	5.92	7.60	6.88	***	***	***	***	***
	Mae Hia	THA005	3.58	2.88	4.14	5.94	5.39	3.87	7.39	5.73	7.19	7.55					
	Sakaerat	THA008	4.81	4.80	6.36	6.34	11.1	6.99	6.57	4.08	5.08	5.26					
Vietnam	Hanoi	VNA001	10.9	8.56	6.58	9.93	10.4	14.8	11.4	14.6	23.0	25.2	48.3	14.1	35.2	20.1	58.4
	Hoa Binh	VNA002	6.35	4.30	4.65	6.18	4.24	5.25	7.94	14.6	9.84	9.31	21.4	15.1	10.2	19.3	3.96
	Cuc Phuong	VNA003	24.3	15.5	20.3	25.2	11.7	21.3	17.1	35.6	30.2	38.8	39.3	37.4	22.4	28.9	21.6
	Da Nang	VNA004	50.4	93.5	83.1	174	92.9	72.8	70.2	80.9	97.8	167	171	116	226	98.4	89.7
	Can Tho	VNA005					27.4	41.2	36.1	29.2	30.4	23.9	28.9	29.8	29.5	29.7	29.0
	Ho Chi Minh	VNA006					44.8	52.0	37.3	47.5	36.3	36.9	43.2	43.5	44.7	43.9	33.0
	Yen Bai	VNA007						7.48	14.3	17.3	12.4	14.0	31.2	14.3	16.0	19.8	6.44

Terms and abbreviations are given in Table 3.5.

Table 3.74 Precipitation amount-weighted annual average concentrations of NH₄⁺ from 2010 to 2024

unit: µmol L⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	22.6	21.9	21.6	13.5	13.9	18.1	19.5	22.2	***	***	***	***	***	***	***
China	Haifu	CNA003	141	145	116	142	116	95.2	98.7	96.3	103	91.5	74.5	73.5	80.6	80.8	87.1
	Jinyunshan	CNA004	124	117	124	90.1	70.6	62.6	65.8	60.0	79.3	70.6	62.5	55.8	63.7	55.2	75.0
	Shizhan	CNA005	187	60.8	109	238	170	194	118	147	127	136	160	69.5	118	123	56.5
	Jiwozi	CNA007	17.3	23.1	26.6	55.5	32.8	65.7	2.87	1.07	15.5	34.2	37.9	31.9	17.0	18.0	9.93
	Hongwen	CNA008	39.8	42.3	43.2	18.3	25.7	29.2	37.2	33.8	25.0	28.3	31.9	46.2	21.9	16.9	29.9
	Xiaoping	CNA009	42.9	38.9	30.4	25.3	38.9	37.8	24.6	29.5	23.5	19.9	25.9	34.8	13.0	35.4	27.9
	Xiang Zhou	CNA010	24.4	20.7	29.1	17.7	23.8	19.1	29.6	24.5	24.2	22.7	23.3	14.0	15.7	21.0	25.3
	Zhuxiandong	CNA011	22.7	24.8	***	***	***	24.3	42.4	25.7	23.6	23.0	21.6	18.4	14.2	19.4	19.8
	Wuzhishan	CNA013										14.7	20.0	13.2	13.1	8.87	9.68
	Lijiang	CNA014										11.0	2.44	12.6	24.9	12.3	42.2
Indonesia	Jakarta	IDA001	23.0	33.7	23.1	17.2	17.6	18.9	37.5	24.0	47.9	29.6	24.5	30.6	27.8	***	26.1
	Serpong	IDA002	52.3	62.2	71.1	83.0	65.5	63.0	55.6	50.5	69.4	67.4	69.6	69.6	64.5		
	Kototabang	IDA003	2.83	10.0	8.47	6.93	12.1	1903	4.94	5.59	7.35	7.80	6.87	9.94	4.71	***	12.8
	Bandung	IDA004	32.1	60.8	53.8	47.4	55.4	56.7	58.1	62.4	61.9	73.2	69.1	53.2	65.7		
	Maros	IDA005	10.1	9.30	14.1	6.75	7.19	20.7	53.7	5.22	10.9	2.61	1.61	3.52	7.73	***	10.4
	Jembrana	IDA006										16.8	14.4	12.2	3.72	***	13.3
	Lombok	IDA007										16.9	20.9	16.6	83.5	***	6.97
Japan	Rishiri	JPA001	15.7	14.0	11.4	12.9	12.5	13.3	10.4	22.3	22.3	19.0	19.1	15.0	18.5	15.5	19.8
	Ochiishi	JPA002	10.7	11.0	12.3	9.68	10.8	11.4	5.01	6.26	6.59	7.54	10.6	43.0	*	*	*
	Tappi	JPA003	15.0	16.9	13.8	19.1	22.7	13.0	15.4	15.9	10.3						
	Sado-seki	JPA004	11.9	14.6	15.5	18.1	18.2	19.3	16.0	20.0	10.9	16.2	11.3	14.3	6.72	11.2	10.1
	Happo	JPA005	5.88	6.06	10.7	8.94	8.08	7.84	4.77	4.33	5.57	8.54	5.58	7.25	6.81	6.33	4.81
	Ijira	JPA006	12.2	14.1	14.7	13.4	13.4	13.5	14.3	12.5	9.12	12.7	10.7	9.66	12.6	10.8	9.07
	Oki	JPA007	17.8	18.6	17.0	17.5	14.0	9.63	14.4	17.7	12.1	15.5	10.0	9.83	*	*	*
	Banryu	JPA008	21.6	15.7	21.5	13.8	17.3	14.9	15.0	16.3	9.62						
	Yusuhara	JPA009	6.60	4.83	7.55	7.16	4.91	4.04	6.04	21.9	3.15	5.39	5.94	4.78	6.31	6.56	4.93
	Hedo	JPA010	9.31	9.13	18.8	9.94	8.28	11.0	8.05	7.04	3.19	4.93	8.05	23.8	3.36	12.4	*
	Ogasawara	JPA011	5.29	4.54	5.18	6.04	3.88	2.64	4.85	2.30	2.02	2.47	3.51	1.68	1.88	3.03	1.11
	Tokyo	JPA012	19.2	25.4	24.3	22.9	23.1	20.1	17.2	18.2	21.7	17.6	21.8	17.6	20.6	18.4	16.6
	Niigata-maki	JPA013										16.3	12.5	11.9	13.5	12.4	23.0
	Tsushima	JPA014										8.61	12.8	9.17	9.34	11.5	10.1
Lao PDR	Vientiane	LAA001	***	***	***	***	***	7.78	7.50	*	*	*	***	***	***	7.64	*
Malaysia	Petaling Jaya	MYA001	4.60	4.86	1.29	16.2	27.4	25.5	13.0	17.0	19.8	***	20.2	18.9	15.3	21.7	21.3
	Tanah Rata	MYA002	4.05	14.3	5.67	2.42	3.44	7.54	3.51	3.13	2.04	***	10.9	***	6.52	8.29	8.08
	Danum Valley	MYA003	4.89	1.90	<0.8	<0.8	0.915	4.21	<0.8	<0.8	1.75	***	<0.8	<0.8	1.85	<0.8	2.11
	Kuching	MYA004	1.94	5.03	6.16	2.87	9.38	5.49	2.45	3.48	5.24	***	2.26	4.98	7.40	5.92	1.57
	Gunung Brinchang	MYA005												2.93	***	***	***
Mongolia	Ulaanbaatar	MNA001	54.7	45.9	***	62.2	***	***	40.7	48.9	57.4	75.1					
	Terelj	MNA002	35.0	39.4	***	5.37	***	***	60.2	41.9	31.0	***	22.5	55.6	*	28.7	25.1
	Khan-Uul	MNA004											49.6	62.5	*	26.3	33.7
Myanmar	Yangon	MMA001	14.6	14.9	17.7	17.0	16.6	22.3	17.1	13.6	19.5	17.0	21.0	19.0	22.5	19.0	10.4
Philippines	Manila Observatory	PHA001	53.1	183	273	41.2	61.6	86.1	112	***	***	28.6	21.4	16.5	20.7	32.7	31.7
	Los Baños	PHA002	38.2	29.4	67.8	22.3	55.9	54.9	84.8	***	***	***	***	***	11.6	13.9	17.7
	Mt.Sto.Tomas	PHA003	4.65	0.822	3.42	4.71	13.5	9.57	7.79	***	***	***	***	***	3.04	***	5.91
Republic of Korea	Ganghwa	KRA001	26.5	43.3	49.4	78.5	60.2	99.0	58.1	84.4	38.6	42.3	***	36.8	33.9	16.4	34.0
	Jeju	KRA002	26.8	28.0	33.4	35.9	25.5	28.2	40.3	38.3	25.7	45.4	***	23.4	36.2	20.0	23.7
	Imsil	KRA003	31.2	37.7	39.5	40.5	33.4	50.6	36.1	51.6	26.8	35.7	***	22.5	43.1	34.0	21.4
Russia	Mondy	RUA001	17.5	9.14	19.0	2.71	3.60	13.5	4.97	10.4	8.38	9.51	5.19	33.1	12.4	***	
	Listvyanka	RUA002	18.3	17.2	26.7	9.85	13.7	36.8	14.4	20.6	13.8	18.8	11.8	14.7	13.7	12.1	12.1
	Irkutsk	RUA003	34.5	32.7	34.1	29.5	23.9	73.0	22.2	20.4	21.0	29.8	23.7	25.0	26.7	25.3	13.0
	Primorskaya	RUA004	42.7	54.1	27.0	39.6	42.3	25.7	22.7	46.8	33.0	23.9	22.8	51.4	59.0	44.5	47.1
Thailand	Bangkok	THA001	37.8	40.2	44.1	46.3	52.3	60.7	63.6	54.6	52.9	35.5	44.2	***	28.3	42.1	*
	Samutprakarn	THA002	28.1	27.8	34.1	37.7	48.6	46.0	43.3	48.5	40.1	31.6	30.6	***	22.1	26.5	*
	Pathumthani	THA003	28.0	38.1	37.9	44.9	35.3	45.3	53.1	41.3	35.6	49.4	31.3	32.6	28.2	35.0	29.3
	Khanchanaburi	THA004	8.90	13.0	8.95	6.80	14.0	10.7	16.2	14.1	6.33	4.51	***	***	***	***	***
	Mae Hia	THA005	19.3	13.5	19.6	19.3	26.8	17.6	29.3	26.2	15.1	33.2					
	Sakaerat	THA008	24.6	24.3	25.7	23.8	42.3	31.3	34.0	23.3	63.3	68.9					
Vietnam	Hanoi	VNA001	52.4	52.8	60.2	53.4	68.0	64.9	61.4	52.6	56.9	29.9	98.6	66.0	63.3	78.8	31.7
	Hoa Binh	VNA002	28.3	27.8	30.0	25.3	45.6	38.3	56.9	20.0	29.0	12.0	41.2	54.1	25.2	79.6	17.7
	Cuc Phuong	VNA003	9.90	19.2	23.9	25.5	20.5	30.0	20.1	8.72	5.39	19.7	16.4	49.1	57.2	51.3	41.7
	Da Nang	VNA004	8.67	21.5	21.3	24.6	14.5	8.73	5.43	20.9	14.1	41.7	21.2	18.6	16.1	14.1	29.6
	Can Tho	VNA005					18.3	21.3	22.7	21.5	12.3	17.6	16.1	19.2	21.6	21.0	19.9
	Ho Chi Minh	VNA006					24.3	29.4	28.8	38.4	20.7	22.8	30.1	30.4	30.0	33.7	31.6
	Yen Bai	VNA007						30.5	91.5	33.6	39.0	18.2	66.2	75.2	33.4	110	28.0

Terms and abbreviations are given in Table 3.5.

Table 3.75 Precipitation amount-weighted annual average concentrations of Na⁺ from 2010 to 2024unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	3.10	3.55	3.65	3.10	7.60	6.28	4.23	4.45	***	***	***	***	***	***	***
China	Haifu	CNA003	7.56	9.87	6.04	7.29	6.36	3.61	6.18	4.42	4.98	4.01	3.55	2.47	3.32	4.53	2.87
	Jinyunshan	CNA004	8.17	6.12	6.28	3.92	4.50	2.23	2.55	2.95	1.81	2.00	2.02	1.51	2.01	2.63	2.12
	Shizhan	CNA005	7.30	17.7	5.59	138	126	113	53.6	28.7	20.6	12.1	20.4	17.9	25.6	20.5	14.0
	Jiwozi	CNA007	6.47	7.86	44.5	112	125	92.5	8.39	33.7	24.6	88.3	20.8	20.9	9.93	10.2	18.7
	Hongwen	CNA008	19.4	18.1	16.3	14.3	19.8	18.6	27.2	35.7	24.0	4.99	48.1	45.3	16.6	16.7	13.3
	Xiaoping	CNA009	18.8	10.9	8.45	12.1	8.77	11.0	6.54	6.87	6.55	1.44	10.5	7.52	6.73	10.5	7.84
	Xiang Zhou	CNA010	19.8	32.3	45.9	54.2	30.7	52.9	22.5	52.2	67.2	20.3	23.5	18.3	23.0	20.4	17.8
	Zhuxiandong	CNA011	19.9	45.0	***	***	***	66.9	34.1	26.2	89.3	24.0	38.1	24.2	28.1	24.5	25.3
	Wuzhishan	CNA013										8.68	7.39	6.83	8.22	5.83	6.07
	Lijiang	CNA014										8.65	0.580	1.15	1.65	1.59	1.62
Indonesia	Jakarta	IDA001	7.92	11.7	12.7	16.2	21.4	2.01	21.0	9.76	16.7	9.40	15.5	15.9	9.55	***	22.5
	Serpong	IDA002	8.32	10.1	10.9	14.0	18.8	14.6	14.4	12.1	17.7	17.0	13.1	22.4	8.15		
	Kototabang	IDA003	5.25	6.54	9.63	8.51	5.67	0.779	21.1	3.46	3.40	4.75	7.43	3.63	3.37	***	3.69
	Bandung	IDA004	9.74	12.2	10.8	13.6	12.9	8.58	11.2	18.7	23.1	44.8	14.7	7.05	11.6		
	Maros	IDA005	13.2	14.9	19.9	19.3	29.1	3.67	118	104	13.5	18.7	15.4	12.6	11.2	***	13.7
	Jembrana	IDA006										19.9	30.0	32.2	23.9	***	31.2
	Lombok	IDA007										22.8	25.9	19.5	23.6	***	21.8
Japan	Rishiri	JPA001	162	139	292	200	162	140	69.7	207	170	182	139	230	167	91.2	110
	Ochiishi	JPA002	232	155	274	421	97.2	178	138	219	77.6	67.4	117	282	*	*	*
	Tappi	JPA003	114	150	141	257	156	237	169	189	159						
	Sado-seki	JPA004	320	153	246	328	282	327	175	150	134	220	175	1389	204	139	138
	Happo	JPA005	3.76	3.34	9.57	4.07	5.31	5.84	4.83	4.96	5.41	3.54	4.21	5.25	4.45	4.91	2.04
	Ijira	JPA006	13.0	13.8	19.3	15.1	15.6	15.8	12.4	14.6	14.6	13.1	13.7	16.2	20.3	12.0	9.88
	Okii	JPA007	409	480	357	505	545	412	332	486	405	163	229	380	*	*	*
	Banryu	JPA008	94.2	108	92.2	69.1	86.9	91.1	81.9	87.8	56.7						
	Yusuhara	JPA009	8.82	12.3	18.1	9.90	5.19	22.9	7.97	48.7	14.5	13.8	9.34	17.9	36.1	18.3	14.5
	Hedo	JPA010	254	204	418	227	137	313	201	368	160	130	228	1125	133	304	*
	Ogasawara	JPA011	208	202	114	141	131	306	90.9	180	46.7	178	51.1	164	149	138	116
	Tokyo	JPA012	17.3	37.7	29.5	22.8	18.9	18.0	14.4	40.3	34.5	57.7	15.3	19.4	18.6	16.1	17.5
	Niigata-maki	JPA013										176	113	189	210	175	206
	Tsushima	JPA014										30.0	31.2	35.0	101	36.3	45.6
Lao PDR	Vientiane	LAA001	***	***	***	***	***	2.78	1.52	*	*	*	***	***	***	3.41	*
Malaysia	Petaling Jaya	MYA001	4.99	4.56	3.85	4.29	5.04	6.20	6.14	6.04	5.33	***	5.51	4.88	3.61	5.12	5.30
	Tanah Rata	MYA002	1.29	1.99	1.51	2.17	2.82	2.74	2.72	2.47	2.48	***	5.02	***	2.96	3.17	3.98
	Danum Valley	MYA003	13.8	5.52	2.87	5.14	5.42	5.40	3.30	2.52	5.16	***	12.7	6.84	4.76	4.00	5.03
	Kuching	MYA004	6.67	9.08	5.21	7.54	9.25	12.9	12.7	9.28	8.49	***	10.5	7.50	6.60	6.04	4.01
	Gunung Brinchang	MYA005												4.66	***	***	***
Mongolia	Ulaanbaatar	MNA001	3.50	5.65	***	78.8	***	***	172	21.9	41.5	110					
	Terelj	MNA002	11.1	6.07	***	17.0	***	***	206	13.5	49.5	***	60.8	111	*	16.8	26.0
	Khan-Uul	MNA004											77.7	17.4	*	4.11	6.30
Myanmar	Yangon	MMA001	12.9	15.0	22.1	15.8	17.3	8.77	15.7	15.0	21.9	18.3	14.0	15.7	15.3	15.8	12.2
Philippines	Manila Observatory	PHA001	22.3	21.4	16.7	28.0	24.5	23.4	17.4	***	***	18.0	10.4	22.3	24.1	24.1	18.4
	Los Baños	PHA002	22.7	19.4	22.2	22.8	15.4	17.6	22.4	***	***	***	***	***	12.8	21.5	13.6
	Mt.Sto.Tomas	PHA003	6.30	4.31	10.3	6.70	6.30	8.71	14.8	***	***	***	***	***	1.93	***	4.08
Republic of Korea	Ganghwa	KRA001	27.0	35.8	50.7	29.6	43.2	45.0	28.5	27.8	30.4	180	***	29.9	24.1	18.2	28.6
	Jeju	KRA002	103	152	375	290	116	101	394	261	264	93.4	***	285	879	360	185
	Imsil	KRA003	48.2	37.4	51.8	30.3	29.8	47.1	33.8	36.2	38.5	38.1	***	80.5	72.3	45.5	25.3
Russia	Mondy	RUA001	2.81	3.86	4.32	1.36	2.25	1.61	1.38	2.58	2.11	1.92	5.00	2.82	1.66	***	
	Listvyanka	RUA002	3.60	5.42	4.20	6.68	4.80	2.96	2.80	3.26	3.01	3.06	4.45	4.78	4.39	6.29	2.84
	Irkutsk	RUA003	18.4	16.8	9.96	12.8	8.62	12.7	7.42	7.99	8.80	6.70	9.98	7.00	9.07	11.2	6.08
	Primorskaya	RUA004	23.9	13.7	23.1	25.5	15.8	24.8	25.2	26.0	21.9	20.0	33.8	34.3	36.0	21.0	21.8
Thailand	Bangkok	THA001	8.79	6.46	6.07	12.0	9.17	7.97	11.0	5.83	11.4	8.83	15.9	***	5.12	9.88	*
	Samutprakarn	THA002	18.6	5.70	7.89	25.3	12.6	9.33	8.87	7.10	9.95	9.65	12.3	***	5.62	9.26	*
	Pathumthani	THA003	7.46	5.87	14.1	5.96	5.31	6.92	6.41	4.83	5.10	6.57	3.64	3.64	2.83	5.27	3.74
	Khanchanaburi	THA004	3.11	7.45	9.71	5.46	6.41	5.91	10.4	4.70	8.17	5.45	***	***	***	***	***
	Mae Hia	THA005	2.72	3.21	3.80	5.63	3.65	4.48	7.01	6.14	7.89	8.18					
	Sakaerat	THA008	3.21	4.04	3.71	2.96	8.85	4.59	4.02	2.08	11.0	9.64					
Vietnam	Hanoi	VNA001	7.28	6.17	4.19	7.69	7.24	9.00	11.4	16.4	11.2	26.4	23.9	11.6	24.0	13.6	16.4
	Hoa Binh	VNA002	4.86	2.46	3.03	4.13	3.16	3.80	4.40	3.99	2.79	12.2	8.27	9.65	4.56	10.2	2.83
	Cuc Phuong	VNA003	12.0	13.6	20.0	26.7	10.7	8.76	12.7	17.6	13.4	23.4	17.5	38.1	20.4	24.0	20.1
	Da Nang	VNA004	41.3	70.2	63.2	144	82.1	79.6	65.7	81.0	68.1	108	57.8	68.8	60.5	38.1	63.6
	Can Tho	VNA005					15.4	29.4	12.6	9.61	9.73	18.1	17.9	14.0	14.6	17.7	17.2
	Ho Chi Minh	VNA006					25.0	34.6	13.5	17.4	14.2	20.4	18.4	19.5	18.9	18.6	19.3
	Yen Bai	VNA007						5.40	8.96	3.68	3.65	11.7	16.0	10.8	5.18	15.4	5.21

Terms and abbreviations are given in Table 3.5.

Table 3.76 Precipitation amount-weighted annual average concentrations of K⁺ from 2010 to 2024

unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	0.861	1.15	0.761	1.06	2.69	1.98	2.11	1.22	***	***	***	***	***	***	***
China	Haifu	CNA003	10.0	9.38	6.57	12.8	9.28	5.99	4.66	4.80	6.21	3.45	2.71	2.38	2.96	3.50	3.40
	Jinyunshan	CNA004	10.4	10.4	7.64	5.49	4.42	3.40	3.37	3.60	2.75	3.20	2.60	1.78	2.43	1.60	3.12
	Shizhan	CNA005	32.4	13.4	5.69	28.1	251	5.32	3.76	4.60	10.9	7.50	7.55	3.52	13.2	2.67	7.31
	Jiwozi	CNA007	4.89	7.28	9.74	10.2	16.4	6.63	4.58	13.0	19.3	64.1	13.4	5.05	8.23	6.46	12.5
	Hongwen	CNA008	2.24	1.99	2.86	1.90	1.42	5.99	5.34	35.0	37.8	14.3	9.74	10.6	3.37	1.72	1.56
	Xiaoping	CNA009	1.94	2.80	3.47	1.66	1.45	8.40	5.59	12.4	14.4	2.51	2.71	2.55	3.38	2.72	1.83
	Xiang Zhou	CNA010	2.21	3.74	9.20	8.24	6.89	4.41	3.68	2.56	3.05	1.49	1.22	0.901	0.989	1.35	1.09
	Zhuxiandong	CNA011	3.29	5.92	***	***	***	8.30	5.80	2.24	4.65	1.87	2.15	1.63	1.34	1.42	1.83
	Wuzhishan	CNA013										2.87	2.68	3.40	4.00	2.15	5.09
	Lijiang	CNA014										1.53	0.768	0.642	1.74	0.919	19.7
Indonesia	Jakarta	IDA001	2.23	2.28	2.86	2.83	3.62	12.5	10.5	2.38	2.83	1.38	3.53	2.43	3.97	***	10.8
	Serpong	IDA002	3.20	3.15	4.33	4.91	5.64	7.81	4.85	3.78	6.02	11.9	14.5	5.04	2.81		
	Kototabang	IDA003	4.43	3.96	5.52	19.3	10.4	4949	11.5	1.86	2.06	2.87	3.86	4.29	2.42	***	6.41
	Bandung	IDA004	4.22	4.77	3.36	7.97	5.63	3.54	2.89	4.22	4.48	4.65	5.06	2.54	3.40		
	Maros	IDA005	2.52	1.86	3.50	1.84	19.1	1786	15.1	6.27	2.83	3.00	11.3	1.91	1.44	***	8.73
	Jembrana	IDA006										3.81	19.7	20.9	3.31	***	17.1
	Lombok	IDA007										3.28	6.77	6.93	22.6	***	12.5
Japan	Rishiri	JPA001	4.28	3.44	6.41	4.61	4.10	3.62	2.07	6.01	4.83	5.24	4.30	6.17	4.40	3.00	3.39
	Ochiishi	JPA002	6.16	3.70	6.76	9.35	2.55	4.84	3.43	5.36	1.86	1.68	3.05	24.7	*	*	*
	Tappi	JPA003	3.50	4.34	3.96	6.21	3.97	5.56	4.47	4.72	3.87						
	Sado-seki	JPA004	8.08	4.45	6.62	7.69	7.51	9.69	7.55	4.71	3.33	5.81	4.27	43.3	4.63	3.42	3.46
	Happo	JPA005	0.356	0.447	0.865	0.581	0.746	0.681	0.457	0.376	0.423	0.558	0.509	0.426	0.401	0.385	<0.3
	Ijira	JPA006	0.426	0.535	0.609	0.589	0.611	0.699	0.498	0.576	0.462	0.523	0.490	0.588	0.593	0.506	0.471
	Okri	JPA007	10.1	12.7	9.16	12.8	13.1	9.87	8.06	11.6	9.86	4.26	5.39	9.38	*	*	*
	Banryu	JPA008	5.43	3.39	3.26	2.33	2.65	2.54	2.28	2.41	1.66						
	Yusuhara	JPA009	0.613	0.465	1.07	0.387	0.701	0.758	0.508	1.83	0.664	0.793	0.719	1.09	1.58	1.26	0.717
	Hedo	JPA010	6.19	4.94	10.6	5.48	3.31	7.24	4.51	8.02	3.52	3.03	5.15	24.4	2.95	7.66	*
	Ogasawara	JPA011	5.02	4.95	2.71	3.64	3.12	8.10	2.22	4.14	1.10	4.41	1.43	2.99	3.43	3.38	2.60
	Tokyo	JPA012	0.989	1.29	0.888	0.711	0.628	0.641	0.539	1.11	0.842	1.37	0.541	0.502	0.523	0.624	0.568
	Niigata-maki	JPA013										4.80	2.70	4.55	5.09	4.05	4.82
	Tsushima	JPA014										0.882	1.10	1.20	3.44	1.37	1.78
Lao PDR	Vientiane	LAA001	***	***	***	***	***	1.74	0.958	*	*	*	***	***	***	1.59	*
Malaysia	Petaling Jaya	MYA001	1.50	1.31	1.33	1.14	1.47	1.70	1.83	1.55	1.90	***	1.97	1.53	1.12	1.48	1.54
	Tanah Rata	MYA002	1.06	2.03	1.68	1.75	1.62	2.37	1.22	1.93	1.36	***	4.70	***	1.93	1.81	2.07
	Danum Valley	MYA003	3.24	1.73	1.21	1.01	2.16	2.39	1.01	1.29	2.64	***	2.95	2.43	2.77	2.83	7.39
	Kuching	MYA004	0.650	0.854	0.924	0.695	3.26	1.44	1.13	1.43	1.54	***	1.92	1.96	2.95	2.11	1.38
	Gunung Brinchang	MYA005												1.85	***	***	***
Mongolia	Ulaanbaatar	MNA001	2.72	3.98	***	3.88	***	***	0.620	1.29	1.01	2.01					
	Terelj	MNA002	5.43	5.00	***	7.98	***	***	7.09	3.40	3.65	***	3.48	4.22	*	3.49	1.91
	Khan-Uul	MNA004											1.64	1.57	*	1.71	2.12
Myanmar	Yangon	MMA001	2.07	1.66	6.78	2.66	4.69	13.3	3.35	10.4	4.38	7.01	4.64	7.66	4.17	3.06	5.47
Philippines	Manila Observatory	PHA001	17.0	23.5	26.3	6.45	9.79	13.1	14.2	***	***	4.13	1.47	1.77	1.69	1.97	1.59
	Los Baños	PHA002	7.43	6.82	8.14	6.37	8.18	73.4	13.8	***	***	***	***	***	1.18	2.15	3.17
	Mt.Sto.Tomas	PHA003	1.41	0.821	0.885	0.752	1.26	1.63	0.889	***	***	***	***	***	0.426	***	4.69
Republic of Korea	Ganghwa	KRA001	7.78	3.62	6.39	3.27	13.4	106	13.3	16.5	5.01	7.91	***	2.41	3.95	1.88	10.6
	Jeju	KRA002	7.96	6.54	15.7	12.0	11.3	13.8	15.2	7.43	6.53	2.87	***	11.3	17.0	13.8	3.34
	Imsil	KRA003	10.3	3.89	47.5	6.33	9.82	9.19	3.39	8.80	2.18	1.33	***	6.64	2.23	1.58	0.665
Russia	Mondy	RUA001	2.62	4.98	9.05	2.30	2.01	3.40	1.05	1.94	1.27	0.982	0.937	3.64	0.863	***	
	Listvyanka	RUA002	1.66	2.42	2.00	4.36	3.11	2.10	1.71	3.64	2.01	3.04	3.53	3.76	5.25	5.89	6.93
	Irkutsk	RUA003	5.52	4.59	4.99	5.19	2.97	4.51	3.10	2.92	3.06	4.06	3.72	5.18	6.02	6.26	5.55
	Primorskaya	RUA004	5.84	6.75	5.09	5.55	5.14	7.79	19.1	10.1	8.36	8.03	9.07	6.69	11.3	8.43	17.9
Thailand	Bangkok	THA001	2.58	1.82	1.52	1.91	1.38	1.75	1.70	1.24	2.26	3.89	3.88	***	1.56	3.17	*
	Samutprakarn	THA002	17.0	1.11	1.52	5.23	2.33	1.93	1.71	1.36	1.63	1.92	2.13	***	1.48	2.24	*
	Pathumthani	THA003	1.85	1.96	1.64	2.13	1.87	1.84	2.09	2.13	1.35	2.14	1.51	4.02	0.813	1.09	0.947
	Khanchanaburi	THA004	0.710	2.21	1.57	0.955	1.22	0.838	1.51	1.43	1.72	1.04	***	***	***	***	***
	Mae Hia	THA005	1.21	1.45	1.26	1.48	1.77	1.24	3.17	2.71	1.90	3.64					
	Sakaerat	THA008	0.940	1.20	1.26	0.813	2.63	1.52	1.59	0.512	6.95	6.12					
Vietnam	Hanoi	VNA001	2.78	2.27	3.00	2.64	3.75	3.72	3.63	7.09	8.06	8.12	6.51	5.56	11.2	6.41	70.8
	Hoa Binh	VNA002	2.88	2.40	1.50	7.10	2.77	2.87	2.59	2.88	3.89	1.85	2.46	4.44	3.96	5.81	2.64
	Cuc Phuong	VNA003	5.61	3.31	6.06	8.57	4.72	4.68	5.77	3.41	4.00	5.38	4.33	8.16	5.68	11.5	9.06
	Da Nang	VNA004	3.41	14.0	11.5	17.9	13.8	11.9	3.39	9.85	15.6	18.1	89.7	19.2	130	16.5	19.8
	Can Tho	VNA005					7.45	7.17	6.07	5.44	6.27	12.7	7.05	6.36	11.2	9.33	7.71
	Ho Chi Minh	VNA006					10.6	12.0	6.62	10.4	8.29	11.0	9.79	10.8	10.3	10.8	11.1
	Yen Bai	VNA007						4.03	4.98	6.20	3.27	2.59	4.59	4.85	4.15	8.62	2.06

Terms and abbreviations are given in Table 3.5.

Table 3.77 Precipitation amount-weighted annual average concentrations of Ca²⁺ from 2010 to 2024

unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	8.33	9.30	10.7	9.57	9.47	11.6	14.3	9.74	***	***	***	***	***	***	***
China	Haifu	CNA003	69.2	68.5	57.9	69.5	54.6	43.0	67.3	53.5	43.0	25.7	22.0	21.6	21.4	27.1	25.3
	Jinyunshan	CNA004	68.7	65.1	59.2	31.2	26.0	21.7	38.0	51.9	34.2	22.8	19.3	15.4	16.0	14.5	19.9
	Shizhan	CNA005	105	91.2	128	325	92.7	89.7	35.0	68.3	61.9	50.9	46.1	95.0	177	57.6	43.3
	Jiwozi	CNA007	40.7	91.6	203	133	149	57.7	36.8	95.1	56.3	161	63.8	34.9	25.3	37.0	72.7
	Hongwen	CNA008	9.11	14.1	17.5	21.9	25.5	16.3	13.1	28.3	26.5	60.8	413	35.3	13.3	7.04	7.37
	Xiaoping	CNA009	8.37	11.7	20.0	22.7	42.4	9.17	6.39	15.1	8.12	7.45	4.79	6.93	4.43	6.39	7.74
	Xiang Zhou	CNA010	7.40	17.5	10.8	43.4	17.0	15.9	10.8	10.0	10.6	8.15	7.13	6.29	3.73	13.4	5.69
	Zhuxiandong	CNA011	16.4	19.1	***	***	***	25.2	17.3	13.9	17.7	10.8	12.1	8.47	7.31	7.93	8.73
	Wuzhishan	CNA013										10.3	3.75	3.37	4.63	3.63	4.63
	Lijiang	CNA014										23.1	2.78	4.31	9.98	11.6	18.2
Indonesia	Jakarta	IDA001	10.3	11.1	12.0	14.1	15.0	7.47	25.2	17.6	16.5	10.6	7.50	8.42	8.18	***	30.3
	Serpong	IDA002	9.25	10.9	9.29	14.0	13.0	19.7	13.9	12.1	21.2	17.5	8.52	11.7	7.43		
	Kototabang	IDA003	4.77	5.90	7.85	9.55	3.93	1.99	3.83	11.6	8.57	30.9	5.25	9.73	3.80	***	5.46
	Bandung	IDA004	13.5	20.9	13.3	19.6	22.8	17.6	15.2	14.4	18.2	19.6	24.5	17.1	18.1		
	Maros	IDA005	9.58	6.49	16.1	10.4	27.9	16.8	13.8	14.4	14.0	20.3	8.08	22.7	15.2	***	9.00
	Jembrana	IDA006										7.88	20.3	5.43	4.96	***	8.53
	Lombok	IDA007										15.7	7.98	6.65	17.2	***	7.00
Japan	Rishiri	JPA001	6.89	5.63	8.44	7.33	5.78	5.27	3.60	8.15	8.45	7.35	6.66	9.79	7.87	4.81	4.73
	Ochiishi	JPA002	8.25	5.42	7.35	11.5	4.06	6.72	4.27	6.18	3.18	2.87	4.37	15.1	*	*	*
	Tappi	JPA003	8.54	8.01	8.02	14.1	7.45	7.99	7.45	6.78	6.07						
	Sado-seki	JPA004	12.7	8.28	11.4	10.4	9.49	11.3	11.4	6.67	7.86	8.74	5.63	53.1	6.06	5.97	5.23
	Happo	JPA005	2.40	2.57	4.14	2.77	2.31	1.70	0.750	1.77	2.12	2.24	1.92	2.45	1.35	1.94	1.27
	Ijira	JPA006	2.48	1.97	2.50	2.74	1.65	2.00	1.88	2.20	1.86	2.36	1.61	2.03	1.93	2.29	1.59
	Oki	JPA007	16.1	17.1	12.1	17.0	16.4	12.0	10.6	15.1	13.1	6.94	7.56	12.2	*	*	*
	Banryu	JPA008	8.02	5.85	6.65	3.92	4.75	5.37	5.17	5.13	3.30						
	Yusuhara	JPA009	1.79	2.27	2.39	2.16	1.60	1.02	1.14	5.19	0.848	1.32	1.10	1.96	2.16	1.93	1.07
	Hedo	JPA010	7.98	6.04	11.5	6.89	4.25	8.24	5.37	9.70	5.31	3.79	6.38	28.5	4.54	9.45	*
	Ogasawara	JPA011	5.82	5.56	3.46	4.60	3.98	8.13	2.60	4.54	1.28	4.63	1.59	3.97	3.83	3.53	3.27
	Tokyo	JPA012	3.98	4.84	4.21	4.35	3.81	3.56	2.48	3.34	3.46	4.01	3.20	2.62	3.48	3.56	3.20
	Niigata-maki	JPA013										7.18	5.36	6.81	7.21	7.28	8.74
	Tsushima	JPA014										1.35	1.58	1.92	3.54	2.13	2.30
Lao PDR	Vientiane	LAA001	***	***	***	***	***	4.00	2.21	*	*	*	***	***	***	11.1	*
Malaysia	Petaling Jaya	MYA001	5.40	3.97	3.96	6.13	6.02	6.70	6.48	4.18	6.96	***	4.32	4.06	3.40	4.14	4.17
	Tanah Rata	MYA002	1.22	2.08	2.37	2.91	2.68	2.00	2.18	2.25	2.76	***	5.94	***	2.64	2.01	1.97
	Danum Valley	MYA003	3.82	0.887	0.800	1.44	1.41	2.28	0.987	1.48	2.52	***	7.13	1.89	1.70	1.46	3.61
	Kuching	MYA004	2.60	3.15	3.42	4.20	6.12	4.35	3.35	3.86	4.28	***	18.5	2.46	5.59	2.44	3.82
	Gunung Brinchang	MYA005												2.74	***	***	***
Mongolia	Ulaanbaatar	MNA001	34.3	33.9	***	95.3	***	***	29.1	41.8	23.5	39.0					
	Terelj	MNA002	42.3	20.4	***	69.1	***	***	16.8	15.9	15.3	***	62.5	31.3	*	34.5	11.9
	Khan-Uul	MNA004											45.9	49.2	*	27.1	27.8
Myanmar	Yangon	MMA001	6.37	6.89	7.79	1.07	14.1	88.7	5.55	10.5	16.6	14.2	9.86	2.60	17.4	8.97	7.36
Philippines	Manila Observatory	PHA001	12.8	12.9	13.9	11.5	14.5	17.4	20.5	***	***	14.7	16.3	9.22	11.6	3.82	10.5
	Los Baños	PHA002	20.1	6.38	9.40	6.40	6.99	8.77	11.8	***	***	***	***	***	17.8	2.74	3.15
	Mt.Sto.Tomas	PHA003	22.7	7.84	14.0	8.58	8.06	6.85	13.4	***	***	***	***	***	7.26	***	5.21
Republic of Korea	Ganghwa	KRA001	7.02	4.39	8.64	8.72	8.94	9.52	3.85	6.73	3.20	7.07	***	10.6	5.65	5.84	6.41
	Jeju	KRA002	6.72	6.60	11.2	13.6	4.12	4.64	16.2	12.8	6.64	4.56	***	9.76	34.9	26.7	9.01
	Imsil	KRA003	5.74	6.81	4.31	2.95	3.50	5.16	2.70	3.71	1.64	2.66	***	8.88	5.94	5.49	2.12
Russia	Mondy	RUA001	9.20	9.02	12.1	4.61	7.02	8.36	5.42	8.67	5.35	5.09	3.46	4.50	4.17	***	
	Listvyanka	RUA002	12.6	16.1	11.7	11.9	12.8	9.97	7.94	12.2	12.4	8.05	7.30	6.76	11.4	9.75	13.6
	Irkutsk	RUA003	32.2	34.7	31.3	33.0	26.5	30.5	17.0	22.5	27.8	17.6	14.1	15.4	27.4	23.0	20.6
	Primorskaya	RUA004	16.9	13.7	12.2	18.0	18.1	13.1	13.1	20.9	14.7	12.1	18.2	13.8	21.1	20.3	9.34
Thailand	Bangkok	THA001	11.2	10.5	13.5	25.2	14.5	16.9	15.9	11.3	27.1	29.2	18.0	***	12.2	20.2	*
	Samutprakarn	THA002	7.78	5.95	8.39	19.9	14.6	6.23	9.28	7.96	8.67	10.6	6.70	***	6.18	5.94	*
	Pathumthani	THA003	9.17	12.1	20.6	27.1	22.5	16.6	13.7	12.3	7.97	10.3	4.37	5.41	5.43	5.92	4.03
	Khanchanaburi	THA004	1.80	4.04	17.5	3.26	4.07	3.63	5.17	3.63	3.54	4.25	***	***	***	***	***
	Mae Hia	THA005	4.40	2.60	7.77	10.6	9.72	4.11	10.7	8.57	7.01	10.3					
	Sakaerat	THA008	2.21	1.88	3.74	1.96	8.73	6.83	8.24	4.60	35.1	55.9					
Vietnam	Hanoi	VNA001	23.7	14.6	15.0	16.2	24.8	36.7	22.8	35.3	40.6	80.0	83.0	30.8	79.0	26.9	52.1
	Hoa Binh	VNA002	21.1	12.5	11.1	16.9	13.4	10.1	13.1	23.1	13.7	17.6	43.6	25.5	17.9	23.8	9.65
	Cuc Phuong	VNA003	38.3	32.2	30.6	24.4	23.1	19.4	27.1	24.0	18.0	24.2	20.8	34.1	36.9	60.8	44.6
	Da Nang	VNA004	8.87	10.0	16.9	21.5	27.3	34.4	38.5	33.9	36.5	92.2	93.3	32.2	23.8	27.5	22.4
	Can Tho	VNA005					12.8	26.8	11.9	10.6	14.4	15.8	14.2	13.0	13.8	15.7	14.8
	Ho Chi Minh	VNA006					26.0	44.3	12.1	14.8	18.2	26.5	15.7	18.6	17.8	17.7	17.6
	Yen Bai	VNA007						15.9	20.3	23.1	20.8	27.4	52.9	22.5	21.5	28.9	14.0

Terms and abbreviations are given in Table 3.5.

Table 3.78 Precipitation amount-weighted annual average concentrations of nss-Ca²⁺ from 2010 to 2024

unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	8.26	9.23	10.7	9.50	9.31	11.5	14.2	9.64	***	***	***	***	***	***	***
China	Haifu	CNA003	69.0	68.2	57.7	69.3	54.5	43.0	67.1	53.4	42.9	25.6	22.0	21.6	21.3	27.0	25.3
	Jinyunshan	CNA004	68.6	64.9	59.0	31.1	25.9	21.7	38.0	51.9	34.2	22.7	19.2	15.4	16.0	14.4	19.9
	Shizhan	CNA005	105	90.8	128	322	90.0	87.2	33.9	67.7	61.4	50.6	45.6	94.6	176	57.2	43.0
	Jiwozi	CNA007	40.6	91.4	202	130	146	55.7	36.6	94.4	55.7	160	63.4	34.4	25.1	36.8	72.3
	Hongwen	CNA008	8.70	13.7	17.1	21.6	25.1	15.9	12.6	27.5	26.0	60.7	412	34.4	13.0	6.67	7.08
	Xiaoping	CNA009	7.96	11.5	19.9	22.4	42.2	8.94	6.24	14.9	7.98	7.41	4.56	6.77	4.28	6.17	7.57
	Xiang Zhou	CNA010	6.97	16.8	9.76	42.2	16.4	14.7	10.4	8.88	9.14	7.71	6.62	5.89	3.23	12.9	5.30
	Zhuxiandong	CNA011	15.9	18.1	***	***	***	23.7	16.6	13.3	15.8	10.3	11.3	7.95	6.71	7.40	8.19
	Wuzhishan	CNA013										10.2	3.61	3.23	4.45	3.52	4.51
	Lijiang	CNA014										22.9	2.77	4.29	9.94	11.5	18.2
Indonesia	Jakarta	IDA001	10.2	10.8	11.7	13.8	14.5	7.43	24.7	17.3	16.1	10.4	7.16	8.08	7.98	***	29.8
	Serpong	IDA002	9.07	10.7	9.05	13.7	12.6	19.4	13.6	11.8	20.8	17.1	8.26	11.3	7.25		
	Kototabang	IDA003	4.65	5.76	7.64	9.37	3.81	2.03	3.53	11.6	8.50	30.8	5.09	9.65	3.72	***	5.38
	Bandung	IDA004	13.3	20.6	13.1	19.3	22.6	17.4	15.0	14.0	17.7	18.7	24.2	16.9	17.8		
	Maros	IDA005	9.30	6.17	15.7	9.98	27.2	16.7	11.5	12.2	13.7	19.9	7.75	22.4	15.0	***	8.70
	Jembrana	IDA006										7.45	19.7	4.74	4.44	***	7.86
	Lombok	IDA007										15.2	7.43	6.23	16.7	***	6.53
Japan	Rishiri	JPA001	3.44	2.63	2.20	3.06	2.31	2.29	2.10	3.68	4.78	3.42	3.65	4.83	4.27	2.84	2.34
	Ochiishi	JPA002	3.25	2.11	1.50	2.42	1.96	2.87	1.28	1.46	1.50	1.41	1.84	9.00	*	*	*
	Tappi	JPA003	6.16	4.87	4.44	8.53	4.17	3.02	3.80	2.71	2.63						
	Sado-seki	JPA004	5.94	4.99	6.19	3.83	3.47	4.33	7.67	3.43	4.96	3.98	1.87	23.1	1.66	2.97	2.24
	Happo	JPA005	2.32	2.49	3.93	2.69	2.20	1.58	0.646	1.67	2.01	2.16	1.83	2.34	1.25	1.84	1.23
	Ijira	JPA006	2.21	1.70	2.09	2.43	1.34	1.66	1.61	1.88	1.54	2.08	1.31	1.68	1.49	2.03	1.38
	Okri	JPA007	7.24	6.73	4.40	6.12	4.63	3.15	3.55	4.72	4.35	3.43	2.61	3.99	*	*	*
	Banryu	JPA008	5.99	3.52	4.66	2.42	2.87	3.49	3.45	3.23	2.08						
	Yusuhara	JPA009	1.65	2.04	2.00	1.95	1.49	0.530	0.969	4.14	0.558	1.03	0.909	1.58	1.38	1.54	0.761
	Hedo	JPA010	2.50	1.63	2.44	1.99	1.29	1.48	1.12	2.08	1.90	1.06	1.47	4.16	1.68	2.89	*
	Ogasawara	JPA011	1.35	1.20	1.01	1.56	1.15	1.51	0.638	0.647	0.302	0.784	0.504	0.485	0.637	0.590	0.765
	Tokyo	JPA012	3.60	4.03	3.57	3.86	3.40	3.17	2.17	2.47	2.72	2.76	2.87	2.20	3.08	3.21	2.82
	Niigata-maki	JPA013										3.40	2.93	2.72	2.68	3.51	4.28
	Tsushima	JPA014										0.717	0.912	1.16	1.36	1.34	1.32
Lao PDR	Vientiane	LAA001	***	***	***	***	***	3.94	2.18	*	*	*	***	***	***	11.0	*
Malaysia	Petaling Jaya	MYA001	5.29	3.87	3.88	6.04	5.91	6.56	6.34	4.05	6.84	***	4.20	3.95	3.32	4.03	4.06
	Tanah Rata	MYA002	1.19	2.04	2.33	2.87	2.63	1.94	2.12	2.20	2.71	***	5.83	***	2.58	1.95	1.88
	Danum Valley	MYA003	3.59	0.794	0.750	1.34	1.32	2.18	0.920	1.43	2.41	***	6.86	1.74	1.60	1.38	3.50
	Kuching	MYA004	2.45	2.95	3.32	4.04	5.93	4.07	3.07	3.71	4.10	***	18.2	2.29	5.45	2.31	3.73
	Gunung Brinchang	MYA005												2.64	***	***	***
Mongolia	Ulaanbaatar	MNA001	34.2	33.8	***	93.6	***	***	25.4	41.3	22.6	36.6					
	Terelj	MNA002	42.1	20.2	***	68.8	***	***	13.7	15.6	14.4	***	61.3	29.1	*	34.2	11.4
	Khan-Uul	MNA004											44.4	48.8	*	27.0	27.6
Myanmar	Yangon	MMA001	6.09	6.57	7.32	0.792	13.8	88.5	5.22	10.2	16.1	13.8	9.56	2.26	17.1	8.62	7.10
Philippines	Manila Observatory	PHA001	12.3	12.4	13.5	10.9	14.0	16.9	20.2	***	***	14.3	16.1	8.75	11.1	3.53	10.1
	Los Baños	PHA002	19.7	5.96	8.92	5.94	6.67	8.42	11.3	***	***	***	***	***	17.6	2.63	2.93
	Mt.Sto.Tomas	PHA003	22.5	7.75	13.8	8.43	7.92	6.66	13.1	***	***	***	***	***	7.21	***	5.14
Republic of Korea	Ganghwa	KRA001	6.44	3.66	7.54	8.09	8.13	8.55	3.24	6.15	2.56	3.19	***	10.00	5.13	5.44	5.85
	Jeju	KRA002	4.70	3.72	3.15	7.33	1.79	2.52	7.72	7.59	2.29	2.88	***	3.78	15.9	18.9	5.25
	Imsil	KRA003	4.79	6.02	3.40	2.29	2.90	4.19	2.01	2.98	1.17	2.07	***	7.24	4.48	4.58	1.60
Russia	Mondy	RUA001	9.14	8.94	12.1	4.58	6.97	8.32	5.39	8.61	5.30	5.05	3.35	4.44	4.14	***	
	Listvyanka	RUA002	12.5	16.0	11.7	11.7	12.7	9.91	7.88	12.1	12.4	7.98	7.20	6.66	11.3	9.62	13.5
	Irkutsk	RUA003	31.8	34.4	31.1	32.7	26.3	30.2	16.8	22.4	27.6	17.5	13.9	15.3	27.2	22.8	20.5
	Primorskaya	RUA004	16.3	13.4	11.7	17.4	17.7	12.6	12.6	20.4	14.2	11.6	17.5	13.1	20.3	19.9	8.87
Thailand	Bangkok	THA001	11.1	10.4	13.3	25.0	14.3	16.8	15.7	11.2	26.9	29.0	17.7	***	12.1	20.0	*
	Samutprakarn	THA002	7.38	5.83	8.22	19.3	14.3	6.02	9.09	7.81	8.46	10.4	6.44	***	6.06	5.74	*
	Pathumthani	THA003	9.03	12.0	20.3	27.0	22.4	16.5	13.6	12.2	7.86	10.2	4.30	5.33	5.37	5.81	3.95
	Khanchanaburi	THA004	1.73	3.88	17.3	3.14	3.93	3.50	4.95	3.53	3.36	4.13	***	***	***	***	***
	Mae Hia	THA005	4.36	2.54	7.69	10.4	9.64	4.01	10.6	8.43	6.84	10.1					
	Sakaerat	THA008	2.15	1.81	3.66	1.90	8.57	6.73	8.16	4.55	34.9	55.7					
Vietnam	Hanoi	VNA001	23.5	14.5	15.0	16.1	24.6	36.5	22.5	35.0	40.3	79.4	82.5	30.5	78.5	26.6	51.8
	Hoa Binh	VNA002	21.0	12.5	11.0	16.9	13.3	10.0	13.0	23.1	13.7	17.3	43.4	25.3	17.8	23.6	9.59
	Cuc Phuong	VNA003	38.0	32.0	30.2	23.8	22.8	19.2	26.8	23.7	17.7	23.7	20.5	33.3	36.5	60.3	44.2
	Da Nang	VNA004	7.98	8.50	15.5	18.4	25.5	32.7	37.1	32.1	35.0	89.8	92.1	30.7	22.5	26.6	21.1
	Can Tho	VNA005					12.4	26.2	11.6	10.3	14.2	15.4	13.8	12.7	13.5	15.3	14.5
	Ho Chi Minh	VNA006					25.4	43.5	11.8	14.4	17.9	26.1	15.3	18.2	17.4	17.3	17.1
	Yen Bai	VNA007						15.8	20.1	23.0	20.7	27.1	52.5	22.3	21.4	28.6	13.9

Terms and abbreviations are given in Table 3.5.

Table 3.79 Precipitation amount-weighted annual average concentrations of Mg²⁺ from 2010 to 2024

unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	0.717	1.22	1.22	1.12	1.63	2.56	1.44	1.41	***	***	***	***	***	***	***
China	Haifu	CNA003	8.95	8.61	6.87	8.23	7.00	4.79	5.69	4.08	4.04	3.01	2.22	2.19	2.75	3.43	2.37
	Jinyunshan	CNA004	5.76	6.13	5.82	4.42	4.37	3.24	3.89	4.74	3.34	3.01	2.55	2.12	2.81	2.70	2.58
	Shizhan	CNA005	11.0	9.94	3.47	54.5	11.8	9.25	1.97	11.2	12.9	6.63	9.92	1.25	18.9	3.58	3.67
	Jiwozi	CNA007	7.17	9.65	44.4	22.3	21.6	11.1	12.6	19.7	16.0	22.5	6.32	0.630	5.88	6.83	6.07
	Hongwen	CNA008	2.00	4.22	4.69	3.36	4.27	4.20	4.89	7.19	4.77	4.18	14.5	6.44	3.62	3.03	2.78
	Xiaoping	CNA009	1.89	2.21	3.45	4.03	3.65	2.27	2.14	2.78	2.12	2.04	2.85	2.19	2.34	2.57	2.22
	Xiang Zhou	CNA010	2.57	4.39	6.90	14.0	7.21	7.19	4.02	5.64	6.39	3.56	3.82	2.38	2.53	2.70	2.50
	Zhuxiandong	CNA011	2.86	6.75	***	***	***	8.78	5.17	3.21	10.2	4.12	5.87	3.49	3.74	3.10	3.17
	Wuzhishan	CNA013										2.30	1.34	1.36	1.31	0.838	0.969
	Lijiang	CNA014										4.59	2.62	1.24	2.28	1.30	5.14
Indonesia	Jakarta	IDA001	2.23	3.45	2.96	2.62	3.64	1.81	4.50	2.95	3.37	1.88	2.52	3.06	2.59	***	5.63
	Serpong	IDA002	3.09	3.12	2.01	3.86	3.23	3.86	3.06	2.51	4.42	4.43	1.95	3.54	3.31		
	Kototabang	IDA003	1.55	0.950	1.40	2.40	0.908	21.5	1.19	1.08	1.06	0.724	1.22	0.922	0.842	***	1.44
	Bandung	IDA004	4.43	5.78	3.17	6.33	7.51	5.61	3.50	3.80	3.92	4.83	5.09	2.81	2.80		
	Maros	IDA005	2.17	2.50	7.03	2.81	13.6	30.0	2.92	2.24	2.51	2.59	2.10	1.65	1.80	***	2.06
	Jembrana	IDA006										2.63	4.74	4.87	3.06	***	5.31
	Lombok	IDA007										4.15	6.84	4.14	9.06	***	4.84
Japan	Rishiri	JPA001	18.6	15.4	32.3	22.5	18.1	16.2	7.96	24.2	19.9	21.5	15.9	27.7	19.3	10.7	12.9
	Ochiishi	JPA002	28.6	18.5	30.6	48.2	11.1	20.4	15.8	25.4	8.76	7.65	13.6	32.1	*	*	*
	Tappi	JPA003	12.9	17.4	15.4	30.0	18.1	25.2	19.5	21.7	18.3						
	Sado-seki	JPA004	37.7	19.0	29.4	36.9	32.5	37.3	20.8	17.1	15.4	25.3	19.7	188	23.1	16.1	15.7
	Happo	JPA005	0.810	0.896	2.30	1.37	1.27	1.33	0.861	1.23	1.03	0.808	0.853	0.962	0.775	0.913	0.456
	Ijira	JPA006	1.62	1.69	2.54	2.09	1.97	2.04	1.57	1.84	1.92	1.67	1.69	2.17	2.57	1.65	1.36
	Oki	JPA007	48.1	55.5	41.2	56.1	60.6	47.9	38.5	55.2	46.1	18.8	25.9	41.7	*	*	*
	Banryu	JPA008	12.1	12.8	11.2	8.50	10.8	10.8	9.45	9.94	6.66						
	Yusuhara	JPA009	1.56	2.56	2.84	2.40	1.82	2.77	1.21	6.01	1.78	1.72	1.05	2.54	4.55	2.89	1.84
	Hedo	JPA010	29.2	23.2	47.9	25.7	15.6	35.8	23.3	42.6	20.8	17.2	27.2	129	15.7	35.7	*
	Ogasawara	JPA011	24.5	23.6	13.6	17.0	15.2	34.5	10.5	21.3	5.45	20.3	5.89	17.4	16.5	15.7	13.2
	Tokyo	JPA012	2.40	4.79	3.78	3.04	2.54	2.45	1.85	4.92	4.15	6.71	2.18	2.26	2.35	2.08	2.34
	Niigata-maki	JPA013										20.4	13.0	21.6	24.2	21.2	24.9
	Tsushima	JPA014										3.27	3.50	4.11	11.3	4.07	5.14
Lao PDR	Vientiane	LAA001	***	***	***	***	***	0.613	<0.3	*	*	*	***	***	***	1.31	*
Malaysia	Petaling Jaya	MYA001	0.698	0.579	0.497	0.686	1.10	0.922	0.819	0.565	0.724	***	0.889	0.743	0.604	0.795	1.21
	Tanah Rata	MYA002	<0.3	<0.3	<0.3	0.301	0.333	<0.3	<0.3	<0.3	<0.3	***	1.16	***	<0.3	<0.3	<0.3
	Danum Valley	MYA003	1.48	0.541	<0.3	0.430	0.552	0.934	0.320	0.379	1.30	***	2.10	0.714	0.930	0.709	2.82
	Kuching	MYA004	0.457	0.745	<0.3	0.588	1.12	1.21	0.949	0.718	0.607	***	1.49	0.596	0.726	0.431	0.353
	Gunung Brinchang	MYA005												0.332	***	***	***
Mongolia	Ulaanbaatar	MNA001	2.98	9.23	***	3.74	***	***	6.06	3.06	2.50	3.71					
	Terej	MNA002	5.54	7.35	***	4.97	***	***	2.19	1.32	1.46	***	9.00	3.14	*	3.15	1.56
	Khan-Uul	MNA004											3.25	3.33	*	2.97	2.98
Myanmar	Yangon	MMA001	1.80	3.02	6.56	12.3	3.41	5.87	4.58	3.46	4.72	4.00	2.78	29.5	4.53	3.10	2.05
Philippines	Manila Observatory	PHA001	9.12	7.13	6.53	4.54	4.64	6.39	5.29	***	***	3.97	3.26	1.41	13.4	2.08	3.40
	Los Baños	PHA002	8.20	4.76	4.26	3.25	3.32	4.40	4.14	***	***	***	***	***	3.96	2.56	2.04
	Mt.Sto.Tomas	PHA003	3.34	1.61	2.90	1.69	1.35	3.44	2.78	***	***	***	***	***	0.542	***	2.03
Republic of Korea	Ganghwa	KRA001	3.64	3.18	5.50	3.30	3.27	3.60	1.19	2.33	1.09	16.2	***	5.35	3.74	4.21	4.34
	Jeju	KRA002	6.90	10.5	34.5	25.6	7.85	5.92	37.7	21.5	18.1	3.67	***	25.0	83.3	38.0	15.9
	Imsil	KRA003	4.68	2.02	3.05	1.87	1.77	3.30	1.55	1.91	0.648	0.797	***	5.28	3.74	2.50	1.06
Russia	Mondy	RUA001	1.81	2.60	4.06	0.877	1.18	2.15	0.864	1.75	1.07	0.948	0.549	1.24	0.832	***	
	Listvyanka	RUA002	2.97	3.12	2.53	2.92	2.37	2.06	1.91	3.15	2.95	2.27	2.38	2.29	3.29	3.37	4.77
	Irkutsk	RUA003	6.75	7.29	6.49	6.38	3.68	5.51	3.97	4.70	5.32	4.20	3.85	4.63	6.89	7.61	5.03
	Primorskaya	RUA004	4.27	4.29	4.43	4.89	6.21	5.62	5.51	11.9	9.23	8.90	8.73	5.56	7.47	6.41	4.46
Thailand	Bangkok	THA001	1.52	1.25	1.35	2.63	2.37	1.90	2.48	1.57	3.00	2.71	2.81	***	1.58	2.01	*
	Samutprakarn	THA002	2.20	1.20	1.53	4.46	3.12	1.57	1.79	1.56	2.14	1.91	2.28	***	1.49	1.49	*
	Pathumthani	THA003	1.38	1.57	3.14	2.59	1.91	1.88	2.10	1.41	1.14	1.98	1.02	1.18	1.43	0.877	0.832
	Khanchanaburi	THA004	0.575	1.27	2.76	1.03	1.32	1.06	1.74	1.15	1.44	0.993	***	***	***	***	***
	Mae Hia	THA005	0.451	<0.3	0.842	1.50	1.91	1.41	1.54	1.37	0.656	1.41					
	Sakaerat	THA008	0.703	<0.3	0.423	<0.3	1.31	2.17	4.25	1.76	8.17	9.26					
Vietnam	Hanoi	VNA001	5.68	4.08	2.15	2.79	3.51	4.59	4.38	7.27	6.49	7.57	8.43	5.59	9.88	5.84	1.59
	Hoa Binh	VNA002	5.56	2.39	2.17	2.69	2.72	2.44	2.52	1.97	3.11	2.17	5.14	4.33	2.53	5.29	1.44
	Cuc Phuong	VNA003	4.41	4.78	7.07	12.2	4.88	5.44	8.30	8.30	10.2	13.5	10.8	13.9	9.48	12.0	9.07
	Da Nang	VNA004	8.52	9.42	9.19	18.8	10.8	8.77	9.03	11.3	10.6	28.6	16.7	17.4	21.2	19.7	14.2
	Can Tho	VNA005					4.45	9.17	6.85	5.35	9.84	10.2	7.83	7.01	8.86	8.31	8.23
	Ho Chi Minh	VNA006					8.73	17.9	6.90	9.01	10.2	13.2	9.34	11.1	10.1	10.4	10.3
	Yen Bai	VNA007						2.68	3.24	1.66	3.39	2.33	9.32	3.48	2.74	6.54	0.685

Terms and abbreviations are given in Table 3.5.

Table 3.80 Precipitation amount-weighted annual average concentrations of H⁺ from 2010 to 2024unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	1.07	1.10	0.694	0.662	0.621	0.717	0.389	0.667	***	***	***	***	***	***	***
China	Haifu	CNA003	71.0	65.9	57.5	30.1	12.1	3.81	0.655	1.47	5.10	3.73	3.41	2.94	1.69	0.893	0.774
	Jinyunshan	CNA004	115	90.9	81.5	63.3	41.2	20.0	10.6	7.07	14.2	17.5	17.5	8.96	7.42	5.99	7.39
	Shizhan	CNA005	0.211	0.535	0.552	0.117	0.247	0.220	0.206	0.256	0.171	0.150	0.120	0.0744	0.0736	0.0746	0.156
	Jiwozi	CNA007	2.91	1.13	0.076	0.635	0.104	0.124	0.237	0.203	0.164	0.175	0.268	0.580	0.831	0.976	0.218
	Hongwen	CNA008	26.6	22.5	30.9	13.2	8.39	12.7	12.1	4.56	2.30	0.853	0.391	4.63	5.57	5.91	5.19
	Xiaoping	CNA009	26.5	15.3	15.7	9.92	19.6	11.3	18.5	1.27	14.6	18.6	17.2	13.6	13.7	10.2	2.62
	Xiang Zhou	CNA010	14.1	8.81	7.73	5.83	9.91	2.77	6.78	10.5	8.66	11.3	8.13	6.03	6.12	3.37	4.93
	Zhuxiandong	CNA011	11.3	16.7	***	***	***	3.29	6.88	8.49	6.98	9.55	6.82	3.56	6.27	5.50	5.50
	Wuzhishan	CNA013										1.14	1.29	0.623	0.691	0.688	0.629
	Lijiang	CNA014										0.529	0.374	0.241	0.339	0.749	0.506
Indonesia	Jakarta	IDA001	18.6	28.2	17.4	16.9	19.6	14.4	11.3	12.9	20.4	14.7	6.52	12.6	16.4	***	10.4
	Serpong	IDA002	17.5	19.7	12.4	8.63	7.23	11.4	6.56	6.34	6.10	10.5	7.37	3.39	7.61		
	Kototabang	IDA003	16.0	9.22	9.75	10.6	15.2	12.4	5.04	6.29	4.88	4.21	4.75	2.55	2.56	***	16.6
	Bandung	IDA004	7.99	4.00	3.48	4.01	6.14	4.41	8.29	5.63	2.17	0.953	1.06	3.22	4.92		
	Maros	IDA005	6.16	4.43	2.41	3.41	5.88	5.77	5.77	4.88	4.21	11.5	4.00	0.568	1.02	***	4.88
	Jembrana	IDA006										4.32	6.91	12.2	11.8	***	20.0
	Lombok	IDA007										2.56	4.04	5.15	12.9	***	21.7
Japan	Rishiri	JPA001	18.7	20.1	20.2	21.2	18.6	16.8	12.6	17.3	13.6	15.3	10.2	8.77	9.26	7.12	8.08
	Ochiishi	JPA002	14.8	13.1	15.2	9.38	7.82	9.96	6.39	7.42	7.28	7.64	7.77	12.7	*	*	*
	Tappi	JPA003	20.4	24.6	20.5	16.0	21.9	14.1	15.2	18.0	11.0						
	Sado-seki	JPA004	19.8	20.8	18.6	18.2	19.7	21.8	13.9	12.7	10.9	12.6	13.6	18.6	6.91	8.09	5.73
	Happo	JPA005	8.00	9.15	13.3	10.0	9.77	8.14	8.18	7.96	6.31	7.26	5.50	5.53	6.34	5.73	6.39
	Ijira	JPA006	17.3	18.0	20.5	17.9	19.3	20.0	17.5	18.3	12.1	16.4	11.4	8.72	10.4	13.5	11.6
	Oki	JPA007	21.8	18.8	26.4	24.6	22.2	19.1	13.4	14.9	13.6	15.4	14.6	7.38	*	*	*
	Banryu	JPA008	19.8	21.8	33.5	22.8	27.9	22.2	15.4	17.1	13.5						
	Yusuhara	JPA009	16.2	11.7	16.8	16.7	13.2	13.5	14.2	31.1	10.0	10.8	11.4	7.15	10.8	11.2	9.15
	Hedo	JPA010	6.34	12.5	7.49	10.9	9.55	7.17	6.72	9.90	7.96	10.5	8.57	20.8	5.72	11.4	*
	Ogasawara	JPA011	5.68	4.98	4.63	5.65	8.38	5.89	7.98	6.09	5.96	5.87	10.6	5.17	6.79	10.00	6.44
	Tokyo	JPA012	11.2	14.9	14.4	8.83	14.8	16.3	11.4	12.7	11.8	9.99	7.95	6.71	6.74	7.39	8.74
	Niigata-maki	JPA013										13.7	11.3	10.1	9.95	9.91	12.8
	Tsushima	JPA014										10.2	11.9	13.0	7.57	12.4	9.22
Lao PDR	Vientiane	LAA001	***	***	0.351	***	0.288	1.15	0.171	*	*	*	***	***	***	0.241	4.11
Malaysia	Petaling Jaya	MYA001	54.4	69.4	61.4	38.0	38.2	40.8	54.9	30.9	31.6	***	22.4	20.8	29.7	28.9	27.9
	Tanah Rata	MYA002	8.64	9.76	10.9	11.2	13.9	19.1	14.1	13.9	13.7	***	12.7	***	7.97	8.41	10.2
	Danum Valley	MYA003	5.99	6.20	6.58	5.33	4.87	6.15	5.56	6.08	4.97	***	6.04	5.78	6.85	5.08	6.23
	Kuching	MYA004	5.25	3.73	4.84	5.17	4.60	4.88	7.14	6.10	5.62	***	2.51	4.52	2.62	3.39	4.36
	Gunung Brinchang	MYA005												5.59	***	***	***
Mongolia	Ulaanbaatar	MNA001	1.33	3.64	1.31	1.04	***	0.379	9.54	2.95	1.73	3.25					
	Terelj	MNA002	2.44	5.47	1.81	12.3	***	3.14	6.47	9.14	1.56	***	0.564	2.00	6.77	4.45	0.882
	Khan-Uul	MNA004											1.12	2.08	7.06	4.22	1.25
Myanmar	Yangon	MMA001	0.384	0.347	0.323	0.352	0.199	0.216	0.178	0.204	0.264	0.294	0.550	0.182	0.126	0.146	0.227
Philippines	Manila Observatory	PHA001	2.25	2.27	6.03	2.85	0.736	0.528	3.05	***	***	3.94	2.50	10.0	11.6	14.6	7.65
	Los Baños	PHA002	1.32	2.70	2.19	1.41	1.61	0.508	19.3	***	***	***	***	***	14.8	30.6	15.2
	Mt.Sto.Tomas	PHA003	0.201	4.46	1.12	5.18	0.724	1.10	0.345	***	***	***	***	***	2.25	***	1.45
Republic of Korea	Ganghwa	KRA001	39.0	23.0	24.4	26.3	13.4	20.2	16.4	36.4	13.2	20.9	***	5.59	3.75	5.85	8.66
	Jeju	KRA002	9.19	6.80	4.95	4.18	1.61	2.15	7.94	5.27	1.36	2.53	***	2.04	3.27	2.59	2.79
	Imsil	KRA003	13.5	5.42	7.82	6.01	5.17	8.04	3.15	5.04	2.00	4.60	***	0.655	0.261	5.87	0.768
Russia	Mondy	RUA001	2.80	2.90	2.37	4.83	4.65	3.58	4.31	4.86	6.50	3.93	3.97	2.34	4.18	***	
	Listvyanka	RUA002	17.6	18.8	16.7	15.9	12.6	14.7	12.5	17.0	17.9	18.6	15.7	14.0	12.7	16.0	7.95
	Irkutsk	RUA003	7.41	9.51	11.6	9.81	8.65	6.15	11.8	11.4	14.0	15.3	14.0	10.9	7.10	5.74	11.6
	Primorskaya	RUA004	10.7	23.4	8.55	8.80	3.41	6.90	3.97	2.07	1.49	3.65	0.990	2.77	1.70	2.11	2.49
Thailand	Bangkok	THA001	8.48	8.97	2.08	2.52	0.0943	5.09	2.91	1.08	0.902	0.863	1.70	***	1.44	2.56	1.95
	Samutprakarn	THA002	4.82	1.27	0.679	1.06	0.310	2.53	3.57	1.37	3.01	1.76	0.880	***	1.73	3.12	2.57
	Pathumthani	THA003	5.82	9.99	3.60	3.90	3.09	5.12	4.01	4.55	7.57	3.47	1.89	3.26	3.73	1.66	0.902
	Khanchanaburi	THA004	2.03	3.21	0.964	4.72	1.61	3.44	1.04	1.72	1.73	0.835	***	***	***	***	***
	Mae Hia	THA005	0.676	5.14	0.789	0.909	0.527	2.28	2.49	2.77	3.07	7.04					
	Sakaerat	THA008	17.8	9.95	8.58	5.70	15.0	9.26	5.47	3.84	7.28	6.23					
Vietnam	Hanoi	VNA001	1.16	5.03	2.39	2.21	1.83	0.649	2.52	0.292	3.04	11.2	0.650	2.28	3.16	2.41	4.51
	Hoa Binh	VNA002	4.26	3.65	2.35	0.911	3.60	5.07	2.31	6.02	5.51	4.94	1.87	3.49	3.77	1.11	3.49
	Cuc Phuong	VNA003	5.88	9.09	3.68	3.77	3.00	4.78	1.57	8.43	3.57	3.51	5.64	0.744	2.18	1.03	1.11
	Da Nang	VNA004	7.71	10.4	3.66	2.62	3.01	1.05	1.10	1.36	1.64	0.709	0.712	1.62	1.72	1.50	1.63
	Can Tho	VNA005					0.550	1.68	1.43	1.08	1.34	1.18	1.41	1.09	1.15	1.39	1.25
	Ho Chi Minh	VNA006					1.42	0.775	1.75	0.861	0.773	1.08	1.08	0.835	0.790	1.04	0.876
	Yen Bai	VNA007						5.90	6.63	6.40	4.48	15.3	1.70	2.60	8.54	1.14	12.8

Terms and abbreviations are given in Table 3.5.

Table 3.81 Precipitation amount-weighted annual average pH from 2010 to 2024

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	5.97	5.96	6.16	6.18	6.21	6.14	6.41	6.18	***	***	***	***	***	***	***
China	Haifu	CNA003	4.15	4.18	4.24	4.52	4.92	5.42	6.18	5.83	5.29	5.43	5.47	5.53	5.77	6.05	6.11
	Jinyunshan	CNA004	3.94	4.04	4.09	4.20	4.39	4.70	4.97	5.15	4.85	4.76	4.76	5.05	5.13	5.22	5.13
	Shizhan	CNA005	6.68	6.27	6.26	6.93	6.61	6.66	6.69	6.59	6.77	6.82	6.92	7.13	7.13	7.13	6.81
	Jiwozi	CNA007	5.54	5.95	7.12	6.20	6.98	6.91	6.63	6.69	6.79	6.76	6.57	6.24	6.08	6.01	6.66
	Hongwen	CNA008	4.57	4.65	4.51	4.88	5.08	4.90	4.92	5.34	5.64	6.07	6.41	5.33	5.25	5.23	5.28
	Xiaoping	CNA009	4.58	4.82	4.80	5.00	4.71	4.95	4.73	5.90	4.84	4.73	4.76	4.87	4.86	4.99	5.58
	Xiang Zhou	CNA010	4.85	5.05	5.11	5.23	5.00	5.56	5.17	4.98	5.06	4.95	5.09	5.22	5.21	5.47	5.31
	Zhuxiandong	CNA011	4.95	4.78	***	***	***	5.48	5.16	5.07	5.16	5.02	5.17	5.45	5.20	5.26	5.26
	Wuzhishan	CNA013										5.94	5.89	6.21	6.16	6.16	6.20
	Lijiang	CNA014										6.28	6.43	6.62	6.47	6.13	6.30
Indonesia	Jakarta	IDA001	4.73	4.55	4.76	4.77	4.71	4.84	4.95	4.89	4.69	4.83	5.19	4.90	4.79	***	4.98
	Serpong	IDA002	4.76	4.70	4.91	5.06	5.14	4.94	5.18	5.20	5.21	4.98	5.13	5.47	5.12		
	Kototabang	IDA003	4.80	5.04	5.01	4.97	4.82	4.91	5.30	5.20	5.31	5.38	5.32	5.59	5.59	***	4.78
	Bandung	IDA004	5.10	5.40	5.46	5.40	5.21	5.36	5.08	5.25	5.66	6.02	5.97	5.49	5.31		
	Maros	IDA005	5.21	5.35	5.62	5.47	5.23	5.24	5.24	5.31	5.38	4.94	5.40	6.25	5.99	***	5.31
	Jembrana	IDA006										5.36	5.16	4.91	4.93	***	4.70
	Lombok	IDA007										5.59	5.39	5.29	4.89	***	4.66
Japan	Rishiri	JPA001	4.73	4.70	4.70	4.67	4.73	4.77	4.90	4.76	4.87	4.82	4.99	5.06	5.03	5.15	5.09
	Ochiishi	JPA002	4.83	4.88	4.82	5.03	5.11	5.00	5.19	5.13	5.14	5.12	5.11	4.90	*	*	*
	Tappi	JPA003	4.69	4.61	4.69	4.80	4.66	4.85	4.82	4.74	4.96						
	Sado-seki	JPA004	4.70	4.68	4.73	4.74	4.70	4.66	4.86	4.90	4.96	4.90	4.87	4.73	5.16	5.09	5.24
	Happo	JPA005	5.10	5.04	4.88	5.00	5.01	5.09	5.09	5.10	5.20	5.14	5.26	5.26	5.20	5.24	5.19
	Ijira	JPA006	4.76	4.75	4.69	4.75	4.71	4.70	4.76	4.74	4.92	4.79	4.94	5.06	4.98	4.87	4.94
	Okri	JPA007	4.66	4.73	4.58	4.61	4.65	4.72	4.87	4.83	4.87	4.81	4.84	5.13	*	*	*
	Banryu	JPA008	4.70	4.66	4.48	4.64	4.55	4.65	4.81	4.77	4.87						
	Yusuhara	JPA009	4.79	4.93	4.77	4.78	4.88	4.87	4.85	4.51	5.00	4.97	4.94	5.15	4.97	4.95	5.04
	Hedo	JPA010	5.20	4.90	5.13	4.96	5.02	5.14	5.17	5.00	5.10	4.98	5.07	4.68	5.24	4.94	*
	Ogasawara	JPA011	5.25	5.30	5.33	5.25	5.08	5.23	5.10	5.22	5.23	5.23	4.97	5.29	5.17	5.00	5.19
	Tokyo	JPA012	4.95	4.83	4.84	5.05	4.83	4.79	4.94	4.90	4.93	5.00	5.10	5.17	5.17	5.13	5.06
	Niigata-maki	JPA013										4.86	4.95	5.00	5.00	5.00	4.89
	Tsushima	JPA014										4.99	4.92	4.89	5.12	4.91	5.04
Lao PDR	Vientiane	LAA001	***	***	6.46	***	6.54	5.94	6.77	*	*	*	***	***	***	6.62	5.39
Malaysia	Petaling Jaya	MYA001	4.26	4.16	4.21	4.42	4.42	4.39	4.26	4.51	4.50	***	4.65	4.68	4.53	4.54	4.55
	Tanah Rata	MYA002	5.06	5.01	4.96	4.95	4.86	4.72	4.85	4.86	4.86	***	4.90	***	5.10	5.08	4.99
	Danum Valley	MYA003	5.22	5.21	5.18	5.27	5.31	5.21	5.25	5.22	5.30	***	5.22	5.24	5.16	5.29	5.21
	Kuching	MYA004	5.28	5.43	5.32	5.29	5.34	5.31	5.15	5.21	5.25	***	5.60	5.34	5.58	5.47	5.36
	Gunung Brinchang	MYA005												5.25	***	***	***
Mongolia	Ulaanbaatar	MNA001	5.88	5.44	5.88	5.98	***	6.42	5.02	5.53	5.76	5.49					
	Terej	MNA002	5.61	5.26	5.74	4.91	***	5.50	5.19	5.04	5.81	***	6.25	5.70	5.17	5.35	6.05
	Khan-Uul	MNA004											5.95	5.68	5.15	5.37	5.90
Myanmar	Yangon	MMA001	6.42	6.46	6.49	6.45	6.70	6.66	6.75	6.69	6.58	6.53	6.26	6.74	6.90	6.83	6.64
Philippines	Manila Observatory	PHA001	5.65	5.64	5.22	5.55	6.13	6.28	5.52	***	***	5.40	5.60	5.00	4.93	4.84	5.12
	Los Baños	PHA002	5.88	5.57	5.66	5.85	5.79	6.29	4.71	***	***	***	***	***	4.83	4.51	4.82
	Mt.Sto.Tomas	PHA003	6.70	5.35	5.95	5.29	6.14	5.96	6.46	***	***	***	***	***	5.65	***	5.84
Republic of Korea	Ganghwa	KRA001	4.41	4.64	4.61	4.58	4.87	4.69	4.79	4.44	4.88	4.68	***	5.25	5.43	5.23	5.06
	Jeju	KRA002	5.04	5.17	5.31	5.38	5.79	5.67	5.10	5.28	5.87	5.60	***	5.69	5.49	5.59	5.55
	Imsil	KRA003	4.87	5.27	5.11	5.22	5.29	5.09	5.50	5.30	5.70	5.34	***	6.18	6.58	5.23	6.11
Russia	Mondy	RUA001	5.55	5.54	5.62	5.32	5.33	5.45	5.37	5.31	5.19	5.41	5.40	5.63	5.38	***	
	Listvyanka	RUA002	4.76	4.73	4.78	4.80	4.90	4.83	4.90	4.77	4.75	4.73	4.80	4.85	4.90	4.80	5.10
	Irkutsk	RUA003	5.13	5.02	4.93	5.01	5.06	5.21	4.93	4.94	4.86	4.82	4.85	4.96	5.15	5.24	4.93
	Primorskaya	RUA004	4.97	4.63	5.07	5.06	5.47	5.16	5.40	5.69	5.83	5.44	6.00	5.56	5.77	5.68	5.60
Thailand	Bangkok	THA001	5.07	5.05	5.68	5.60	7.03	5.29	5.54	5.97	6.04	6.06	5.77	***	5.84	5.59	5.71
	Samutprakarn	THA002	5.32	5.90	6.17	5.98	6.51	5.60	5.45	5.86	5.52	5.75	6.06	***	5.76	5.51	5.59
	Pathumthani	THA003	5.24	5.00	5.44	5.41	5.51	5.29	5.40	5.34	5.12	5.46	5.72	5.49	5.43	5.78	6.04
	Khanchanaburi	THA004	5.69	5.49	6.02	5.33	5.79	5.46	5.98	5.76	5.76	6.08	***	***	***	***	***
	Mae Hia	THA005	6.17	5.29	6.10	6.04	6.28	5.64	5.60	5.56	5.51	5.15					
	Sakaerat	THA008	4.75	5.00	5.07	5.24	4.82	5.03	5.26	5.42	5.14	5.21					
Vietnam	Hanoi	VNA001	5.93	5.30	5.62	5.66	5.74	6.19	5.60	6.53	5.52	4.95	6.19	5.64	5.50	5.62	5.35
	Hoa Binh	VNA002	5.37	5.44	5.63	6.04	5.44	5.29	5.64	5.22	5.26	5.31	5.73	5.46	5.42	5.95	5.46
	Cuc Phuong	VNA003	5.23	5.04	5.43	5.42	5.52	5.32	5.81	5.07	5.45	5.45	5.25	6.13	5.66	5.99	5.96
	Da Nang	VNA004	5.11	4.98	5.44	5.58	5.52	5.98	5.96	5.87	5.78	6.15	6.15	5.79	5.76	5.82	5.79
	Can Tho	VNA005					6.26	5.77	5.84	5.97	5.87	5.93	5.85	5.96	5.94	5.86	5.90
	Ho Chi Minh	VNA006					5.85	6.11	5.76	6.06	6.11	5.96	5.96	6.08	6.10	5.98	6.06
	Yen Bai	VNA007						5.23	5.18	5.19	5.35	4.82	5.77	5.59	5.07	5.94	4.89

Terms and abbreviations are given in Table 3.5.

Table 3.82 Precipitation amount-weighted annual average EC from 2010 to 2024

unit: mS m⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	0.747	0.820	0.704	0.665	0.676	0.691	0.705	0.747	***	***	***	***	***	***	***
China	Haifu	CNA003	6.71	6.55	5.33	5.26	3.94	2.70	3.00	2.71	2.83	2.27	1.86	1.85	1.83	2.02	2.00
	Jinyunshan	CNA004	8.07	7.09	6.56	4.81	3.65	2.50	2.44	2.38	2.65	2.43	2.20	1.71	1.77	1.53	1.98
	Shizhan	CNA005	5.63	4.31	6.51	6.97	4.37	5.06	3.69	3.53	3.28	3.02	3.43	3.57	6.32	2.89	2.08
	Jiwozi	CNA007	1.67	3.04	5.39	3.61	4.29	2.32	1.05	2.64	2.09	5.58	2.21	1.41	1.21	1.44	2.35
	Hongwen	CNA008	2.05	2.18	2.67	1.63	1.89	1.59	2.33	2.21	2.07	3.18	7.26	2.42	1.15	0.956	1.04
	Xiaoping	CNA009	2.06	1.82	1.67	1.46	2.15	1.43	1.28	0.996	1.29	1.56	1.41	1.35	1.03	1.26	0.956
	Xiang Zhou	CNA010	1.74	1.84	1.76	1.15	1.94	1.65	1.50	1.85	2.09	1.46	1.24	0.905	0.968	1.07	1.08
	Zhuxiandong	CNA011	1.37	1.99	***	***	***	2.29	2.01	1.45	2.38	1.53	1.49	1.02	1.09	1.08	1.21
	Wuzhishan	CNA013										0.733	0.613	0.525	0.573	0.520	0.560
	Lijiang	CNA014										1.50	0.418	0.366	0.536	0.414	0.827
Indonesia	Jakarta	IDA001	1.90	2.17	1.39	1.59	1.67	1.26	2.03	1.27	2.52	1.82	1.27	1.81	1.71	***	2.01
	Serpong	IDA002	1.95	2.31	2.05	2.16	1.89	2.26	1.85	1.82	2.30	2.46	2.03	2.00	1.98		
	Kototabang	IDA003	0.903	0.742	0.791	0.927	1.10	1.04	0.790	0.402	0.429	0.671	0.499	0.507	0.348	***	0.987
	Bandung	IDA004	1.43	1.90	1.60	1.86	2.14	1.71	1.79	1.88	1.88	2.37	1.96	1.59	1.81		
	Maros	IDA005	0.718	0.576	0.885	0.970	1.00	2.10	3.03	1.65	0.664	1.04	0.692	0.659	0.559	***	0.719
	Jembrana	IDA006										0.898	1.78	1.79	1.29	***	1.80
	Lombok	IDA007										1.10	1.03	0.968	3.77	***	1.53
Japan	Rishiri	JPA001	3.77	3.50	5.54	4.25	3.56	3.16	1.92	4.47	3.78	4.00	3.13	4.36	3.48	2.17	2.57
	Ochiishi	JPA002	4.65	3.28	4.96	7.10	2.14	3.29	2.42	4.02	1.64	1.58	2.52	4.51	*	*	*
	Tappi	JPA003	2.80	3.64	3.45	4.76	3.62	3.97	3.32	3.91	3.16						
	Sado-seki	JPA004	5.08	3.57	4.88	5.98	5.58	6.15	3.47	3.11	2.86	4.15	3.17	27.9	3.64	2.74	2.76
	Happo	JPA005	0.597	0.666	1.07	0.764	0.744	0.680	0.616	0.569	0.560	0.595	0.494	0.541	0.530	0.499	0.430
	Ijira	JPA006	1.33	1.46	1.65	1.42	1.47	1.49	1.33	1.32	0.959	1.19	1.00	0.866	1.08	1.02	0.798
	Oki	JPA007	7.56	8.76	6.72	9.41	9.58	7.57	6.08	7.96	6.96	3.51	4.37	5.93	*	*	*
	Banryu	JPA008	2.88	3.13	3.44	2.48	3.11	2.82	2.39	2.46	1.85						
	Yusuhara	JPA009	1.06	0.870	1.24	1.06	0.789	1.11	0.972	2.68	0.804	0.870	0.839	0.763	1.21	0.961	0.843
	Hedo	JPA010	4.59	3.87	7.27	4.24	2.68	5.28	3.41	6.15	3.00	2.66	4.16	19.7	2.42	5.49	*
	Ogasawara	JPA011	3.58	3.70	2.26	2.86	2.62	5.30	1.87	3.25	1.02	3.15	1.39	2.80	2.76	2.73	2.20
	Tokyo	JPA012	1.18	1.88	1.75	1.33	1.46	1.40	1.04	1.60	1.43	1.66	0.997	0.941	1.02	0.959	1.01
	Niigata-maki	JPA013										3.87	2.58	3.67	4.03	3.49	4.21
	Tsushima	JPA014										1.23	1.40	1.46	2.29	1.52	1.45
Lao PDR	Vientiane	LAA001	***	***	0.411	***	0.867	1.26	0.730	*	*	*	***	***	***	0.530	6.06
Malaysia	Petaling Jaya	MYA001	2.90	3.43	3.10	2.43	2.50	2.61	2.95	1.92	2.17	***	1.58	1.50	1.90	1.93	1.80
	Tanah Rata	MYA002	0.550	0.822	0.780	0.734	0.875	1.10	0.813	0.798	0.808	***	1.01	***	0.569	0.607	0.623
	Danum Valley	MYA003	0.552	0.440	0.416	0.410	0.419	0.513	0.360	0.339	0.433	***	0.707	0.506	0.504	0.418	0.571
	Kuching	MYA004	0.500	0.547	0.489	0.549	1.02	0.635	0.683	0.588	0.612	***	0.730	0.630	0.487	0.406	0.372
	Gunung Brinchang	MYA005												0.481	***	***	***
Mongolia	Ulaanbaatar	MNA001	1.53	1.74	1.71	2.54	***	2.86	3.52	1.26	1.40	7.89					
	Terej	MNA002	1.88	1.54	1.33	1.94	***	2.80	3.27	1.38	1.19	***	2.37	4.04	5.11	1.76	0.812
	Khan-Uul	MNA004											2.09	2.10	4.24	1.15	1.15
Myanmar	Yangon	MMA001	1.34	0.682	1.30	0.813	0.914	1.46	1.37	0.504	0.644	0.910	1.19	0.807	1.38	1.42	0.519
Philippines	Manila Observatory	PHA001	1.89	3.76	4.81	1.53	1.92	2.53	3.02	***	***	1.20	1.01	1.33	1.25	1.45	1.34
	Los Baños	PHA002	1.22	1.18	1.74	1.02	1.45	3.34	2.25	***	***	***	***	***	1.21	1.80	1.19
	Mt.Sto.Tomas	PHA003	0.533	0.355	0.500	0.558	0.460	0.464	0.527	***	***	***	***	***	0.520	***	0.732
Republic of Korea	Ganghwa	KRA001	2.46	2.34	2.76	2.66	2.41	4.29	1.80	2.44	1.67	4.74	***	1.62	1.23	0.968	1.64
	Jeju	KRA002	2.32	3.07	7.05	5.55	2.42	2.31	7.07	5.00	4.74	2.37	***	5.13	15.1	6.54	3.68
	Imsil	KRA003	1.89	1.58	2.58	1.47	1.39	1.98	1.23	1.69	1.07	1.31	***	1.96	1.82	1.48	0.745
Russia	Mondy	RUA001	0.653	0.566	0.864	0.420	0.480	0.588	0.409	0.659	0.576	0.469	0.330	0.802	0.441	***	
	Listvyanka	RUA002	1.41	1.63	1.51	1.25	1.20	1.50	1.11	1.54	1.43	1.32	1.14	1.14	1.20	1.23	1.10
	Irkutsk	RUA003	2.05	2.16	2.16	2.08	1.59	2.55	1.47	1.62	1.90	1.65	1.54	1.51	1.68	1.55	1.47
	Primorskaya	RUA004	1.96	2.64	1.56	1.89	1.63	1.75	1.58	2.06	1.53	1.36	1.56	1.85	2.02	1.82	1.66
Thailand	Bangkok	THA001	1.31	1.24	1.26	1.35	1.10	1.35	1.34	0.821	1.64	1.36	0.891	***	0.958	1.26	0.929
	Samutprakarn	THA002	1.13	0.667	0.902	1.20	1.00	0.921	0.880	0.799	1.05	1.01	0.845	***	0.681	0.938	1.07
	Pathumthani	THA003	0.975	1.27	1.17	1.08	0.998	1.34	1.38	1.19	1.24	1.24	0.798	1.03	0.944	0.916	0.694
	Khanchanaburi	THA004	0.249	0.585	0.817	0.326	0.506	0.438	0.379	0.421	0.382	0.421	***	***	***	***	***
	Mae Hia	THA005	0.519	0.442	0.512	0.682	0.803	0.561	0.825	0.736	0.526	0.939					
	Sakaerat	THA008	0.992	0.796	0.756	0.789	1.46	0.856	0.848	0.566	0.870	0.800					
Vietnam	Hanoi	VNA001	1.72	1.60	1.56	1.52	1.99	2.21	1.93	2.08	2.47	3.68	4.28	2.21	3.87	2.35	3.36
	Hoa Binh	VNA002	1.39	1.02	0.940	1.10	1.35	1.22	1.45	1.27	1.22	1.06	2.11	1.90	1.17	2.16	0.751
	Cuc Phuong	VNA003	1.71	1.98	1.73	1.80	1.28	1.42	1.37	1.52	1.10	1.69	1.51	2.22	2.10	2.72	2.15
	Da Nang	VNA004	1.46	2.37	2.10	3.46	1.85	1.82	1.74	2.47	2.41	5.02	4.72	2.63	4.03	2.11	2.33
	Can Tho	VNA005					1.10	1.92	1.20	1.06	1.27	1.35	1.34	1.21	1.28	1.36	1.22
	Ho Chi Minh	VNA006					2.00	2.85	1.33	1.68	1.35	1.78	1.64	1.61	1.65	1.70	1.67
	Yen Bai	VNA007						1.31	2.47	1.55	1.49	1.90	2.90	2.10	1.59	2.97	1.43

Terms and abbreviations are given in Table 3.5.

Table 3.83 Annual SO₄²⁻ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	13.6	11.5	17.0	10.7	9.78	7.76	6.85	15.6	***	***	***	***	***	***	***
China	Haifu	CNA003	136	115	103	109	120	61.3	59.5	49.8	46.1	41.0	33.0	34.7	24.1	32.5	24.1
	Jinyunshan	CNA004	148	119	125	91.7	90.0	56.5	48.6	46.3	33.9	36.6	38.0	37.3	24.0	29.1	19.9
	Shizhan	CNA005	45.8	72.5	42.9	62.0	70.1	49.1	25.9	41.8	22.1	14.1	19.5	28.7	25.0	21.7	13.9
	Jiwozi	CNA007	36.8	60.7	36.9	34.1	39.4	14.1	7.18	18.2	14.5	36.4	6.75	15.6	7.17	15.3	20.1
	Hongwen	CNA008	40.8	26.4	29.7	30.7	30.4	18.8	40.4	17.1	17.3	46.4	9.74	9.75	6.72	7.30	12.2
	Xiaoping	CNA009	41.4	38.1	30.2	44.9	40.3	27.0	25.4	9.85	11.0	12.9	9.26	9.34	6.28	10.5	11.6
	Xiang Zhou	CNA010	36.7	19.5	22.6	46.3	23.9	16.6	37.6	26.9	25.0	20.2	15.5	14.4	13.8	16.5	19.4
	Zhuxiandong	CNA011	31.6	23.4	***	***	***	37.2	42.6	25.7	33.1	24.8	22.5	19.1	16.0	17.7	15.8
	Wuzhishan	CNA013										10.1	3.50	3.11	4.04	1.58	2.38
	Lijiang	CNA014										0.234	36.9	1.34	1.85	1.57	2.23
Indonesia	Jakarta	IDA001	46.4	28.4	56.0	51.0	70.4	48.0	61.4	22.6	59.4	38.1	45.8	57.4	40.2	***	41.2
	Serpong	IDA002	34.8	27.9	26.0	61.6	66.9	55.8	76.0	81.5	71.0	74.3	82.4	68.6	76.5		
	Kototabang	IDA003	15.0	17.1	16.0	13.2	21.3	20.8	12.3	10.9	16.2	14.0	12.2	14.3	10.0	***	29.0
	Bandung	IDA004	70.3	47.1	55.2	72.1	78.8	60.6	86.1	67.3	55.6	72.8	44.0	54.3	65.9		
	Maros	IDA005	28.9	30.0	21.5	26.0	20.9	15.3	20.6	14.6	19.4	11.6	8.26	8.55	22.5	***	9.46
	Jembrana	IDA006										14.8	20.1	22.0	22.5	***	28.1
	Lombok	IDA007										18.6	15.0	19.7	50.7	***	22.5
Japan	Rishiri	JPA001	25.1	26.1	32.6	27.1	20.7	19.9	15.3	23.1	24.4	15.6	22.7	23.2	20.1	17.5	15.7
	Ochiishi	JPA002	24.9	12.4	22.0	34.4	10.9	16.8	14.5	15.1	10.9	7.39	8.29	29.0	*	*	*
	Tappi	JPA003	33.1	31.5	26.2	35.4	31.7	27.5	27.5	24.9	28.8						
	Sado-seki	JPA004	44.2	34.0	38.6	52.7	45.1	30.1	21.4	24.7	24.6	22.2	25.3	179	19.8	21.8	17.6
	Happo	JPA005	16.0	21.5	23.2	23.6	19.6	15.8	12.5	14.5	13.1	14.5	10.7	12.4	9.43	11.0	8.91
	Ijira	JPA006	42.6	39.8	38.9	33.6	36.6	36.8	34.1	29.4	27.7	27.5	25.0	25.6	31.3	36.9	26.1
	Oki	JPA007	59.3	70.0	49.1	65.6	50.4	38.6	48.2	40.4	45.9	23.0	35.6	51.1	*	*	*
	Banryu	JPA008	30.8	30.1	31.2	35.0	32.7	26.7	30.9	23.8	19.3						
	Yusuhara	JPA009	23.9	23.9	32.8	22.5	24.4	19.9	20.8	51.3	21.2	20.1	19.2	14.0	19.7	18.2	17.2
	Hedo	JPA010	55.3	36.3	88.5	35.8	34.9	42.1	31.9	45.5	33.6	32.0	37.5	226	31.5	54.1	*
	Ogasawara	JPA011	27.9	20.4	16.0	17.1	18.5	32.9	11.0	21.1	3.83	23.9	12.6	22.1	22.4	19.3	10.6
	Tokyo	JPA012	18.1	22.0	25.5	19.7	25.1	19.2	15.1	14.5	13.7	18.0	11.7	12.8	12.4	9.46	12.6
	Niigata-maki	JPA013										31.6	30.1	31.7	32.4	29.7	8.09
	Tsushima	JPA014										25.8	25.1	22.9	18.5	21.9	20.2
Lao PDR	Vientiane	LAA001	***	***	3.19	***	***	2.94	2.61	*	*	*	***	***	***	3.79	10.1
Malaysia	Petaling Jaya	MYA001	60.3	81.2	58.0	63.6	79.2	80.3	69.4	42.2	59.6	***	40.9	36.1	44.8	45.7	39.7
	Tanah Rata	MYA002	7.96	16.6	13.1	13.2	17.9	18.4	9.28	10.7	11.0	***	14.7	***	8.69	11.2	11.4
	Danum Valley	MYA003	12.0	7.42	6.75	10.1	7.35	7.17	4.92	7.99	8.01	***	16.9	9.00	5.43	5.49	5.59
	Kuching	MYA004	16.6	18.9	17.7	20.6	26.1	20.7	23.0	15.3	16.3	***	30.8	12.7	9.49	11.0	8.12
	Gunung Brinchang	MYA005												1.22	***	***	***
Mongolia	Ulaanbaatar	MNA001	3.39	4.59	***	8.71	***	18.3	20.7	5.54	5.48	11.7					
	Terelj	MNA002	3.96	3.40	***	4.40	***	10.4	15.1	1.42	3.98	***	5.60	53.2	*	6.72	3.09
	Khan-Uul	MNA004											6.27	17.5	*	3.86	4.72
Myanmar	Yangon	MMA001	10.3	20.9	19.2	21.4	13.1	11.2	20.0	32.6	23.8	26.0	14.0	11.0	19.4	21.4	24.2
Philippines	Manila Observatory	PHA001	54.2	68.3	108	52.9	47.3	47.4	54.7	***	***	24.1	28.8	45.9	45.5	51.2	38.4
	Los Baños	PHA002	15.3	20.4	26.5	15.8	18.9	21.0	27.0	***	***	***	***	***	33.0	39.0	24.2
	Mt.Sto.Tomas	PHA003	17.8	21.6	41.6	33.8	16.8	24.5	24.4	***	***	***	***	***	2.37	***	14.6
Republic of Korea	Ganghwa	KRA001	41.3	40.1	20.3	32.4	12.5	17.3	15.8	13.8	8.93	13.2	***	10.3	10.6	4.47	7.23
	Jeju	KRA002	19.4	27.4	43.9	25.9	20.5	25.1	48.3	22.6	24.3	16.7	***	37.8	19.5	30.1	25.1
	Imsil	KRA003	32.0	30.9	27.2	22.6	16.7	14.5	11.6	14.2	12.4	16.8	***	8.94	12.9	8.97	6.90
Russia	Mondy	RUA001	0.613	0.333	0.753	1.18	0.675	0.877	0.696	1.23	1.58	0.853	0.212	0.358	0.269	***	
	Listvyanka	RUA002	6.76	10.6	7.33	5.02	4.85	7.04	4.74	7.09	4.77	8.32	5.92	9.12	5.73	8.16	7.51
	Irkutsk	RUA003	12.6	11.3	16.8	10.1	9.02	12.3	11.4	12.9	13.7	11.3	10.9	15.4	9.69	12.8	11.2
	Primorskaya	RUA004	21.5	8.70	19.1	21.1	20.6	24.7	22.2	21.7	30.6	16.4	21.2	15.9	26.3	31.2	19.5
Thailand	Bangkok	THA001	24.3	23.2	19.3	9.42	8.52	12.0	23.1	27.1	17.3	7.29	13.5	***	10.8	10.4	*
	Samutprakarn	THA002	29.3	16.1	9.73	8.55	9.52	10.4	21.3	16.2	15.1	9.55	8.07	***	10.5	6.43	*
	Pathumthani	THA003	14.1	14.8	12.4	11.1	8.71	12.4	10.9	12.2	9.47	8.64	7.98	7.90	12.2	9.12	6.53
	Khanchanaburi	THA004	2.91	9.93	8.89	1.84	3.51	2.56	10.4	3.92	2.65	1.91	***	***	***	***	***
	Mae Hia	THA005	3.88	5.23	5.28	5.92	4.42	3.07	4.06	7.67	3.41	5.34					
	Sakaerat	THA008	11.5	7.99	7.48	10.8	4.61	9.04	7.51	8.34	10.9	8.02					
Vietnam	Hanoi	VNA001	43.8	55.7	51.8	50.4	65.3	50.3	59.5	71.7	84.6	87.5	136	79.5	173	87.8	102
	Hoa Binh	VNA002	36.1	31.7	32.7	39.6	32.9	32.3	37.9	35.9	61.4	22.9	86.1	70.8	43.7	73.1	23.1
	Cuc Phuong	VNA003	33.7	69.7	49.0	51.1	31.5	27.5	32.3	36.1	34.0	35.5	38.0	31.1	41.7	32.5	33.7
	Da Nang	VNA004	27.6	76.7	32.9	56.1	35.0	21.6	31.9	37.0	36.2	52.7	34.5	31.5	37.0	43.7	35.3
	Can Tho	VNA005					16.1	67.7	26.5	30.9	59.1	61.0	39.7	51.6	58.1	48.2	46.8
	Ho Chi Minh	VNA006					46.3	67.6	49.0	80.5	63.5	71.8	60.7	58.0	60.1	59.7	72.1
	Yen Bai	VNA007						34.2	79.1	62.9	47.3	38.9	80.6	57.1	46.6	80.8	34.2

Terms and abbreviations are given in Table 3.5.

Table 3.84 Annual nss-SO₄²⁻ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	13.3	11.3	16.6	10.5	9.07	7.35	6.53	15.2	***	***	***	***	***	***	***
China	Haifu	CNA003	135	115	102	108	119	61.1	59.1	49.5	45.7	40.7	32.7	34.6	23.9	32.1	24.0
	Jinyunshan	CNA004	148	119	125	91.5	89.6	56.4	48.5	46.1	33.8	36.5	37.9	37.2	23.9	28.9	19.9
	Shizhan	CNA005	45.6	71.8	42.8	58.3	65.4	45.1	24.6	40.8	21.5	13.7	19.0	27.8	24.3	20.4	13.3
	Jiwozi	CNA007	36.3	60.3	35.8	29.7	35.1	11.6	6.99	17.1	13.7	33.3	6.18	14.4	6.91	14.8	19.5
	Hongwen	CNA008	39.0	25.5	28.8	29.5	29.1	17.7	37.7	15.9	15.9	46.1	8.82	8.54	5.86	6.47	11.4
	Xiaoping	CNA009	39.7	37.1	29.5	43.5	39.6	25.9	24.7	9.57	10.7	12.8	8.76	9.01	5.86	9.93	11.1
	Xiang Zhou	CNA010	34.5	17.0	18.4	38.4	20.9	12.3	34.4	20.9	16.6	17.8	13.0	11.7	10.9	13.9	16.9
	Zhuxiandong	CNA011	29.4	20.3	***	***	***	30.8	38.3	22.8	21.8	21.7	17.7	15.6	12.5	14.5	13.0
	Wuzhishan	CNA013										9.35	3.17	2.63	3.49	1.37	2.06
	Lijiang	CNA014										0.207	36.9	1.31	1.81	1.53	2.20
Indonesia	Jakarta	IDA001	45.4	27.7	53.9	48.8	66.3	45.7	58.9	21.8	57.7	37.2	43.0	55.4	39.2	***	39.0
	Serpong	IDA002	34.1	27.4	25.4	59.6	63.7	54.3	73.5	79.2	68.8	72.1	80.0	65.6	75.1		
	Kototabang	IDA003	14.3	16.2	14.4	12.1	20.4	21.6	10.7	10.4	15.7	13.4	11.5	13.7	9.56	***	28.4
	Bandung	IDA004	68.8	46.0	53.8	70.2	77.2	59.5	84.3	65.1	53.2	68.2	42.9	53.5	64.6		
	Maros	IDA005	26.7	26.7	18.7	21.3	17.2	14.9	11.0	8.53	16.7	9.75	6.69	7.33	19.6	***	8.00
	Membrana	IDA006										12.9	16.0	17.0	18.6	***	24.4
	Lombok	IDA007										16.4	12.4	17.3	47.1	***	20.4
Japan	Rishiri	JPA001	14.6	15.8	12.3	13.2	10.6	10.7	9.89	11.4	13.3	7.76	12.3	8.60	9.59	9.69	8.40
	Ochiishi	JPA002	10.5	5.51	7.68	7.60	5.99	7.88	4.98	4.07	5.63	4.02	3.77	15.3	*	*	*
	Tappi	JPA003	22.5	21.2	16.3	18.9	20.4	12.9	15.1	12.1	12.9						
	Sado-seki	JPA004	18.3	21.2	19.9	22.0	21.2	13.1	10.9	13.3	12.0	9.48	11.2	51.4	5.18	9.69	6.94
	Happo	JPA005	15.4	20.9	22.0	22.9	18.8	15.0	11.8	13.6	12.2	14.0	10.1	11.6	8.84	10.2	8.55
	Ijira	JPA006	39.6	37.2	35.5	31.1	33.8	33.8	31.8	26.8	24.4	25.3	22.2	21.5	26.4	33.7	23.4
	Oki	JPA007	23.6	25.6	21.2	23.1	15.8	12.3	17.8	11.4	14.1	12.2	14.9	11.3	*	*	*
	Banryu	JPA008	22.5	20.8	24.5	26.5	24.8	18.6	21.8	16.0	13.7						
	Yusuhara	JPA009	22.6	21.3	29.4	21.1	23.3	16.1	19.5	43.4	17.7	17.5	17.6	11.0	14.4	15.3	14.8
	Hedo	JPA010	15.3	14.6	17.9	13.8	14.7	8.88	9.97	9.63	8.21	11.9	10.9	40.4	7.26	16.0	*
	Ogasawara	JPA011	5.60	4.62	5.27	6.31	6.44	3.79	4.72	3.45	1.18	3.92	7.45	3.57	4.91	6.62	1.96
	Tokyo	JPA012	16.3	18.9	22.6	17.4	23.1	17.4	13.7	11.4	11.0	12.3	10.4	10.6	10.8	8.20	10.8
	Niigata-maki	JPA013										15.4	15.8	11.5	11.4	11.4	3.75
	Tsushima	JPA014										21.4	20.6	18.2	9.36	17.5	14.6
Lao PDR	Vientiane	LAA001	***	***	***	***	***	2.79	2.54	*	*	*	***	***	***	3.55	*
Malaysia	Petaling Jaya	MYA001	59.3	80.2	57.3	62.6	78.1	78.9	68.1	41.1	58.4	***	39.6	35.0	43.9	44.5	38.5
	Tanah Rata	MYA002	7.78	16.2	12.8	12.8	17.4	18.0	8.93	10.2	10.6	***	13.8	***	8.12	10.7	10.7
	Danum Valley	MYA003	10.2	6.51	6.24	9.15	6.42	6.52	4.36	7.58	7.24	***	15.1	7.50	4.59	4.97	4.62
	Kuching	MYA004	14.7	16.3	16.5	18.7	24.1	17.3	18.8	13.2	14.3	***	28.2	10.7	7.91	9.45	7.00
	Gunung Brinchang	MYA005												1.08	***	***	***
Mongolia	Ulaanbaatar	MNA001	3.36	4.53	***	8.00	***	***	19.0	5.32	5.05	11.4					
	Terelj	MNA002	3.86	3.34	***	4.33	***	***	13.5	1.34	3.56	***	5.17	51.9	*	6.59	2.85
	Khan-Uul	MNA004											5.65	17.3	*	3.82	4.64
Myanmar	Yangon	MMA001	8.88	18.0	15.8	19.7	10.1	9.94	18.0	30.0	19.9	22.7	12.1	9.06	17.2	18.9	22.0
Philippines	Manila Observatory	PHA001	50.6	63.6	103	47.0	43.5	43.9	52.0	***	***	21.5	27.3	42.5	41.4	46.3	36.1
	Los Baños	PHA002	12.5	17.6	23.7	12.5	17.0	19.3	24.7	***	***	***	***	***	31.3	36.4	22.6
	Mt.Sto.Tomas	PHA003	16.5	20.4	38.1	32.1	15.4	21.3	20.5	***	***	***	***	***	2.30	***	14.0
Republic of Korea	Ganghwa	KRA001	38.8	36.9	18.3	30.8	11.4	15.7	14.3	12.9	7.77	7.71	***	9.04	9.33	3.82	6.12
	Jeju	KRA002	13.1	17.6	16.9	14.8	12.1	16.2	21.7	11.3	7.82	12.3	***	17.8	7.37	9.63	14.2
	Imsil	KRA003	27.2	27.5	22.8	20.4	14.7	12.5	9.88	12.5	9.75	14.2	***	6.41	9.83	7.32	5.49
Russia	Mondy	RUA001	0.598	0.316	0.726	1.15	0.658	0.863	0.678	1.20	1.54	0.832	0.194	0.348	0.263	***	
	Listvyanka	RUA002	6.69	10.4	7.25	4.91	4.77	6.98	4.63	7.03	4.68	8.22	5.81	8.96	5.63	7.99	7.43
	Irkutsk	RUA003	12.2	11.0	16.5	9.90	8.82	12.1	11.1	12.7	13.5	11.1	10.7	15.1	9.49	12.3	11.0
	Primorskaya	RUA004	20.5	8.19	17.9	20.0	20.0	23.0	20.8	20.7	29.3	15.4	19.6	14.4	24.6	29.7	18.5
Thailand	Bangkok	THA001	23.3	22.4	18.6	8.46	7.96	11.2	22.0	26.6	16.5	6.95	12.2	***	10.2	9.10	*
	Samutprakarn	THA002	27.2	15.4	9.28	6.94	8.77	9.63	20.3	15.4	14.3	9.03	7.27	***	9.93	5.23	*
	Pathumthani	THA003	13.5	14.2	11.1	10.7	8.37	12.0	10.4	11.8	9.09	8.32	7.68	7.72	11.9	8.72	6.23
	Khanchanaburi	THA004	2.61	9.06	7.49	1.40	3.13	2.19	9.73	3.59	2.16	1.70	***	***	***	***	***
	Mae Hia	THA005	3.69	4.93	5.04	5.49	4.31	2.87	3.74	7.23	3.06	4.97					
	Sakaerat	THA008	11.1	7.63	7.23	10.5	4.39	8.66	7.25	8.13	10.1	7.36					
Vietnam	Hanoi	VNA001	43.3	55.0	51.4	49.5	64.6	49.6	58.4	69.6	83.3	85.5	133	78.1	169	86.2	99.1
	Hoa Binh	VNA002	35.7	31.5	32.4	39.1	32.7	31.9	37.5	35.4	61.0	21.8	85.0	69.6	43.1	71.9	22.7
	Cuc Phuong	VNA003	32.5	68.2	46.5	48.0	30.4	26.8	30.8	33.7	31.9	33.3	35.9	26.6	38.3	29.8	31.0
	Da Nang	VNA004	23.4	61.3	27.1	36.0	24.0	12.6	21.1	26.1	25.6	38.8	23.8	20.8	25.9	34.7	25.3
	Can Tho	VNA005					14.4	63.8	25.2	29.8	57.5	58.4	37.9	49.4	56.0	46.3	45.0
	Ho Chi Minh	VNA006					43.5	64.6	46.9	76.9	61.4	69.0	57.9	55.3	57.5	57.4	69.6
	Yen Bai	VNA007						33.7	78.1	62.4	46.9	37.7	79.0	56.2	46.0	79.5	33.3

Terms and abbreviations are given in Table 3.5.

Table 3.85 Annual NO₃⁻ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	15.5	11.3	17.4	10.3	13.3	11.4	9.78	15.1	***	***	***	***	***	***	***
China	Haifu	CNA003	75.9	67.4	74.6	75.8	90.8	57.8	66.4	63.1	63.5	61.4	54.9	54.1	43.2	56.7	44.5
	Jinyunshan	CNA004	73.4	65.8	70.8	59.9	68.0	46.9	45.6	46.7	41.7	48.8	52.8	54.6	35.6	43.5	34.8
	Shizhan	CNA005	18.8	11.5	19.4	15.7	61.0	42.7	26.1	14.6	18.1	11.5	10.8	10.7	30.2	23.9	21.4
	Jiwozi	CNA007	14.1	8.01	18.5	5.69	7.84	12.8	2.05	1.30	8.25	22.0	2.16	4.08	4.42	15.0	19.1
	Hongwen	CNA008	44.3	19.9	32.5	29.3	29.8	26.6	55.6	23.5	26.5	40.4	15.9	16.8	15.9	16.1	18.8
	Xiaoping	CNA009	46.0	34.6	34.4	40.9	46.3	38.0	35.7	19.0	21.3	31.7	23.2	22.3	21.5	29.5	22.1
	Xiang Zhou	CNA010	44.3	19.8	23.1	49.3	34.9	26.9	42.6	34.5	35.3	43.0	40.3	32.9	28.4	37.0	48.1
	Zhuxiandong	CNA011	36.6	21.5	***	***	***	47.0	52.2	41.5	40.7	51.0	51.4	45.9	33.1	39.1	40.8
	Wuzhishan	CNA013										14.1	8.14	7.17	8.10	3.27	4.14
	Lijiang	CNA014										2.25	29.6	0.542	2.19	2.76	2.68
Indonesia	Jakarta	IDA001	36.2	29.5	44.2	50.8	63.4	42.9	67.5	24.7	75.8	38.3	48.3	52.0	37.8	***	37.5
	Serpong	IDA002	42.4	29.5	28.2	91.9	104	85.1	92.8	99.6	102	88.3	93.1	75.4	75.0		
	Kototabang	IDA003	5.61	11.1	12.3	6.06	18.7	9.00	8.99	9.21	21.7	16.2	12.9	14.3	10.4	***	15.2
	Bandung	IDA004	46.8	42.8	45.0	51.7	55.3	47.5	61.0	49.7	41.8	60.4	36.9	34.9	42.5		
	Maros	IDA005	16.9	27.3	22.2	14.7	16.8	15.6	17.3	8.00	25.1	5.26	5.20	8.19	25.5	***	11.5
	Membrana	IDA006										15.3	53.1	62.2	20.0	***	27.0
	Lombok	IDA007										20.0	13.4	10.6	16.0	***	19.4
Japan	Rishiri	JPA001	15.4	17.4	15.7	15.7	10.6	11.8	13.3	17.5	20.9	12.2	17.6	13.5	16.1	18.3	17.3
	Ochiishi	JPA002	10.3	7.83	8.54	9.36	7.29	9.54	6.40	5.71	7.92	6.68	5.77	34.0	*	*	*
	Tappi	JPA003	27.2	22.7	20.4	27.0	28.8	15.9	21.5	22.0	20.1						
	Sado-seki	JPA004	24.8	27.3	26.0	30.6	27.1	18.0	18.7	23.5	22.2	17.4	17.7	28.9	11.0	17.8	14.6
	Happo	JPA005	17.1	25.1	23.3	22.1	19.1	15.2	14.2	18.6	17.9	20.0	14.4	18.5	13.4	15.9	14.0
	Ijira	JPA006	57.9	46.4	47.7	40.2	44.7	52.5	51.6	44.9	38.6	37.9	38.8	42.9	49.8	46.6	45.3
	Oki	JPA007	35.2	32.6	28.0	33.7	21.4	16.1	24.9	20.8	22.0	20.9	19.9	21.7	*	*	*
	Banryu	JPA008	33.2	27.9	33.6	32.8	32.9	26.3	32.8	32.6	22.6						
	Yusuhara	JPA009	19.1	19.6	26.1	17.5	17.2	23.0	19.1	68.2	17.6	17.5	16.4	17.0	15.3	18.5	15.2
	Hedo	JPA010	16.9	13.6	20.3	13.8	16.8	12.4	13.5	14.2	13.1	17.0	13.3	55.4	13.5	25.4	*
	Ogasawara	JPA011	5.70	3.80	4.53	4.83	4.76	3.82	4.47	4.65	2.00	4.25	4.46	4.43	4.84	4.37	2.81
	Tokyo	JPA012	25.4	30.1	30.7	25.9	30.4	26.7	19.0	17.9	20.0	20.9	19.4	21.5	19.9	16.4	21.9
	Niigata-maki	JPA013										25.7	28.7	23.9	22.7	23.3	7.39
	Tsushima	JPA014										16.6	27.3	25.1	15.4	24.6	22.0
Lao PDR	Vientiane	LAA001	***	***	7.34	***	***	3.79	2.90	*	*	*	***	***	***	9.71	18.1
Malaysia	Petaling Jaya	MYA001	174	190	150	119	133	164	151	90.1	140	***	96.1	105	139	118	115
	Tanah Rata	MYA002	10.8	7.29	10.8	10.5	13.9	20.5	14.1	23.8	15.2	***	19.2	***	17.4	19.6	16.1
	Danum Valley	MYA003	3.36	3.99	2.83	6.32	2.10	3.81	2.65	0.545	2.35	***	<0.01	4.01	11.1	2.12	1.11
	Kuching	MYA004	22.8	23.1	14.5	18.6	19.4	16.0	23.5	17.8	20.0	***	13.5	32.8	7.81	5.61	8.18
	Gunung Brinchang	MYA005												2.49	***	***	***
Mongolia	Ulaanbaatar	MNA001	3.26	2.75	***	4.76	***	5.20	5.87	4.86	4.16	1.92					
	Terelj	MNA002	3.58	2.59	***	2.89	***	2.41	5.20	4.58	3.81	***	4.68	9.88	*	3.05	1.68
	Khan-Uul	MNA004											7.03	7.45	*	2.09	5.08
Myanmar	Yangon	MMA001	11.3	19.8	21.4	18.1	13.8	20.1	32.5	51.4	29.3	65.5	36.8	32.6	18.0	23.9	25.1
Philippines	Manila Observatory	PHA001	135	52.7	81.4	49.0	42.0	33.5	91.8	***	***	31.0	28.5	33.9	49.9	49.3	43.2
	Los Baños	PHA002	64.9	19.9	25.0	18.7	17.0	13.7	67.7	***	***	***	***	***	19.9	17.1	16.6
	Mt.Sto.Tomas	PHA003	15.5	11.8	34.9	37.2	18.5	21.3	25.5	***	***	***	***	***	2.30	***	10.5
Republic of Korea	Ganghwa	KRA001	49.8	40.9	27.2	38.8	15.7	29.7	24.7	24.6	17.9	16.0	***	23.0	19.9	8.46	15.8
	Jeju	KRA002	22.7	30.0	23.1	19.3	21.8	31.4	35.6	28.4	21.2	31.0	***	31.6	17.8	36.7	26.1
	Imsil	KRA003	47.6	41.3	36.7	32.0	30.8	24.3	19.0	26.5	24.6	25.1	***	13.5	33.5	23.0	18.1
Russia	Mondy	RUA001	0.732	0.316	0.841	1.66	0.573	0.718	1.28	1.86	1.92	1.40	0.202	0.194	0.276	***	
	Listvyanka	RUA002	6.59	14.6	6.64	4.37	3.68	5.18	4.73	6.08	3.99	6.88	4.75	5.32	7.17	6.02	6.75
	Irkutsk	RUA003	8.36	6.81	8.09	4.52	4.77	6.02	6.46	7.22	5.82	6.53	5.44	5.89	5.36	7.09	7.95
	Primorskaya	RUA004	14.7	23.5	21.6	13.4	4.93	29.4	20.6	22.3	27.0	18.6	14.9	16.1	18.6	15.1	8.19
Thailand	Bangkok	THA001	54.1	44.7	49.7	17.2	15.5	25.7	51.8	32.2	43.4	18.0	40.8	***	52.2	50.7	*
	Samutprakarn	THA002	28.9	20.6	11.9	5.65	12.9	14.4	33.2	28.5	27.5	17.8	15.2	***	37.4	22.0	*
	Pathumthani	THA003	36.0	30.0	29.3	22.0	15.6	31.2	28.1	38.8	24.2	22.6	25.4	22.2	32.7	22.7	19.8
	Khanchanaburi	THA004	6.11	14.1	16.4	2.90	4.58	4.68	5.22	5.83	4.00	2.09	***	***	***	***	***
	Mae Hia	THA005	8.52	11.7	8.78	14.2	6.19	6.24	9.59	12.5	7.25	11.2					
	Sakaerat	THA008	23.7	15.0	12.6	15.0	10.5	17.8	14.6	17.9	15.4	15.2					
Vietnam	Hanoi	VNA001	25.7	39.5	45.3	51.2	50.9	44.7	47.3	72.1	88.0	100	120	80.8	191	80.6	239
	Hoa Binh	VNA002	21.3	25.4	29.5	37.7	32.8	36.0	35.7	42.1	45.9	37.3	91.8	88.2	40.1	76.8	44.9
	Cuc Phuong	VNA003	38.4	51.5	40.5	31.6	17.4	19.6	22.1	31.4	23.2	33.4	36.3	50.5	99.4	87.4	97.6
	Da Nang	VNA004	11.9	57.5	8.06	12.5	11.7	0.941	7.58	12.1	1.12	4.03	5.94	9.56	11.8	13.3	11.3
	Can Tho	VNA005					15.4	25.8	5.52	7.30	8.01	39.7	6.42	10.0	8.57	7.03	7.03
	Ho Chi Minh	VNA006					34.2	25.5	18.9	37.2	12.2	41.4	22.2	31.4	33.3	24.3	28.2
	Yen Bai	VNA007						27.0	73.2	58.6	54.0	63.0	126	53.4	51.1	66.6	94.6

Terms and abbreviations are given in Table 3.5.

Table 3.86 Annual Cl⁻ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	9.12	7.52	10.8	10.1	14.2	9.94	8.23	8.40	***	***	***	***	***	***	***
China	Haifu	CNA003	15.8	11.6	11.5	13.1	15.7	9.48	10.6	9.49	9.93	8.35	8.12	6.84	5.82	9.52	5.82
	Jinyunshan	CNA004	15.7	10.1	11.7	8.13	8.50	6.56	5.78	6.77	4.18	5.10	5.77	6.55	4.44	5.18	3.83
	Shizhan	CNA005	10.5	7.07	6.28	22.4	13.1	10.6	5.96	5.15	10.4	6.20	8.54	21.3	9.87	17.1	10.5
	Jiwozi	CNA007	16.9	10.8	12.2	22.0	13.1	6.35	0.290	8.49	7.94	13.9	7.25	8.02	6.99	18.6	8.44
	Hongwen	CNA008	23.0	21.5	22.1	27.1	32.3	26.1	55.3	38.6	61.3	74.3	15.6	14.7	15.8	14.5	20.9
	Xiaoping	CNA009	21.1	26.1	18.8	25.7	18.8	28.8	19.7	14.5	18.9	10.2	11.4	8.94	8.71	12.6	14.2
	Xiang Zhou	CNA010	41.6	37.5	65.8	112	39.8	86.1	55.3	116	152	48.5	50.1	51.5	54.0	49.7	47.1
	Zhuxiandong	CNA011	40.2	21.5	***	***	***	116	78.9	53.3	214	60.5	94.3	66.4	66.2	59.5	47.9
	Wuzhishan	CNA013										11.1	7.02	8.57	9.91	3.40	7.35
	Lijiang	CNA014										1.72	20.7	1.27	3.60	1.89	4.12
Indonesia	Jakarta	IDA001	32.7	19.2	35.3	45.1	91.1	48.0	61.6	16.2	36.1	22.3	53.9	42.7	23.3	***	65.0
	Serpong	IDA002	31.9	12.5	21.6	52.8	73.3	39.4	46.8	52.6	50.2	65.7	109	57.4	47.2		
	Kototabang	IDA003	23.5	30.5	25.7	57.8	26.4	20.7	72.3	15.3	14.1	12.6	14.1	15.2	10.5	***	19.5
	Bandung	IDA004	22.4	18.9	22.1	36.5	29.8	19.1	26.0	28.7	24.0	36.3	17.3	13.6	21.5		
	Maros	IDA005	56.2	58.4	48.9	146	99.9	17.1	304	262	51.8	35.5	47.4	23.0	55.6	***	41.0
	Membrana	IDA006										49.8	136	158	93.2	***	111
	Lombok	IDA007										37.9	38.2	41.7	61.1	***	47.6
Japan	Rishiri	JPA001	197	192	389	260	190	175	104	219	211	149	196	273	196	151	138
	Ochiishi	JPA002	288	147	267	514	93.8	166	184	216	99.6	64.6	85.6	260	*	*	*
	Tappi	JPA003	192	191	191	309	210	315	238	242	305						
	Sado-seki	JPA004	481	252	380	559	447	318	199	214	237	240	264	2335	279	232	204
	Happo	JPA005	13.1	13.6	23.3	13.0	15.2	15.7	15.7	19.3	18.1	11.0	13.0	17.0	11.8	16.0	7.87
	Ijira	JPA006	62.4	52.8	70.2	53.2	59.8	62.3	48.0	51.7	66.9	43.6	55.1	80.3	98.5	63.1	55.7
	Oki	JPA007	684	847	532	807	649	502	583	551	619	207	397	754	*	*	*
	Banryu	JPA008	157	179	125	164	155	157	168	147	108						
	Yusuhara	JPA009	27.3	49.8	66.5	33.4	24.5	83.4	27.4	157	66.8	51.7	31.7	59.7	102	55.9	46.4
	Hedo	JPA010	751	410	1407	424	383	648	429	696	490	391	527	3707	466	734	*
	Ogasawara	JPA011	391	313	210	210	236	587	122	344	50.7	379	101	358	336	242	163
	Tokyo	JPA012	32.1	63.8	58.5	44.5	41.8	36.4	27.6	60.8	51.5	108	25.8	41.9	31.6	23.6	35.0
	Niigata-maki	JPA013										320	276	387	413	355	85.4
	Tsushima	JPA014										85.5	86.1	90.5	178	85.6	108
Lao PDR	Vientiane	LAA001	***	***	5.89	***	***	4.58	3.76	*	*	*	***	***	***	4.86	14.7
Malaysia	Petaling Jaya	MYA001	32.6	30.2	27.2	27.3	33.0	38.7	35.3	31.3	37.5	***	33.6	33.0	31.0	28.7	30.6
	Tanah Rata	MYA002	4.67	9.70	9.07	8.19	10.1	10.1	7.82	10.1	10.7	***	12.5	***	10.9	10.4	10.9
	Danum Valley	MYA003	40.5	21.6	12.3	24.1	18.5	15.1	14.6	13.6	18.1	***	33.3	32.0	18.4	11.0	35.8
	Kuching	MYA004	37.3	53.2	25.7	36.2	40.4	64.1	81.8	44.0	41.3	***	58.2	48.8	30.8	29.6	52.1
	Gunung Brinchang	MYA005												4.02	***	***	***
Mongolia	Ulaanbaatar	MNA001	1.30	1.22	***	0.628	***	0.774	0.740	0.569	0.752	0.452					
	Terelj	MNA002	1.37	1.41	***	0.630	***	0.793	1.03	0.913	0.860	***	0.655	2.19	*	0.845	0.403
	Khan-Uul	MNA004											0.743	1.19	*	0.569	0.947
Myanmar	Yangon	MMA001	30.0	49.6	68.3	72.9	56.0	83.6	68.2	99.1	64.1	61.6	50.8	34.9	36.0	46.7	74.9
Philippines	Manila Observatory	PHA001	55.2	109	90.1	101	68.6	68.2	79.0	***	***	55.1	25.9	77.3	34.2	73.7	43.7
	Los Baños	PHA002	52.3	62.5	45.4	61.7	38.0	143	44.3	***	***	***	***	***	31.1	45.2	27.4
	Mt.Sto.Tomas	PHA003	18.3	20.3	37.2	31.2	15.3	47.6	24.1	***	***	***	***	***	4.89	***	36.8
Republic of Korea	Ganghwa	KRA001	68.9	71.6	50.5	32.6	26.3	95.0	41.9	32.8	26.6	108	***	25.0	24.6	15.2	25.5
	Jeju	KRA002	114	158	545	219	148	159	498	200	303	60.4	***	341	221	385	178
	Imsil	KRA003	72.9	37.9	124	27.8	33.8	33.7	25.1	24.4	32.4	31.2	***	37.0	29.6	14.0	9.37
Russia	Mondy	RUA001	0.306	0.388	0.626	1.22	0.440	0.501	0.369	1.01	0.864	0.355	0.128	0.143	0.0470	***	
	Listvyanka	RUA002	1.12	3.17	1.13	1.62	1.02	1.82	0.975	1.30	0.658	1.80	1.50	1.28	1.04	2.24	1.03
	Irkutsk	RUA003	8.95	7.23	6.69	5.30	3.82	6.96	4.76	5.13	4.43	4.27	4.38	4.09	2.91	5.51	3.20
	Primorskaya	RUA004	19.8	41.9	27.5	30.9	16.1	29.4	30.9	23.6	22.0	30.4	25.4	43.1	43.9	50.4	35.8
Thailand	Bangkok	THA001	18.9	17.3	15.0	9.63	9.32	11.7	18.1	13.0	16.5	7.46	17.1	***	12.7	16.7	*
	Samutprakarn	THA002	30.4	16.0	9.45	10.2	11.2	13.9	17.0	15.1	16.0	10.3	14.6	***	12.6	57.9	*
	Pathumthani	THA003	10.2	10.6	24.9	8.08	8.34	10.7	9.24	10.2	9.23	7.74	8.66	7.69	9.63	9.51	7.06
	Khanchanaburi	THA004	5.37	17.2	27.8	4.34	6.75	6.22	9.58	6.97	7.55	4.48	***	***	***	***	***
	Mae Hia	THA005	4.17	4.65	4.59	8.51	2.84	2.89	5.49	7.07	5.89	5.70					
	Sakaerat	THA008	7.82	7.24	7.17	9.14	4.76	9.68	7.12	6.90	5.74	6.00					
Vietnam	Hanoi	VNA001	13.4	15.6	11.8	19.3	17.2	18.8	18.9	30.3	43.7	32.5	76.1	28.1	87.2	40.9	160
	Hoa Binh	VNA002	8.70	7.58	8.91	12.4	5.53	8.49	11.4	27.6	27.5	14.2	46.3	33.0	20.9	37.8	10.0
	Cuc Phuong	VNA003	40.2	28.7	41.0	47.9	19.8	31.1	33.1	79.6	76.1	60.9	76.7	71.6	61.9	54.0	48.4
	Da Nang	VNA004	85.2	340	140	403	206	138	191	182	254	359	524	300	689	388	234
	Can Tho	VNA005					50.4	90.8	60.3	55.6	79.4	56.6	47.8	75.5	68.2	55.4	51.0
	Ho Chi Minh	VNA006					85.8	73.9	95.2	164	89.9	83.6	109	99.7	103	88.6	70.0
	Yen Bai	VNA007						11.3	25.9	41.4	23.2	22.3	52.8	20.2	29.3	27.3	16.9

Terms and abbreviations are given in Table 3.5.

Table 3.87 Annual NH₄⁺ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	41.9	28.0	34.9	18.1	21.7	19.9	24.9	30.7	***	***	***	***	***	***	***
China	Haifu	CNA003	137	117	118	145	164	116	125	117	115	112	95.3	96.8	85.1	109	90.8
	Jinyunshan	CNA004	121	98.8	125	102	105	80.6	80.1	76.1	74.2	73.2	77.0	85.4	61.6	74.4	57.9
	Shizhan	CNA005	85.6	40.0	42.7	105	106	115	49.0	85.0	59.8	63.3	70.1	57.5	54.1	130	38.8
	Jiwozi	CNA007	20.0	22.5	10.4	36.0	18.6	29.4	1.06	0.544	8.50	19.9	17.1	29.5	7.13	15.3	5.78
	Hongwen	CNA008	60.9	35.7	39.9	25.7	29.1	29.6	65.9	18.2	24.4	29.1	10.1	20.5	18.8	14.0	31.7
	Xiaoping	CNA009	65.1	59.6	39.2	50.0	53.0	58.8	45.5	20.0	19.8	20.1	20.6	25.8	13.6	34.4	30.1
	Xiang Zhou	CNA010	45.4	26.1	44.2	42.9	39.9	27.3	69.4	46.6	50.0	45.1	41.6	34.5	33.4	44.4	58.4
	Zhuxiandong	CNA011	42.1	28.4	***	***	***	38.9	99.8	46.7	49.8	48.4	45.7	44.1	30.0	41.4	35.6
Indonesia	Wuzhishan	CNA013										22.0	16.6	15.2	14.6	5.89	8.45
	Lijiang	CNA014										5.58	2.44	7.75	8.59	5.91	12.7
	Jakarta	IDA001	48.8	33.4	62.9	40.0	55.7	53.2	74.1	31.4	81.9	44.3	73.0	64.8	47.8	***	44.1
	Serpong	IDA002	74.6	51.6	63.6	193	189	112	163	161	147	148	218	156	172		
	Kototabang	IDA003	6.72	21.9	22.4	14.7	30.2	4764	10.7	13.6	21.4	16.6	19.3	25.6	11.0	***	34.8
	Bandung	IDA004	83.7	93.0	112	111	113	114	157	120	108	124	91.2	94.4	128		
	Maros	IDA005	27.0	33.8	34.5	27.2	19.9	51.4	106	12.0	36.5	4.33	2.71	5.64	33.4	***	18.5
	Membrana	IDA006										26.7	32.2	31.4	10.1	***	26.2
Japan	Lombok	IDA007										27.0	34.3	34.4	208	***	11.2
	Rishiri	JPA001	16.8	17.3	13.3	15.1	12.9	14.5	13.5	20.9	24.2	13.6	23.8	15.8	19.3	22.2	21.7
	Ochiishi	JPA002	11.6	8.98	10.7	10.3	9.05	9.45	5.70	5.24	7.40	6.26	6.77	34.7	*	*	*
	Tappi	JPA003	23.3	19.4	16.3	20.4	27.2	14.5	18.8	17.9	16.9						
	Sado-seki	JPA004	16.2	20.2	20.1	28.6	25.6	16.7	16.0	25.2	17.2	15.5	15.2	21.8	8.02	16.3	12.8
	Happo	JPA005	15.4	18.6	21.5	23.8	19.8	17.6	11.7	13.5	15.4	21.2	14.5	19.4	15.1	17.6	14.2
	Ijira	JPA006	46.9	43.4	42.2	36.6	40.8	42.3	45.1	36.4	34.0	35.2	37.4	40.7	50.8	47.4	41.7
	Oki	JPA007	25.8	28.6	22.0	24.4	14.7	10.2	21.9	17.6	15.8	16.9	15.0	17.1	*	*	*
	Banryu	JPA008	31.8	22.5	25.9	27.9	26.2	21.8	27.4	24.0	16.0						
	Yusuhara	JPA009	16.3	16.4	23.0	17.8	17.3	12.3	16.6	56.9	12.7	16.7	16.9	13.4	15.3	17.2	13.3
	Hedo	JPA010	24.6	16.1	53.5	16.0	20.2	19.4	14.7	11.4	8.39	12.6	15.6	65.3	10.2	25.9	*
	Ogasawara	JPA011	9.82	5.88	8.14	7.64	5.94	4.19	5.59	3.80	1.94	4.61	5.84	3.15	3.68	4.60	1.37
	Tokyo	JPA012	31.8	35.3	39.8	36.9	41.8	33.0	27.7	23.3	28.1	28.8	30.6	32.4	30.2	23.8	28.8
	Niigata-maki	JPA013										24.8	26.3	21.2	22.4	21.6	8.04
	Tsushima	JPA014										21.2	30.8	20.4	14.1	22.9	20.4
Lao PDR	Vientiane	LAA001	***	***	***	***	***	7.17	5.35	*	*	*	***	***	***	9.30	*
Malaysia	Petaling Jaya	MYA001	16.2	17.5	4.40	57.8	102	95.5	44.6	53.3	76.0	***	75.3	71.4	64.0	78.7	79.5
	Tanah Rata	MYA002	9.92	47.2	16.1	6.69	9.97	20.2	8.31	9.45	5.33	***	31.3	***	20.8	24.1	24.2
	Danum Valley	MYA003	11.6	7.19	1.90	2.48	2.60	8.53	0.827	0.590	4.34	***	0.0532	1.61	5.42	0.869	6.77
	Kuching	MYA004	9.03	23.3	23.4	11.8	34.3	24.3	13.9	13.3	19.9	***	9.25	22.0	29.4	25.5	7.84
	Gunung Brinchang	MYA005												1.67	***	***	***
Mongolia	Ulaanbaatar	MNA001	8.35	7.50	***	9.58	***	***	6.50	7.81	9.78	2.53					
	Terelj	MNA002	4.53	5.66	***	0.487	***	***	6.41	4.40	4.62	***	2.63	10.6	*	3.73	3.77
	Khan-Uul	MNA004											8.00	11.1	*	4.43	7.35
Myanmar	Yangon	MMA001	33.3	46.9	45.6	45.8	47.6	54.3	37.4	38.2	57.4	50.3	47.0	39.3	55.4	49.7	31.1
Philippines	Manila Observatory	PHA001	142	667	1218	145	162	215	283	***	***	67.6	53.8	42.1	58.5	116	65.0
	Los Baños	PHA002	79.1	70.1	142	53.3	116	85.6	149	***	***	***	***	***	25.0	29.6	27.7
	Mt.Sto.Tomas	PHA003	16.8	3.79	19.6	20.7	49.0	58.4	34.5	***	***	***	***	***	1.88	***	17.0
Republic of Korea	Ganghwa	KRA001	41.6	63.8	36.9	70.5	25.7	58.3	48.6	49.6	24.2	21.2	***	25.3	28.8	9.76	21.8
	Jeju	KRA002	26.8	30.2	40.1	22.9	30.4	40.9	45.2	27.3	26.6	35.9	***	27.7	8.45	19.6	24.2
	Imsil	KRA003	51.2	56.3	55.4	49.4	36.7	36.4	30.2	39.2	31.4	39.1	***	11.8	30.7	20.4	19.8
Russia	Mondy	RUA001	1.58	0.672	2.00	0.894	0.444	1.84	1.10	1.99	3.03	1.73	0.304	1.94	0.675	***	
	Listvyanka	RUA002	5.99	8.22	9.17	2.74	3.83	12.3	4.56	6.50	3.11	8.06	4.91	8.28	5.41	5.45	5.31
	Irkutsk	RUA003	12.9	10.8	15.1	8.15	9.28	21.3	10.7	10.3	9.29	12.0	11.5	14.8	9.76	12.2	6.54
	Primorskaya	RUA004	28.8	33.6	24.9	28.6	27.2	29.8	21.0	29.7	33.8	21.0	18.5	37.3	46.2	49.9	37.7
Thailand	Bangkok	THA001	76.5	87.3	79.4	61.6	52.9	96.7	104	87.0	60.5	22.4	63.1	***	58.7	60.6	*
	Samutprakarn	THA002	52.9	58.5	32.5	42.1	48.2	66.3	78.4	88.1	58.9	28.4	33.3	***	43.5	26.9	*
	Pathumthani	THA003	49.4	59.5	59.2	53.1	37.4	48.6	56.7	56.3	47.0	39.7	44.5	28.7	46.7	45.4	39.3
	Khanchanaburi	THA004	14.5	25.2	21.4	10.2	13.7	11.7	17.2	16.6	6.29	2.94	***	***	***	***	***
	Mae Hia	THA005	22.5	21.9	21.8	27.7	14.1	13.1	21.8	32.3	12.3	25.0					
	Sakaerat	THA008	40.0	36.7	29.0	34.4	18.0	43.3	36.8	39.4	71.5	78.6					
Vietnam	Hanoi	VNA001	64.8	95.9	108	104	113	82.6	102	109	108	38.6	155	132	157	161	86.9
	Hoa Binh	VNA002	38.8	48.9	57.4	50.7	59.5	62.0	81.8	37.8	81.1	18.3	89.1	118	51.7	156	44.8
	Cuc Phuong	VNA003	16.4	35.5	48.3	48.5	34.9	43.8	38.9	19.5	13.6	31.0	32.0	94.0	158	96.0	93.6
	Da Nang	VNA004	14.6	78.3	35.8	57.0	32.2	16.5	14.8	46.8	36.6	89.4	65.0	48.1	49.0	55.7	77.0
	Can Tho	VNA005					33.7	46.9	38.0	41.0	32.0	41.8	26.6	48.6	50.0	39.2	35.1
	Ho Chi Minh	VNA006					46.6	41.8	73.6	132	51.3	51.5	76.2	69.5	69.1	68.0	67.0
	Yen Bai	VNA007						46.1	166	80.5	72.8	29.0	112	106	61.2	151	73.5

Terms and abbreviations are given in Table 3.5.

Table 3.88 Annual Na⁺ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	5.74	4.54	5.90	4.16	11.9	6.92	5.40	6.14	***	***	***	***	***	***	***
China	Haifu	CNA003	7.38	7.99	6.10	7.48	9.01	4.40	7.85	5.38	5.56	4.90	4.54	3.26	3.51	6.13	2.99
	Jinyunshan	CNA004	8.00	5.19	6.32	4.41	6.70	2.87	3.10	3.74	1.69	2.08	2.49	2.31	1.95	3.54	1.64
	Shizhan	CNA005	3.35	11.7	2.20	60.9	78.1	67.3	22.2	16.6	9.72	5.62	8.94	14.8	11.7	21.7	9.58
	Jiwozi	CNA007	7.47	7.63	17.3	72.8	70.9	41.3	3.09	17.1	13.4	51.3	9.35	19.3	4.16	8.68	10.9
	Hongwen	CNA008	29.6	15.2	15.0	20.1	22.3	18.8	48.2	19.2	23.4	5.12	15.3	20.1	14.2	13.8	14.1
	Xiaoping	CNA009	28.6	16.6	10.9	23.9	12.0	17.0	12.1	4.64	5.50	1.46	8.37	5.56	7.03	10.2	8.45
	Xiang Zhou	CNA010	36.8	40.7	69.7	131	51.4	75.7	52.8	99.5	139	40.4	41.9	45.3	48.8	43.1	41.2
	Zhuxiandong	CNA011	37.0	51.5	***	***	***	107	80.4	47.7	188	50.5	80.5	58.0	59.0	52.2	45.5
Indonesia	Wuzhishan	CNA013										13.0	6.16	7.90	9.14	3.87	5.30
	Lijiang	CNA014										4.40	0.579	0.705	0.571	0.763	0.488
	Jakarta	IDA001	16.8	11.6	34.5	37.7	67.8	5.65	41.5	12.8	28.5	14.1	46.2	33.5	16.4	***	38.0
	Serpong	IDA002	11.9	8.36	9.71	32.5	54.1	25.9	42.1	38.7	37.4	37.5	40.9	50.2	21.8		
	Kototabang	IDA003	12.4	14.3	25.4	18.0	14.2	1.95	45.7	8.43	9.88	10.1	20.9	9.35	7.84	***	10.0
	Bandung	IDA004	25.4	18.7	22.5	31.9	26.3	17.3	30.3	35.9	40.4	75.7	19.4	12.5	22.7		
	Maros	IDA005	35.3	54.1	48.8	77.7	80.5	9.10	233	240	45.2	31.1	26.0	20.3	48.5	***	24.2
	Jembrana	IDA006										31.6	67.0	82.7	64.5	***	61.1
Japan	Lombok	IDA007										36.6	42.3	40.4	58.8	***	34.9
	Rishiri	JPA001	173	171	343	234	168	153	90.6	194	185	130	174	243	175	130	121
	Ochiishi	JPA002	252	126	239	446	81.5	147	158	183	87.2	56.0	74.9	228	*	*	*
	Tappi	JPA003	177	171	166	275	187	264	206	213	263						
	Sado-seki	JPA004	437	213	319	517	397	283	175	189	211	211	235	2124	243	202	176
	Happo	JPA005	9.86	10.3	19.2	10.8	13.0	13.1	11.8	15.5	14.9	8.80	11.0	14.1	9.89	13.6	6.00
	Ijira	JPA006	50.0	42.3	55.2	41.3	47.5	49.6	39.1	42.7	54.4	36.3	47.8	68.1	82.0	52.5	45.4
	Oki	JPA007	594	737	462	705	574	437	505	482	530	178	344	659	*	*	*
	Banryu	JPA008	139	155	111	140	132	133	150	129	94.3						
	Yusuhara	JPA009	21.8	41.8	55.1	24.6	18.3	69.8	21.9	126	58.3	42.7	26.5	50.2	87.4	47.9	39.0
	Hedo	JPA010	670	360	1186	366	335	552	365	597	421	333	442	3083	402	632	*
	Ogasawara	JPA011	386	262	179	178	201	486	105	298	44.8	333	85.0	308	291	210	144
	Tokyo	JPA012	28.7	52.3	48.2	36.7	34.2	29.6	23.2	51.5	44.7	94.7	21.5	35.7	27.2	20.8	30.2
	Niigata-maki	JPA013										269	237	336	349	305	71.9
	Tsushima	JPA014										73.8	74.9	78.1	152	72.5	92.2
Lao PDR	Vientiane	LAA001	***	***	***	***	***	2.56	1.08	*	*	*	***	***	***	4.16	*
Malaysia	Petaling Jaya	MYA001	17.6	16.5	13.1	15.3	18.7	23.3	21.1	18.9	20.5	***	20.5	18.4	15.1	18.6	19.8
	Tanah Rata	MYA002	3.15	6.56	4.29	6.02	8.17	7.36	6.44	7.45	6.46	***	14.4	***	9.44	9.21	11.9
	Danum Valley	MYA003	32.7	20.9	8.49	16.5	15.4	10.9	9.87	7.47	12.8	***	29.1	25.0	14.0	8.68	16.2
	Kuching	MYA004	31.0	42.1	19.8	31.0	33.8	56.9	71.7	35.5	32.3	***	43.1	33.2	26.3	26.0	20.0
	Gunung Brinchang	MYA005												2.66	***	***	***
Mongolia	Ulaanbaatar	MNA001	0.535	0.924	***	12.1	***	***	27.6	3.50	7.07	3.72					
	Terelj	MNA002	1.44	0.873	***	1.54	***	***	21.9	1.42	7.38	***	7.11	21.2	*	2.19	3.91
	Khan-Uul	MNA004											12.5	3.10	*	0.692	1.37
Myanmar	Yangon	MMA001	29.3	47.2	56.7	42.6	49.6	21.3	34.3	42.2	64.3	54.2	31.2	32.5	37.7	41.4	36.3
Philippines	Manila Observatory	PHA001	59.7	78.2	74.6	98.3	64.4	58.5	43.7	***	***	42.7	26.3	57.0	68.2	85.9	37.8
	Los Baños	PHA002	46.9	46.3	46.7	54.5	32.0	27.4	39.3	***	***	***	***	***	27.6	46.1	21.3
	Mt.Sto.Tomas	PHA003	22.7	19.9	58.9	29.4	23.0	53.2	65.7	***	***	***	***	***	1.20	***	11.7
Republic of Korea	Ganghwa	KRA001	42.4	52.8	37.9	26.6	18.4	26.5	23.8	16.3	19.1	90.3	***	20.6	20.4	10.8	18.3
	Jeju	KRA002	103	163	449	184	139	147	442	187	273	73.8	***	338	205	354	189
	Imsil	KRA003	79.2	55.9	72.6	36.9	32.8	33.9	28.4	27.5	45.1	41.8	***	42.0	51.4	27.3	23.5
Russia	Mondy	RUA001	0.253	0.283	0.455	0.449	0.277	0.219	0.306	0.493	0.764	0.350	0.293	0.166	0.0902	***	
	Listvyanka	RUA002	1.18	2.59	1.44	1.86	1.34	0.989	0.883	1.03	0.677	1.32	1.85	2.70	1.74	2.84	1.25
	Irkutsk	RUA003	6.91	5.52	4.41	3.55	3.35	3.71	3.57	4.01	3.89	2.69	4.83	4.14	3.31	5.41	3.07
	Primorskaya	RUA004	16.1	8.48	21.3	18.4	10.1	28.7	23.3	16.5	22.4	17.6	27.3	24.9	28.2	23.5	17.4
Thailand	Bangkok	THA001	17.8	14.0	10.9	16.0	9.26	12.7	17.9	9.28	13.0	5.56	22.7	***	10.6	14.2	*
	Samutprakarn	THA002	35.0	12.0	7.51	28.2	12.5	13.5	16.1	12.9	14.6	8.68	13.4	***	11.1	9.38	*
	Pathumthani	THA003	13.1	9.16	22.0	7.04	5.62	7.42	6.85	6.60	6.74	5.28	5.17	3.21	4.68	6.84	5.02
	Khanchanaburi	THA004	5.05	14.5	23.2	8.19	6.28	6.46	11.0	5.54	8.12	3.55	***	***	***	***	***
	Mae Hia	THA005	3.17	5.17	4.22	8.07	1.93	3.34	5.21	7.58	6.45	6.17					
	Sakaerat	THA008	5.22	6.10	4.18	4.27	3.78	6.36	4.36	3.53	12.5	11.0					
Vietnam	Hanoi	VNA001	9.00	11.2	7.54	15.0	12.0	11.5	18.9	33.9	21.2	34.1	37.7	23.1	59.6	27.7	45.0
	Hoa Binh	VNA002	6.65	4.32	5.81	8.29	4.12	6.14	6.33	7.56	7.80	18.6	17.9	21.1	9.37	19.9	7.17
	Cuc Phuong	VNA003	19.8	25.2	40.4	50.7	18.2	12.8	24.6	39.3	33.9	36.7	34.2	72.9	56.6	44.9	45.0
	Da Nang	VNA004	69.9	255	106	333	182	151	179	182	177	231	177	178	184	150	166
	Can Tho	VNA005					28.4	64.8	21.0	18.3	25.4	42.8	29.7	35.5	33.6	33.1	30.2
	Ho Chi Minh	VNA006					47.9	49.1	34.4	59.8	35.1	46.1	46.5	44.7	43.7	37.6	40.8
	Yen Bai	VNA007						8.18	16.3	8.81	6.81	18.7	27.1	15.2	9.50	21.2	13.7

Terms and abbreviations are given in Table 3.5.

Table 3.89 Annual K⁺ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	1.59	1.47	1.23	1.42	4.20	2.18	2.70	1.68	***	***	***	***	***	***	***
China	Haifu	CNA003	9.78	7.60	6.64	13.1	13.2	7.30	5.91	5.84	6.94	4.22	3.46	3.14	3.12	4.73	3.55
	Jinyunshan	CNA004	10.2	8.80	7.69	6.19	6.59	4.38	4.10	4.56	2.57	3.32	3.20	2.72	2.35	2.16	2.41
	Shizhan	CNA005	14.9	8.83	2.23	12.4	156	3.16	1.56	2.65	5.13	3.49	3.31	2.91	6.01	2.82	5.01
	Jiwozi	CNA007	5.64	7.07	3.80	6.64	9.33	2.96	1.69	6.59	10.6	37.3	6.02	4.67	3.45	5.47	7.26
	Hongwen	CNA008	3.42	1.68	2.64	2.67	1.60	6.08	9.45	18.8	37.0	14.7	3.09	4.69	2.89	1.42	1.65
	Xiaoping	CNA009	2.94	4.29	4.48	3.29	1.98	13.1	10.3	8.37	12.1	2.54	2.16	1.89	3.53	2.64	1.97
	Xiang Zhou	CNA010	4.10	4.71	14.0	20.0	11.5	6.31	8.63	4.87	6.30	2.97	2.17	2.23	2.10	2.86	2.53
	Zhuxiandong	CNA011	6.10	6.78	***	***	***	13.3	13.7	4.08	9.80	3.93	4.54	3.91	2.81	3.03	3.29
Indonesia	Wuzhishan	CNA013										4.29	2.23	3.93	4.45	1.43	4.45
	Lijiang	CNA014										0.778	0.767	0.394	0.601	0.441	5.93
	Jakarta	IDA001	4.72	2.26	7.79	6.61	11.5	35.2	20.7	3.10	4.83	2.08	10.5	5.14	6.83	***	18.3
	Serpong	IDA002	4.57	2.61	3.87	11.4	16.3	13.8	14.2	12.1	12.8	26.2	45.5	11.3	7.50		
	Kototabang	IDA003	10.5	8.69	14.6	40.9	25.8	12387	24.9	4.54	5.98	6.13	10.8	11.0	5.62	***	17.4
	Bandung	IDA004	11.0	7.30	7.01	18.7	11.4	7.11	7.79	8.10	7.82	7.85	6.68	4.51	6.65		
	Maros	IDA005	6.71	6.74	8.57	7.41	52.7	4427	29.7	14.4	9.44	4.98	19.0	3.06	6.24	***	15.5
	Jembrana	IDA006										6.05	43.9	53.8	8.95	***	33.5
Lombok	Lombok	IDA007										5.26	11.1	14.3	56.3	***	20.0
Japan	Rishiri	JPA001	4.59	4.24	7.51	5.40	4.23	3.95	2.69	5.63	5.25	3.74	5.37	6.52	4.61	4.29	3.72
	Ochiishi	JPA002	6.68	3.02	5.89	9.91	2.14	4.00	3.91	4.48	2.09	1.40	1.94	20.0	*	*	*
	Tappi	JPA003	5.45	4.96	4.66	6.65	4.74	6.20	5.46	5.33	6.38						
	Sado-seki	JPA004	11.1	6.18	8.58	12.1	10.6	8.40	7.54	5.95	5.23	5.57	5.74	66.2	5.52	4.96	4.41
	Happo	JPA005	0.934	1.38	1.73	1.54	1.83	1.53	1.12	1.17	1.17	1.39	1.33	1.14	0.891	1.07	0.607
	Ijira	JPA006	1.64	1.64	1.74	1.60	1.86	2.19	1.57	1.68	1.72	1.45	1.71	2.47	2.40	2.21	2.16
	Oki	JPA007	14.7	19.5	11.9	17.8	13.8	10.5	12.2	11.5	12.9	4.67	8.09	16.3	*	*	*
	Banryu	JPA008	7.98	4.85	3.93	4.71	4.02	3.70	4.17	3.54	2.76						
	Yusuhara	JPA009	1.52	1.58	3.25	0.962	2.47	2.31	1.39	4.74	2.67	2.46	2.04	3.06	3.83	3.30	1.93
	Hedo	JPA010	16.4	8.73	30.2	8.82	8.08	12.8	8.22	13.0	9.26	7.78	10.0	66.9	8.94	15.9	*
	Ogasawara	JPA011	9.32	6.42	4.26	4.60	4.79	12.8	2.56	6.84	1.06	8.23	2.37	5.62	6.69	5.13	3.21
	Tokyo	JPA012	1.64	1.79	1.45	1.14	1.13	1.05	0.868	1.42	1.09	2.25	0.758	0.922	0.766	0.810	0.983
	Niigata-maki	JPA013										7.31	5.67	8.08	8.46	7.07	1.68
	Tsushima	JPA014										2.17	2.65	2.67	5.20	2.74	3.61
Lao PDR	Vientiane	LAA001	***	***	***	***	***	1.61	0.683	*	*	*	***	***	***	1.94	*
Malaysia	Petaling Jaya	MYA001	5.26	4.71	4.53	4.07	5.46	6.39	6.27	4.83	7.33	***	7.34	5.78	4.67	5.39	5.74
	Tanah Rata	MYA002	2.60	6.70	4.78	4.85	4.69	6.35	2.88	5.82	3.54	***	13.5	***	6.15	5.25	6.19
	Danum Valley	MYA003	7.67	6.56	3.59	3.22	6.15	4.83	3.02	3.83	6.58	***	6.77	8.88	8.12	6.14	23.7
	Kuching	MYA004	3.02	3.95	3.51	2.85	11.9	6.37	6.40	5.48	5.84	***	7.88	8.66	11.7	9.10	6.87
	Gunung Brinchang	MYA005												1.06	***	***	***
Mongolia	Ulaanbaatar	MNA001	0.416	0.650	***	0.598	***	***	0.0990	0.207	0.172	0.0677					
	Terelj	MNA002	0.703	0.719	***	0.725	***	***	0.754	0.358	0.544	***	0.407	0.805	*	0.454	0.287
	Khan-Uul	MNA004											0.264	0.278	*	0.289	0.462
Myanmar	Yangon	MMA001	4.71	5.21	17.4	7.17	13.5	32.2	7.30	29.4	12.9	20.8	10.4	15.9	10.3	8.02	16.2
Philippines	Manila Observatory	PHA001	45.6	85.9	117	22.7	25.7	32.7	35.8	***	***	9.78	3.69	4.54	4.79	7.00	3.27
	Los Baños	PHA002	15.4	16.3	17.1	15.3	17.0	114	24.3	***	***	***	***	***	2.55	4.60	4.95
	Mt.Sto.Tomas	PHA003	5.09	3.78	5.07	3.30	4.57	9.93	3.93	***	***	***	***	***	0.264	***	13.5
Republic of Korea	Ganghwa	KRA001	12.2	5.34	4.78	2.94	5.73	62.7	11.2	9.72	3.14	3.97	***	1.66	3.35	1.12	6.81
	Jeju	KRA002	7.98	7.04	18.8	7.65	13.5	20.1	17.0	5.31	6.76	2.27	***	13.4	3.96	13.5	3.40
	Imsil	KRA003	16.8	5.81	66.5	7.72	10.8	6.61	2.84	6.70	2.55	1.46	***	3.47	1.58	0.951	0.617
Russia	Mondy	RUA001	0.237	0.366	0.952	0.759	0.248	0.462	0.233	0.371	0.461	0.179	0.0548	0.213	0.0469	***	
	Listvyanka	RUA002	0.543	1.16	0.686	1.21	0.868	0.702	0.540	1.15	0.452	1.31	1.47	2.12	2.08	2.66	3.05
	Irkutsk	RUA003	2.07	1.51	2.21	1.44	1.15	1.31	1.49	1.47	1.35	1.63	1.80	3.06	2.20	3.02	2.80
	Primorskaya	RUA004	3.93	4.19	4.69	4.01	3.30	9.01	17.6	6.41	8.56	7.07	7.32	4.86	8.87	9.45	14.3
Thailand	Bangkok	THA001	5.22	3.95	2.74	2.54	1.40	2.78	2.77	1.97	2.58	2.45	5.53	***	3.24	8.76	*
	Samutprakarn	THA002	31.9	2.33	1.45	5.83	2.30	2.79	3.10	2.48	2.40	1.72	2.31	***	2.91	52.2	*
	Pathumthani	THA003	3.26	3.06	2.57	2.51	1.98	1.97	2.24	2.90	1.78	1.72	2.15	3.55	1.35	1.41	1.27
	Khanchanaburi	THA004	1.15	4.30	3.75	1.43	1.19	0.916	1.60	1.69	1.71	0.679	***	***	***	***	***
	Mae Hia	THA005	1.41	2.33	1.40	2.12	0.935	0.924	2.35	3.35	1.55	2.74					
	Sakaerat	THA008	1.53	1.81	1.42	1.17	1.12	2.10	1.73	0.866	7.85	6.99					
Vietnam	Hanoi	VNA001	3.43	4.12	5.39	5.13	6.23	4.73	6.03	14.7	15.3	10.5	10.3	11.1	27.8	13.1	194
	Hoa Binh	VNA002	3.94	4.23	2.88	14.3	3.61	4.63	3.73	5.46	10.9	2.83	5.31	9.72	8.14	11.4	6.68
	Cuc Phuong	VNA003	9.28	6.14	12.2	16.3	8.04	6.83	11.2	7.63	10.1	8.45	8.46	15.6	15.7	21.5	20.3
	Da Nang	VNA004	5.76	50.9	19.3	41.5	30.5	22.6	9.24	22.1	40.5	38.7	275	49.6	396	65.2	51.5
	Can Tho	VNA005					13.7	15.8	10.1	10.4	16.4	30.0	11.7	16.1	26.0	17.4	13.6
	Ho Chi Minh	VNA006					20.3	17.1	16.9	35.7	20.6	24.9	24.8	24.8	23.7	21.8	23.5
	Yen Bai	VNA007						6.09	9.03	14.9	6.10	4.12	7.76	6.84	7.61	11.9	5.42

Terms and abbreviations are given in Table 3.5.

Table 3.90 Annual Ca²⁺ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	15.4	11.9	17.4	12.9	14.8	12.8	18.2	13.4	***	***	***	***	***	***	***
China	Haifu	CNA003	67.6	55.5	58.5	71.2	77.4	52.5	85.4	65.1	48.0	31.5	28.2	28.5	22.5	36.7	26.4
	Jinyunshan	CNA004	67.3	55.2	59.5	35.1	38.8	28.0	46.3	65.8	32.0	23.6	23.7	23.6	15.5	19.5	15.4
	Shizhan	CNA005	48.1	60.1	50.1	143	57.7	53.2	14.5	39.4	29.1	23.6	20.2	78.6	80.8	60.9	29.7
	Jiwozi	CNA007	47.0	88.9	79.3	86.2	84.4	25.8	13.6	48.3	30.7	93.9	28.7	32.3	10.6	31.3	42.3
	Hongwen	CNA008	13.9	11.9	16.1	30.8	28.8	16.6	23.3	15.2	26.0	62.4	131	15.7	11.4	5.82	7.81
	Xiaoping	CNA009	12.7	17.9	25.9	44.9	57.8	14.3	11.8	10.2	6.83	7.54	3.81	5.13	4.63	6.21	8.34
	Xiang Zhou	CNA010	13.7	22.1	16.3	105	28.5	22.7	25.4	19.1	21.9	16.2	12.7	15.5	7.92	28.2	13.1
	Zhuxiandong	CNA011	30.3	21.8	***	***	***	40.2	40.9	25.2	37.4	22.7	25.6	20.3	15.4	16.9	15.7
Indonesia	Wuzhishan	CNA013										15.5	3.12	3.89	5.15	2.41	4.05
	Lijiang	CNA014										11.8	2.78	2.65	3.45	5.55	5.48
	Jakarta	IDA001	21.9	11.0	32.6	33.0	47.4	21.0	49.8	22.9	28.2	15.8	22.3	17.8	14.1	***	51.1
	Serpong	IDA002	13.2	9.08	8.31	32.5	37.4	34.9	40.7	38.6	44.9	38.5	26.7	26.3	19.8		
	Kototabang	IDA003	11.3	12.9	20.7	20.2	9.82	4.98	8.28	28.4	24.9	66.0	14.7	25.0	8.83	***	14.8
	Bandung	IDA004	35.1	32.0	27.8	45.9	46.4	35.4	41.0	27.7	31.8	33.2	32.3	30.3	35.3		
	Maros	IDA005	25.5	23.6	39.4	41.9	77.0	41.5	27.2	33.0	46.8	33.8	13.6	36.4	65.8	***	15.9
	Jembrana	IDA006										12.5	45.4	14.0	13.4	***	16.8
Japan	Lombok	IDA007										25.3	13.1	13.8	43.0	***	11.2
	Rishiri	JPA001	7.39	6.93	9.89	8.58	5.97	5.75	4.68	7.64	9.19	5.24	8.31	10.3	8.24	6.86	5.18
	Ochiishi	JPA002	8.95	4.44	6.41	12.2	3.40	5.56	4.86	5.17	3.57	2.38	2.79	12.2	*	*	*
	Tappi	JPA003	13.3	9.17	9.45	15.0	8.89	8.90	9.10	7.66	10.0						
	Sado-seki	JPA004	17.4	11.5	14.8	16.4	13.4	9.83	11.4	8.41	12.4	8.39	7.58	81.2	7.23	8.66	6.67
	Happo	JPA005	6.30	7.89	8.29	7.37	5.67	3.82	1.84	5.54	5.86	5.57	5.00	6.55	2.99	5.39	3.75
	Ijira	JPA006	9.55	6.05	7.16	7.45	5.02	6.26	5.92	6.41	6.92	6.55	5.61	8.54	7.79	10.0	7.31
	Oki	JPA007	23.3	26.2	15.7	23.8	17.3	12.8	16.2	15.0	17.1	7.60	11.4	21.2	*	*	*
	Banryu	JPA008	11.8	8.38	8.03	7.92	7.20	7.83	9.45	7.55	5.49						
	Yusuhara	JPA009	4.44	7.71	7.28	5.37	5.64	3.11	3.13	13.5	3.41	4.10	3.12	5.51	5.24	5.06	2.89
	Hedo	JPA010	21.1	10.7	32.6	11.1	10.4	14.5	9.79	15.7	14.0	9.72	12.4	78.0	13.7	19.7	*
	Ogasawara	JPA011	10.8	7.21	5.44	5.82	6.10	12.9	3.00	7.51	1.23	8.65	2.64	7.46	7.48	5.37	4.03
	Tokyo	JPA012	6.59	6.72	6.88	7.00	6.88	5.84	3.99	4.27	4.49	6.58	4.48	4.82	5.10	4.62	5.54
	Niigata-maki	JPA013										10.9	11.3	12.1	12.0	12.7	3.05
	Tsushima	JPA014										3.31	3.79	4.27	5.35	4.24	4.65
Lao PDR	Vientiane	LAA001	***	***	***	***	***	3.68	1.57	*	*	*	***	***	***	13.5	*
Malaysia	Petaling Jaya	MYA001	19.0	14.3	13.5	21.9	22.3	25.1	22.2	13.1	26.8	***	16.1	15.3	14.2	15.0	15.6
	Tanah Rata	MYA002	2.99	6.84	6.73	8.06	7.75	5.36	5.15	6.80	7.19	***	17.1	***	8.43	5.84	5.90
	Danum Valley	MYA003	9.05	3.36	2.37	4.59	4.02	4.62	2.95	4.38	6.27	***	16.3	6.92	4.99	3.17	11.6
	Kuching	MYA004	12.1	14.6	13.0	17.2	22.4	19.2	18.9	14.8	16.3	***	75.6	10.9	22.3	10.5	19.1
	Gunung Brinchang	MYA005												1.56	***	***	***
Mongolia	Ulaanbaatar	MNA001	5.23	5.54	***	14.7	***	***	4.65	6.68	4.00	1.31					
	Terelj	MNA002	5.48	2.93	***	6.28	***	***	1.78	1.67	2.29	***	7.31	5.98	*	4.49	1.80
	Khan-Uul	MNA004											7.40	8.73	*	4.57	6.05
Myanmar	Yangon	MMA001	14.5	21.7	20.0	2.87	40.6	216	12.1	29.5	48.8	41.9	22.0	5.40	42.9	23.4	21.9
Philippines	Manila Observatory	PHA001	34.2	47.0	61.8	40.5	38.2	43.6	51.6	***	***	34.8	41.0	23.6	32.9	13.6	21.5
	Los Baños	PHA002	41.6	15.2	19.8	15.3	14.5	13.7	20.7	***	***	***	***	***	38.5	5.86	4.92
	Mt.Sto.Tomas	PHA003	81.8	36.1	80.4	37.7	29.3	41.8	59.5	***	***	***	***	***	4.50	***	15.0
Republic of Korea	Ganghwa	KRA001	11.0	6.48	6.46	7.83	3.81	5.61	3.22	3.96	2.01	3.54	***	7.32	4.79	3.47	4.10
	Jeju	KRA002	6.74	7.10	13.4	8.64	4.92	6.74	18.1	9.15	6.87	3.61	***	11.6	8.15	26.2	9.18
	Imsil	KRA003	9.42	10.2	6.03	3.59	3.85	3.71	2.26	2.82	1.92	2.92	***	4.63	4.22	3.30	1.96
Russia	Mondy	RUA001	0.830	0.663	1.28	1.52	0.866	1.14	1.20	1.66	1.94	0.928	0.202	0.264	0.227	***	
	Listvyanka	RUA002	4.12	7.72	4.03	3.30	3.56	3.34	2.51	3.86	2.80	3.46	3.04	3.81	4.50	4.41	5.97
	Irkutsk	RUA003	12.1	11.4	13.9	9.12	10.3	8.88	8.18	11.3	12.3	7.09	6.82	9.12	10.0	11.1	10.4
	Primorskaya	RUA004	11.3	8.52	11.2	13.0	11.6	15.2	12.1	13.3	15.0	10.6	14.7	10.0	16.5	22.8	7.48
Thailand	Bangkok	THA001	22.8	22.9	24.2	33.5	14.6	27.0	26.0	18.0	31.0	18.4	25.7	***	25.3	29.1	*
	Samutprakarn	THA002	14.6	12.5	7.99	22.2	14.5	8.98	16.8	14.4	12.8	9.57	7.28	***	12.2	6.01	*
	Pathumthani	THA003	16.2	18.9	32.2	32.0	23.8	17.8	14.7	16.8	10.5	8.30	6.22	4.77	9.00	7.68	5.41
	Khanchanaburi	THA004	2.93	7.84	41.7	4.90	3.98	3.97	5.48	4.28	3.52	2.77	***	***	***	***	***
	Mae Hia	THA005	5.14	4.20	8.64	15.1	5.13	3.07	7.99	10.6	5.74	7.75					
	Sakaerat	THA008	3.60	2.83	4.21	2.83	3.73	9.46	8.93	7.78	39.7	63.7					
Vietnam	Hanoi	VNA001	29.2	26.6	27.0	31.6	41.2	46.8	37.8	73.2	77.1	103	131	61.4	196	54.8	143
	Hoa Binh	VNA002	28.9	22.1	21.2	34.0	17.4	16.3	18.9	43.8	38.4	26.9	94.2	55.9	36.8	46.7	24.4
	Cuc Phuong	VNA003	63.3	59.8	61.8	46.2	39.2	28.3	52.4	53.7	45.4	38.0	40.7	65.4	102	114	100
	Da Nang	VNA004	15.0	36.4	28.4	49.7	60.6	65.0	105	76.0	94.8	197	286	83.2	72.3	108	58.5
	Can Tho	VNA005					23.5	59.1	19.8	20.1	37.5	37.4	23.5	32.9	31.9	29.3	26.1
	Ho Chi Minh	VNA006					49.7	62.8	30.8	51.0	45.1	60.0	39.8	42.6	41.0	35.6	37.2
	Yen Bai	VNA007						24.1	36.9	55.4	38.8	43.6	89.4	31.8	39.5	39.8	36.9

Terms and abbreviations are given in Table 3.5.

Table 3.91 Annual nss-Ca²⁺ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	15.3	11.8	17.3	12.8	14.5	12.6	18.1	13.3	***	***	***	***	***	***	***
China	Haifu	CNA003	67.5	55.3	58.3	71.1	77.2	52.4	85.2	65.0	47.9	31.4	28.1	28.4	22.5	36.6	26.3
	Jinyunshan	CNA004	67.1	55.1	59.4	35.0	38.6	27.9	46.2	65.7	32.0	23.6	23.7	23.6	15.5	19.4	15.3
	Shizhan	CNA005	48.0	59.8	50.1	142	56.0	51.8	14.1	39.0	28.9	23.5	20.0	78.3	80.5	60.4	29.5
	Jiwozi	CNA007	46.9	88.8	78.9	84.6	82.9	24.9	13.5	47.9	30.5	92.8	28.5	31.9	10.5	31.2	42.1
	Hongwen	CNA008	13.3	11.5	15.8	30.3	28.4	16.2	22.2	14.8	25.4	62.3	131	15.2	11.1	5.52	7.50
	Xiaoping	CNA009	12.1	17.6	25.6	44.4	57.6	13.9	11.6	10.1	6.71	7.51	3.63	5.01	4.47	5.99	8.16
	Xiang Zhou	CNA010	13.0	21.2	14.8	102	27.4	21.1	24.4	16.9	18.9	15.3	11.8	14.6	6.87	27.2	12.3
	Zhuxiandong	CNA011	29.5	20.7	***	***	***	37.9	39.1	24.2	33.3	21.6	23.8	19.1	14.1	15.8	14.7
	Wuzhishan	CNA013										15.2	3.01	3.73	4.95	2.34	3.93
	Lijiang	CNA014										11.7	2.77	2.63	3.43	5.53	5.47
Indonesia	Jakarta	IDA001	21.6	10.7	31.9	32.2	46.0	20.8	48.9	22.7	27.6	15.5	21.3	17.1	13.7	***	50.3
	Serpong	IDA002	12.9	8.91	8.10	31.8	36.2	34.3	39.8	37.8	44.1	37.7	25.9	25.2	19.4		
	Kototabang	IDA003	11.0	12.6	20.2	19.9	9.51	5.09	7.64	28.2	24.7	65.8	14.3	24.8	8.66	***	14.6
	Bandung	IDA004	34.6	31.6	27.4	45.2	45.9	35.1	40.4	27.0	31.0	31.5	31.9	30.1	34.8		
	Maros	IDA005	24.8	22.4	38.4	40.3	75.2	41.4	22.8	28.1	45.8	33.1	13.1	35.9	64.7	***	15.4
	Jembrana	IDA006										11.8	44.0	12.2	12.0	***	15.4
	Lombok	IDA007										24.5	12.1	12.9	41.7	***	10.5
Japan	Rishiri	JPA001	3.69	3.24	2.58	3.58	2.39	2.51	2.72	3.45	5.20	2.44	4.56	5.09	4.47	4.05	2.57
	Ochiishi	JPA002	3.52	1.73	1.31	2.57	1.64	2.38	1.45	1.22	1.69	1.17	1.17	7.26	*	*	*
	Tappi	JPA003	9.58	5.57	5.23	9.14	4.98	3.36	4.65	3.06	4.35						
	Sado-seki	JPA004	8.12	6.92	8.03	6.04	4.88	3.76	7.66	4.33	7.80	3.82	2.52	35.3	1.98	4.31	2.86
	Happo	JPA005	6.09	7.67	7.87	7.14	5.39	3.54	1.58	5.20	5.53	5.38	4.76	6.25	2.78	5.10	3.62
	Ijira	JPA006	8.49	5.23	5.99	6.61	4.07	5.20	5.08	5.49	5.74	5.77	4.58	7.07	6.02	8.87	6.33
	Oki	JPA007	10.5	10.3	5.71	8.53	4.88	3.34	5.39	4.68	5.69	3.75	3.92	6.92	*	*	*
	Banryu	JPA008	8.80	5.04	5.62	4.90	4.35	5.09	6.31	4.75	3.46						
	Yusuhara	JPA009	4.07	6.94	6.09	4.84	5.25	1.61	2.66	10.7	2.24	3.19	2.58	4.43	3.35	4.04	2.05
	Hedo	JPA010	6.61	2.88	6.93	3.21	3.14	2.60	2.05	3.38	5.01	2.73	2.86	11.4	5.09	6.01	*
	Ogasawara	JPA011	2.51	1.56	1.58	1.97	1.76	2.40	0.736	1.07	0.290	1.47	0.838	0.911	1.24	0.898	0.944
	Tokyo	JPA012	5.97	5.59	5.84	6.21	6.14	5.20	3.49	3.16	3.52	4.53	4.02	4.04	4.51	4.17	4.88
	Niigata-maki	JPA013										5.17	6.16	4.83	4.46	6.12	1.50
	Tsushima	JPA014										1.76	2.19	2.58	2.06	2.68	2.67
Lao PDR	Vientiane	LAA001	***	***	***	***	***	3.63	1.55	*	*	*	***	***	***	13.4	*
Malaysia	Petaling Jaya	MYA001	18.6	14.0	13.2	21.6	21.9	24.6	21.8	12.7	26.3	***	15.6	14.9	13.9	14.6	15.1
	Tanah Rata	MYA002	2.93	6.71	6.64	7.95	7.60	5.22	5.01	6.64	7.05	***	16.8	***	8.23	5.64	5.64
	Danum Valley	MYA003	8.51	3.01	2.22	4.30	3.76	4.40	2.75	4.24	5.99	***	15.7	6.38	4.69	2.99	11.2
	Kuching	MYA004	11.4	13.7	12.6	16.6	21.7	18.0	17.4	14.2	15.6	***	74.7	10.2	21.7	9.93	18.6
	Gunung Brinchang	MYA005												1.51	***	***	***
Mongolia	Ulaanbaatar	MNA001	5.22	5.53	***	14.4	***	***	4.05	6.60	3.85	1.23					
	Terelj	MNA002	5.45	2.91	***	6.25	***	***	1.46	1.64	2.14	***	7.16	5.55	*	4.44	1.71
	Khan-Uul	MNA004											7.17	8.66	*	4.55	6.02
Myanmar	Yangon	MMA001	13.9	20.7	18.8	2.13	39.6	215	11.4	28.6	47.4	40.8	21.4	4.70	42.1	22.6	21.1
Philippines	Manila Observatory	PHA001	32.9	45.4	60.2	38.4	36.8	42.3	50.8	***	***	33.9	40.7	22.4	31.4	12.6	20.6
	Los Baños	PHA002	40.7	14.2	18.7	14.2	13.8	13.1	19.9	***	***	***	***	***	37.9	5.63	4.59
	Mt.Sto.Tomas	PHA003	81.4	35.7	79.1	37.0	28.8	40.7	58.0	***	***	***	***	***	4.47	***	14.8
Republic of Korea	Ganghwa	KRA001	10.1	5.40	5.64	7.26	3.47	5.04	2.71	3.61	1.61	1.60	***	6.87	4.35	3.23	3.74
	Jeju	KRA002	4.72	4.00	3.78	4.66	2.13	3.66	8.65	5.42	2.37	2.28	***	4.48	3.71	18.6	5.34
	Imsil	KRA003	7.87	8.99	4.76	2.80	3.19	3.01	1.68	2.26	1.37	2.27	***	3.78	3.18	2.75	1.48
Russia	Mondy	RUA001	0.824	0.657	1.27	1.51	0.860	1.13	1.20	1.65	1.92	0.921	0.196	0.260	0.225	***	
	Listvyanka	RUA002	4.09	7.67	4.00	3.26	3.53	3.31	2.49	3.83	2.78	3.43	3.00	3.75	4.46	4.34	5.94
	Irkutsk	RUA003	11.9	11.3	13.8	9.04	10.2	8.80	8.10	11.2	12.2	7.03	6.72	9.03	9.93	11.0	10.3
	Primorskaya	RUA004	11.0	8.34	10.8	12.6	11.4	14.5	11.6	12.9	14.5	10.2	14.1	9.49	15.9	22.3	7.10
Thailand	Bangkok	THA001	22.4	22.6	24.0	33.2	14.4	26.7	25.6	17.8	30.7	18.3	25.3	***	25.0	28.7	*
	Samutprakarn	THA002	13.9	12.3	7.83	21.6	14.2	8.69	16.5	14.2	12.4	9.38	6.99	***	11.9	5.81	*
	Pathumthani	THA003	15.9	18.7	31.8	31.9	23.7	17.7	14.5	16.6	10.4	8.19	6.11	4.70	8.90	7.53	5.30
	Khanchanaburi	THA004	2.82	7.53	41.2	4.72	3.85	3.83	5.24	4.16	3.34	2.69	***	***	***	***	***
	Mae Hia	THA005	5.09	4.10	8.54	15.0	5.09	3.00	7.87	10.4	5.60	7.62					
	Sakaerat	THA008	3.50	2.73	4.13	2.75	3.66	9.32	8.83	7.70	39.4	63.5					
Vietnam	Hanoi	VNA001	29.0	26.3	26.9	31.2	40.9	46.5	37.4	72.5	76.6	102	130	60.9	194	54.2	142
	Hoa Binh	VNA002	28.7	22.0	21.0	33.8	17.3	16.2	18.7	43.7	38.2	26.5	93.8	55.5	36.6	46.2	24.3
	Cuc Phuong	VNA003	62.9	59.2	60.9	45.2	38.8	28.0	51.9	52.9	44.7	37.2	39.9	63.8	101	113	99.1
	Da Nang	VNA004	13.5	30.9	26.1	42.5	56.7	61.8	101	72.1	91.0	192	282	79.4	68.4	105	54.9
	Can Tho	VNA005					22.9	57.7	19.4	19.7	37.0	36.5	22.9	32.1	31.2	28.6	25.4
	Ho Chi Minh	VNA006					48.7	61.8	30.1	49.7	44.3	59.0	38.8	41.6	40.1	34.8	36.3
	Yen Bai	VNA007						23.9	36.5	55.2	38.6	43.2	88.8	31.4	39.3	39.3	36.6

Terms and abbreviations are given in Table 3.5.

Table 3.92 Annual Mg²⁺ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	1.33	1.55	1.98	1.50	2.54	2.82	1.84	1.94	***	***	***	***	***	***	***
China	Haifu	CNA003	8.75	6.98	6.94	8.44	9.92	5.85	7.22	4.96	4.52	3.68	2.84	2.89	2.90	4.64	2.48
	Jinyunshan	CNA004	5.64	5.20	5.85	4.99	6.52	4.17	4.73	6.01	3.13	3.12	3.14	3.25	2.72	3.63	1.99
	Shizhan	CNA005	5.04	6.55	1.36	24.0	7.34	5.49	0.819	6.45	6.06	3.08	4.35	1.03	8.63	3.79	2.52
	Jiwozi	CNA007	8.28	9.37	17.3	14.5	12.3	4.97	4.66	10.0	8.74	13.1	2.84	0.583	2.46	5.79	3.53
	Hongwen	CNA008	3.06	3.56	4.34	4.71	4.82	4.26	8.65	3.87	4.66	4.29	4.60	2.85	3.10	2.51	2.94
	Xiaoping	CNA009	2.88	3.39	4.46	7.97	4.98	3.54	3.96	1.88	1.78	2.06	2.27	1.62	2.44	2.49	2.39
	Xiang Zhou	CNA010	4.77	5.53	10.5	33.9	12.1	10.3	9.42	10.7	13.2	7.08	6.81	5.87	5.36	5.69	5.79
	Zhuxiandong	CNA011	5.30	7.74	***	***	***	14.0	12.2	5.82	21.5	8.67	12.4	8.36	7.88	6.62	5.70
	Wuzhishan	CNA013										3.44	1.12	1.57	1.45	0.556	0.846
	Lijiang	CNA014										2.33	2.62	0.759	0.786	0.622	1.55
Indonesia	Jakarta	IDA001	4.72	3.42	8.06	6.11	11.5	5.07	8.90	3.86	5.76	2.83	7.50	6.47	4.46	***	9.52
	Serpong	IDA002	4.40	2.59	1.80	8.97	9.31	6.84	8.96	8.01	9.36	9.74	6.11	7.93	8.84		
	Kototabang	IDA003	3.67	2.08	3.69	5.09	2.27	53.7	2.57	2.63	3.08	1.55	3.44	2.37	1.96	***	3.89
	Bandung	IDA004	11.6	8.85	6.61	14.8	15.3	11.3	9.45	7.30	6.86	8.16	6.71	4.99	5.47		
	Maros	IDA005	5.79	9.07	17.2	11.3	37.7	74.5	5.76	5.16	8.39	4.30	3.55	2.64	7.78	***	3.64
	Jembrana	IDA006										4.19	10.6	12.5	8.29	***	10.4
	Lombok	IDA007										6.65	11.2	8.56	22.6	***	7.75
Japan	Rishiri	JPA001	20.0	18.9	37.8	26.3	18.7	17.7	10.3	22.7	21.7	15.3	19.9	29.2	20.2	15.3	14.2
	Ochiishi	JPA002	31.0	15.1	26.6	51.0	9.28	16.9	18.0	21.3	9.84	6.35	8.65	25.9	*	*	*
	Tappi	JPA003	20.1	19.9	18.2	32.1	21.6	28.0	23.8	24.5	30.2						
	Sado-seki	JPA004	51.6	26.4	38.1	58.2	45.8	32.3	20.8	21.6	24.3	24.3	26.5	288	27.5	23.4	20.0
	Happo	JPA005	2.12	2.76	4.60	3.63	3.11	2.98	2.11	3.83	2.84	2.01	2.22	2.57	1.72	2.53	1.34
	Ijira	JPA006	6.22	5.19	7.27	5.70	6.00	6.40	4.94	5.38	7.17	4.64	5.89	9.11	10.4	7.20	6.26
	Oki	JPA007	69.9	85.2	53.4	78.3	63.9	50.8	58.5	54.8	60.4	20.6	38.9	72.3	*	*	*
	Banryu	JPA008	17.7	18.3	13.5	17.2	16.4	15.7	17.3	14.6	11.1						
	Yusuhara	JPA009	3.86	8.71	8.65	5.98	6.43	8.45	3.33	15.6	7.18	5.35	2.98	7.14	11.0	7.58	4.94
	Hedo	JPA010	77.2	40.9	136	41.5	38.2	63.0	42.5	69.2	54.7	44.2	52.9	354	47.4	74.2	*
	Ogasawara	JPA011	45.4	30.5	21.3	21.5	23.2	54.8	12.1	35.2	5.23	38.0	9.80	32.7	32.3	23.9	16.3
	Tokyo	JPA012	3.98	6.65	6.18	4.89	4.58	4.02	2.97	6.30	5.38	11.0	3.05	4.16	3.45	2.69	4.05
	Niigata-maki	JPA013										31.0	27.4	38.4	40.3	36.9	8.70
	Tsushima	JPA014										8.05	8.39	9.18	17.1	8.11	10.4
Lao PDR	Vientiane	LAA001	***	***	***	***	***	0.564	0.198	*	*	*	***	***	***	1.60	*
Malaysia	Petaling Jaya	MYA001	2.46	2.09	1.69	2.45	4.07	3.46	2.81	1.77	2.79	***	3.31	2.80	2.53	2.89	4.53
	Tanah Rata	MYA002	0.210	0.869	0.528	0.835	0.964	0.636	0.647	0.327	0.673	***	3.34	***	0.703	0.702	0.855
	Danum Valley	MYA003	3.51	2.05	0.830	1.38	1.57	1.89	0.956	1.12	3.25	***	4.80	2.61	2.73	1.54	9.07
	Kuching	MYA004	2.12	3.45	1.04	2.42	4.10	5.35	5.37	2.75	2.31	***	6.09	2.64	2.89	1.86	1.76
	Gunung Brinchang	MYA005											0.189	***	***	***	***
Mongolia	Ulaanbaatar	MNA001	0.455	1.51	***	0.576	***	***	0.968	0.489	0.426	0.125					
	Terelj	MNA002	0.718	1.06	***	0.451	***	***	0.233	0.139	0.218	***	1.05	0.600	*	0.409	0.235
	Khan-Uul	MNA004											0.524	0.591	*	0.500	0.650
Myanmar	Yangon	MMA001	4.11	9.52	16.9	33.1	9.79	14.3	9.98	9.75	13.9	11.8	6.20	61.3	11.1	8.10	6.09
Philippines	Manila Observatory	PHA001	24.4	26.1	29.1	16.0	12.2	16.0	13.3	***	***	9.41	8.21	3.59	37.9	7.42	6.99
	Los Baños	PHA002	17.0	11.3	8.96	7.77	6.88	6.86	7.28	***	***	***	***	***	8.55	5.48	3.20
	Mt.Sto.Tomas	PHA003	12.1	7.41	16.6	7.41	4.92	21.0	12.3	***	***	***	***	***	0.336	***	5.83
Republic of Korea	Ganghwa	KRA001	5.71	4.70	4.11	2.96	1.39	2.12	0.994	1.37	0.683	8.13	***	3.68	3.17	2.50	2.77
	Jeju	KRA002	6.91	11.3	41.4	16.3	9.38	8.60	42.2	15.3	18.7	2.90	***	29.6	19.5	37.4	16.2
	Imsil	KRA003	7.69	3.02	4.27	2.28	1.95	2.38	1.30	1.45	0.759	0.874	***	2.76	2.66	1.50	0.978
Russia	Mondy	RUA001	0.163	0.191	0.427	0.290	0.146	0.292	0.192	0.334	0.386	0.173	0.0321	0.0725	0.0452	***	
	Listvyanka	RUA002	0.970	1.49	0.867	0.810	0.662	0.689	0.604	0.993	0.663	0.974	0.992	1.29	1.30	1.52	2.10
	Irkutsk	RUA003	2.53	2.40	2.88	1.77	1.43	1.60	1.91	2.36	2.35	1.69	1.86	2.74	2.52	3.67	2.54
	Primorskaya	RUA004	2.88	2.66	4.08	3.53	3.99	6.49	5.09	7.57	9.44	7.83	7.05	4.04	5.85	7.19	3.57
Thailand	Bangkok	THA001	3.07	2.72	2.43	3.50	2.40	3.02	4.04	2.50	3.43	1.70	4.01	***	3.29	2.89	*
	Samutprakarn	THA002	4.14	2.52	1.46	4.97	3.09	2.26	3.24	2.83	3.14	1.71	2.48	***	2.94	1.51	*
	Pathumthani	THA003	2.43	2.46	4.91	3.06	2.03	2.02	2.25	1.92	1.51	1.59	1.45	1.04	2.36	1.14	1.12
	Khanchanaburi	THA004	0.935	2.47	6.59	1.55	1.30	1.16	1.84	1.35	1.43	0.647	***	***	***	***	***
	Mae Hia	THA005	0.526	0.367	0.936	2.15	1.01	1.05	1.15	1.69	0.537	1.07					
	Sakaerat	THA008	1.14	0.410	0.477	0.289	0.557	3.01	4.60	2.97	9.23	10.6					
Vietnam	Hanoi	VNA001	7.02	7.41	3.87	5.42	5.83	5.85	7.28	15.1	12.3	9.77	13.3	11.1	24.5	11.9	4.35
	Hoa Binh	VNA002	7.61	4.21	4.15	5.40	3.54	3.95	3.63	3.73	8.70	3.32	11.1	9.47	5.21	10.4	3.64
	Cuc Phuong	VNA003	7.30	8.86	14.3	23.1	8.30	7.94	16.1	18.6	25.6	21.2	21.1	26.6	26.2	22.5	20.4
	Da Nang	VNA004	14.4	34.3	15.4	43.4	23.9	16.6	24.6	25.4	27.6	61.3	51.1	44.8	64.6	77.9	37.0
	Can Tho	VNA005					8.19	20.2	11.4	10.2	25.7	24.1	13.0	17.8	20.5	15.5	14.5
	Ho Chi Minh	VNA006					16.7	25.4	17.6	31.0	25.2	29.9	23.6	25.4	23.2	21.0	21.8
	Yen Bai	VNA007						4.06	5.88	3.99	6.32	3.71	15.8	4.92	5.02	9.01	1.80

Terms and abbreviations are given in Table 3.5.

Table 3.93 Annual H⁺ deposition amount from 2010 to 2024unit: mmol m⁻² y⁻¹

Country	Name of sites	Code	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	KHA001	1.98	1.41	1.12	0.890	0.969	0.791	0.496	0.920	***	***	***	***	***	***	***
China	Haifu	CNA003	69.3	53.4	58.1	30.8	17.1	4.65	0.832	1.79	5.70	4.56	4.36	3.88	1.78	1.21	0.807
	Jinyunshan	CNA004	112	77.1	82.0	71.4	61.3	25.7	12.9	8.96	13.2	18.2	21.5	13.7	7.17	8.07	5.70
	Shizhan	CNA005	0.0965	0.352	0.217	0.0514	0.154	0.131	0.0852	0.148	0.0803	0.0697	0.0528	0.0616	0.0336	0.0787	0.107
	Jiwozi	CNA007	3.36	1.10	0.0295	0.412	0.0591	0.0556	0.0875	0.103	0.0895	0.102	0.121	0.537	0.348	0.826	0.127
	Hongwen	CNA008	40.7	19.0	28.6	18.5	9.48	12.9	21.5	2.46	2.25	0.877	0.124	2.05	4.78	4.89	5.50
	Xiaoping	CNA009	40.2	23.4	20.3	19.6	26.7	17.6	34.2	0.856	12.2	18.9	13.7	10.1	14.3	9.90	2.82
	Xiang Zhou	CNA010	26.2	11.1	11.7	14.1	16.6	3.96	15.9	20.0	17.9	22.4	14.5	14.9	13.0	7.10	11.4
	Zhuxiandong	CNA011	21.0	19.1	***	***	***	5.25	16.2	15.4	14.7	20.1	14.4	8.55	13.2	11.7	9.88
	Wuzhishan	CNA013										1.71	1.07	0.720	0.768	0.457	0.549
	Lijiang	CNA014										0.269	0.374	0.148	0.117	0.359	0.152
Indonesia	Jakarta	IDA001	39.5	27.9	47.4	39.3	62.2	40.5	22.3	16.8	34.8	22.1	19.4	26.7	28.2	***	17.5
	Serpong	IDA002	25.0	16.4	11.1	20.1	20.8	20.1	19.2	20.3	12.9	23.1	23.1	7.59	20.3		
	Kototabang	IDA003	37.9	20.2	25.7	22.5	38.0	30.9	10.9	15.3	14.2	8.99	13.3	6.58	5.96	***	45.1
	Bandung	IDA004	20.8	6.12	7.25	9.42	12.5	8.87	22.4	10.8	3.79	1.61	1.40	5.72	9.61		
	Maros	IDA005	16.4	16.1	5.90	13.7	16.2	14.3	11.4	11.2	14.1	19.1	6.75	0.910	4.41	***	8.63
	Jembrana	IDA006										6.86	15.4	31.4	31.9	***	39.2
	Lombok	IDA007										4.11	6.61	10.7	32.3	***	34.7
Japan	Rishiri	JPA001	20.1	24.8	23.6	24.8	19.2	18.4	16.4	16.2	14.8	10.9	12.7	9.26	9.70	10.2	8.86
	Ochiishi	JPA002	16.0	10.7	13.3	9.94	6.55	8.23	7.28	6.21	8.18	6.34	4.95	10.3	*	*	*
	Tappi	JPA003	31.7	28.2	24.1	17.1	26.1	15.7	18.5	20.4	18.1						
	Sado-seki	JPA004	27.0	28.8	24.1	28.7	27.8	18.9	13.9	16.0	17.1	12.1	18.3	28.4	8.24	11.7	7.30
	Happo	JPA005	21.0	28.2	26.6	26.7	24.0	18.3	20.0	24.9	17.4	18.0	14.3	14.8	14.1	15.9	18.8
	Ijira	JPA006	66.6	55.2	58.7	48.8	58.8	62.7	55.2	53.5	45.1	45.4	39.7	36.7	42.1	59.1	53.1
	Oki	JPA007	31.7	28.8	34.2	34.3	23.4	20.3	20.3	14.8	17.8	16.8	21.9	12.8	*	*	*
	Banryu	JPA008	29.2	31.3	40.5	46.2	42.3	32.4	28.2	25.2	22.5						
	Yusuhara	JPA009	40.1	39.7	51.3	41.4	46.5	41.2	38.9	80.7	40.3	33.6	32.5	20.1	26.1	29.5	24.6
	Hedo	JPA010	16.8	22.1	21.3	17.6	23.3	12.6	12.2	16.1	21.0	27.0	16.6	56.9	17.3	23.8	*
	Ogasawara	JPA011	10.5	6.46	7.28	7.15	12.8	9.35	9.21	10.1	5.72	11.0	17.7	9.72	13.3	15.2	7.94
	Tokyo	JPA012	18.6	20.7	23.5	14.2	26.7	26.8	18.4	16.3	15.3	16.4	11.1	12.3	9.86	9.59	15.1
	Niigata-maki	JPA013										20.8	23.8	17.9	16.5	17.3	4.48
	Tsushima	JPA014										25.1	28.6	28.9	11.4	24.7	18.6
Lao PDR	Vientiane	LAA001	***	***	0.463	***	0.366	1.06	0.122	*	*	*	***	***	***	0.294	11.7
Malaysia	Petaling Jaya	MYA001	191	250	210	136	142	153	189	96.6	122	***	83.4	78.3	124	105	104
	Tanah Rata	MYA002	21.2	32.1	31.0	31.1	40.3	51.4	33.3	41.9	35.7	***	36.4	***	25.4	24.4	30.5
	Danum Valley	MYA003	14.2	23.5	19.5	17.1	13.9	12.4	16.6	18.0	12.4	***	13.8	21.2	20.1	11.0	20.0
	Kuching	MYA004	24.4	17.3	18.4	21.2	16.8	21.6	40.4	23.4	21.4	***	10.3	20.0	10.4	14.6	21.7
	Gunung Brinchang	MYA005												3.20	***	***	***
Mongolia	Ulaanbaatar	MNA001	0.202	0.595	0.224	0.161	***	0.0569	1.52	0.471	0.295	0.110					
	Terelj	MNA002	0.316	0.786	0.211	1.11	***	0.315	0.689	0.962	0.233	***	0.0659	0.381	0.820	0.578	0.133
	Khan-Uul	MNA004											0.182	0.369	0.829	0.711	0.272
Myanmar	Yangon	MMA001	0.875	1.09	0.831	0.948	0.571	0.526	0.387	0.575	0.777	0.871	1.23	0.378	0.310	0.383	0.675
Philippines	Manila Observatory	PHA001	6.01	8.29	26.9	10.0	1.93	1.32	7.68	***	***	9.33	6.31	25.6	33.0	52.0	15.7
	Los Baños	PHA002	2.73	6.43	4.61	3.37	3.34	0.791	33.9	***	***	***	***	***	32.0	65.5	23.8
	Mt.Sto.Tomas	PHA003	0.726	20.6	6.41	22.7	2.64	6.72	1.52	***	***	***	***	***	1.39	***	4.18
Republic of Korea	Ganghwa	KRA001	61.2	33.9	18.3	23.6	5.72	11.9	13.7	21.4	8.27	10.5	***	3.85	3.18	3.47	5.54
	Jeju	KRA002	9.21	7.32	5.93	2.66	1.93	3.12	8.90	3.76	1.41	2.00	***	2.42	0.765	2.54	2.84
	Imsil	KRA003	22.1	8.09	10.9	7.33	5.69	5.78	2.64	3.83	2.34	5.04	***	0.342	0.185	3.53	0.711
Russia	Mondy	RUA001	0.253	0.213	0.250	1.60	0.573	0.487	0.957	0.928	2.35	0.717	0.232	0.137	0.227	***	
	Listvyanka	RUA002	5.74	9.00	5.73	4.41	3.53	4.91	3.94	5.38	4.03	8.00	6.52	7.88	5.03	7.24	3.49
	Irkutsk	RUA003	2.78	3.13	5.15	2.71	3.35	1.79	5.68	5.73	6.17	6.14	6.77	6.44	2.59	2.77	5.88
	Primorskaya	RUA004	7.23	14.6	7.88	6.36	2.19	7.98	3.68	1.31	1.53	3.21	0.800	2.01	1.33	2.36	1.99
Thailand	Bangkok	THA001	17.2	19.5	3.74	3.35	0.0953	8.10	4.75	1.72	1.03	0.543	2.43	***	2.98	3.68	2.43
	Samutprakarn	THA002	9.06	2.66	0.647	1.18	0.307	3.66	6.46	2.49	4.43	1.58	0.956	***	3.41	3.17	1.14
	Pathumthani	THA003	10.3	15.6	5.62	4.60	3.27	5.48	4.29	6.21	10.0	2.79	2.69	2.87	6.18	2.15	1.21
	Khanchanaburi	THA004	3.30	6.24	2.30	7.08	1.58	3.76	1.10	2.02	1.72	0.544	***	***	***	***	***
	Mae Hia	THA005	0.789	8.29	0.876	1.30	0.278	1.70	1.85	3.42	2.51	5.31					
	Sakaerat	THA008	29.0	15.0	9.66	8.23	6.42	12.8	5.92	6.50	8.21	7.11					
Vietnam	Hanoi	VNA001	1.44	9.13	4.29	4.29	3.04	0.826	4.19	0.604	5.77	14.5	1.02	4.55	7.82	4.91	12.4
	Hoa Binh	VNA002	5.84	6.42	4.50	1.83	4.69	8.20	3.32	11.4	15.4	7.55	4.04	7.65	7.75	2.18	8.83
	Cuc Phuong	VNA003	9.73	16.8	7.42	7.16	5.10	6.99	3.03	18.8	8.99	5.52	11.0	1.42	6.05	1.93	2.48
	Da Nang	VNA004	13.0	38.0	6.16	6.07	6.69	1.98	2.99	3.06	4.27	1.52	2.18	4.19	5.23	5.92	4.25
	Can Tho	VNA005					1.01	3.71	2.39	2.05	3.50	2.79	2.34	2.77	2.65	2.60	2.20
	Ho Chi Minh	VNA006					2.72	1.10	4.46	2.97	1.92	2.45	2.74	1.91	1.82	2.10	1.86
	Yen Bai	VNA007						8.93	12.0	15.3	8.36	24.4	2.87	3.66	15.7	1.57	33.6

Terms and abbreviations are given in Table 3.5.

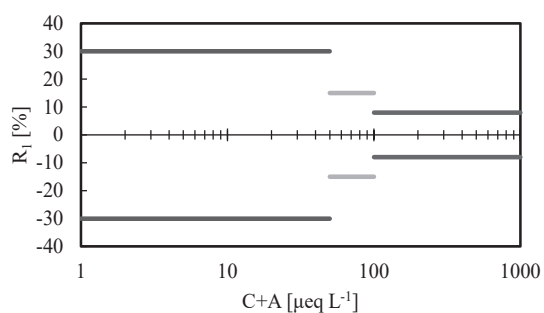


Fig. 3.2 a) Phnom Penh Ion Balance (R_1)

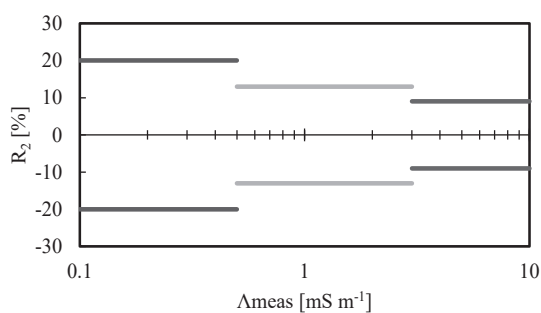


Fig. 3.2 b) Phnom Penh Conductivity Agreement (R_2)

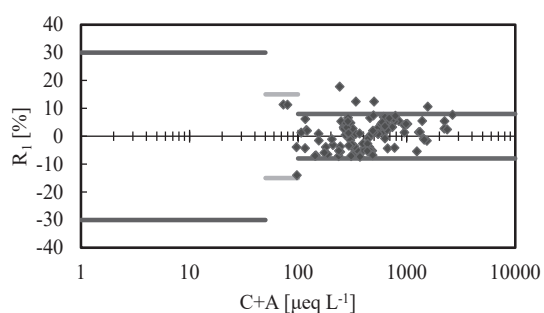


Fig. 3.3 a) Haifu Ion Balance (R_1)

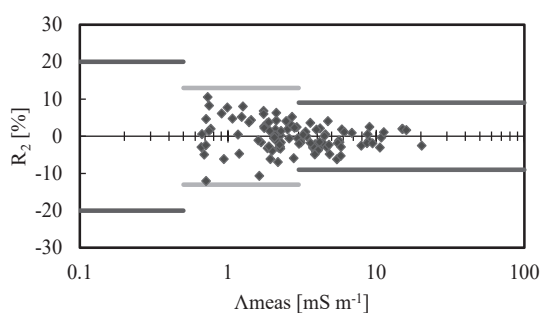


Fig. 3.3 b) Haifu Conductivity Agreement (R_2)

All of R_1 plots were calculated including HCO_3^- and F^- All of R_2 plots were calculated including HCO_3^- and F^-

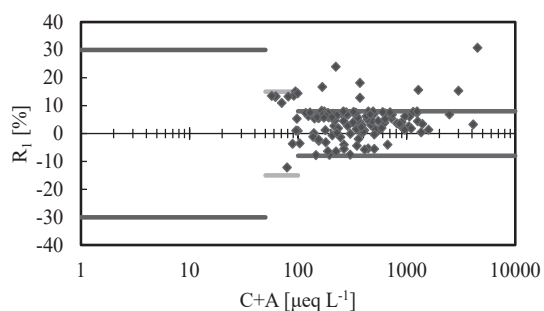


Fig. 3.4 a) Jinyunshan Ion Balance (R_1)

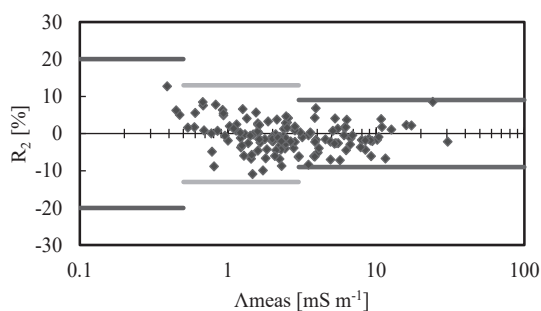


Fig. 3.4 b) Jinyunshan Conductivity Agreement (R_2)

All of R_1 plots were calculated including HCO_3^- and F^- All of R_2 plots were calculated including HCO_3^- and F^-

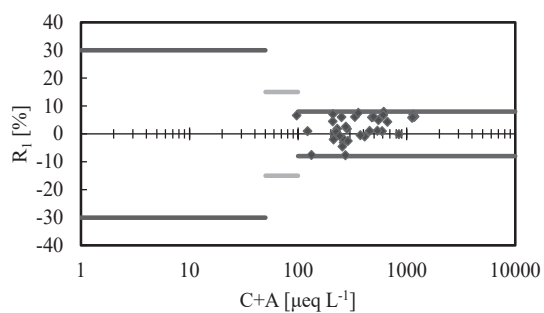


Fig. 3.5 a) Shizhan Ion Balance (R_1)

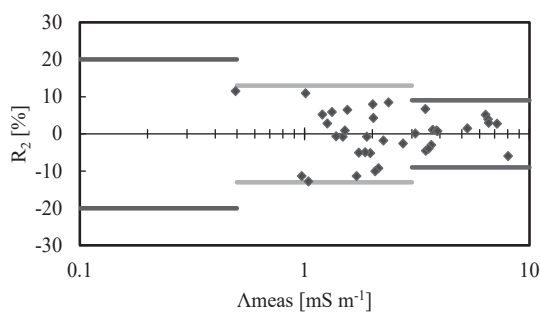


Fig. 3.5 b) Shizhan Conductivity Agreement (R_2)

All of R_1 plots were calculated including HCO_3^- and F^- All of R_2 plots were calculated including HCO_3^- and F^-

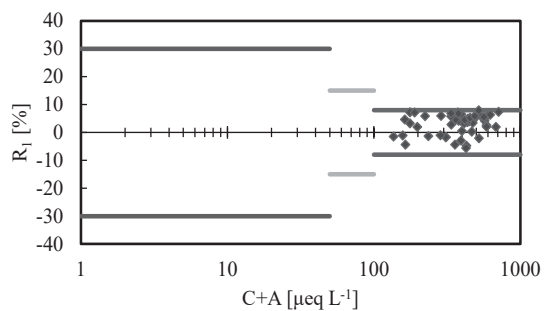


Fig. 3.6 a) Jiwozi Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- and F^-

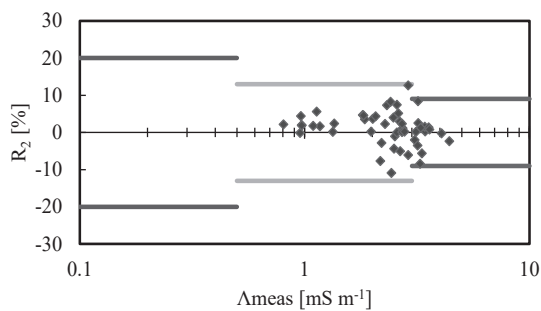


Fig. 3.6 b) Jiwozi Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^- and F^-

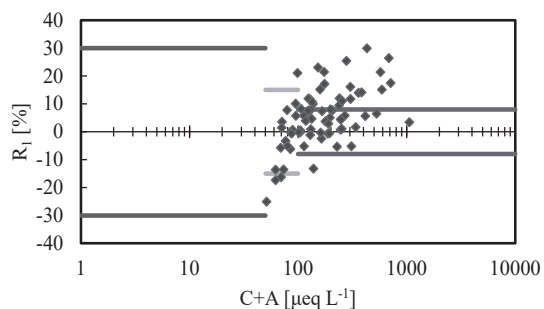


Fig. 3.7 a) Hongwen Ion Balance (R_1)

All of R_1 plots were calculated including F^-

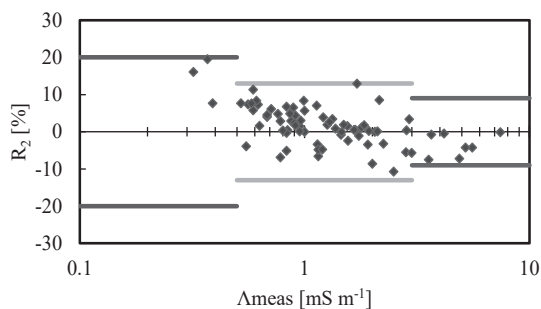


Fig. 3.7 b) Hongwen Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

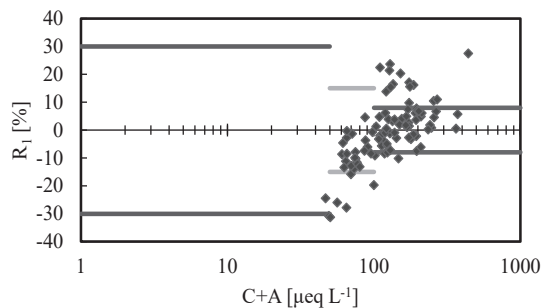


Fig. 3.8 a) Xiaoping Ion Balance (R_1)

All of R_1 plots were calculated including F^-

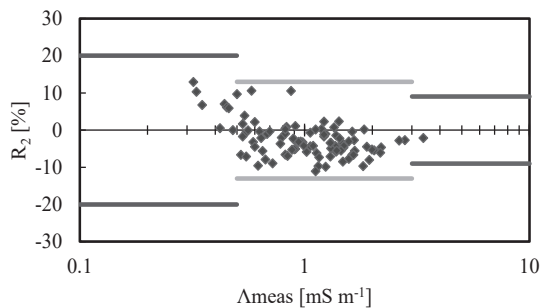


Fig. 3.8 b) Xiaoping Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

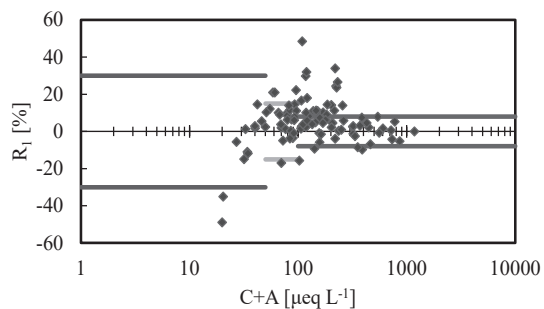


Fig. 3.9 a) Xiang Zhou Ion Balance (R_1)

All of R_1 plots were calculated including F^-

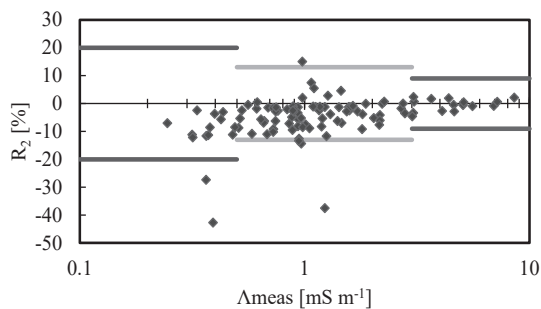


Fig. 3.9 b) Xiang Zhou Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

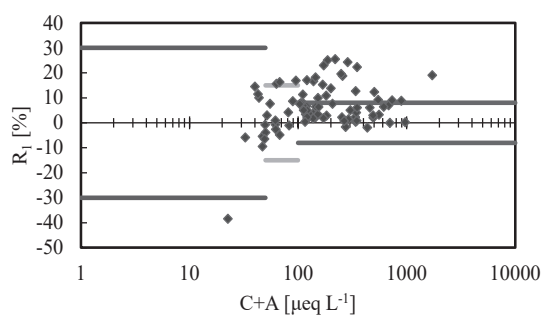


Fig. 3.10 a) Zhuxiandong Ion Balance (R_1)

All of R_1 plots were calculated including F^-

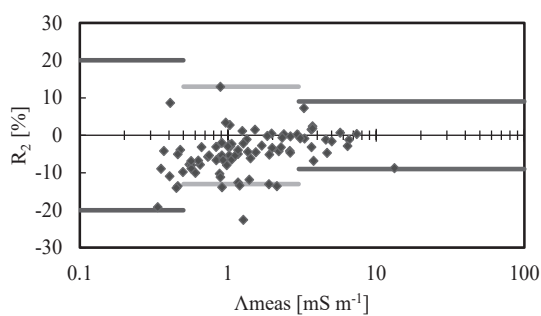


Fig. 3.10 b) Zhuxiandong Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

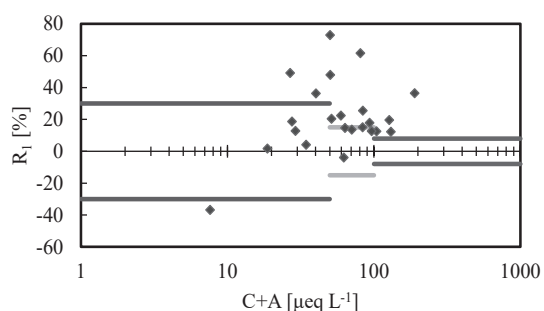


Fig. 3.11 a) Wuzhishan Ion Balance (R_1)

All of R_1 plots were calculated including F^-

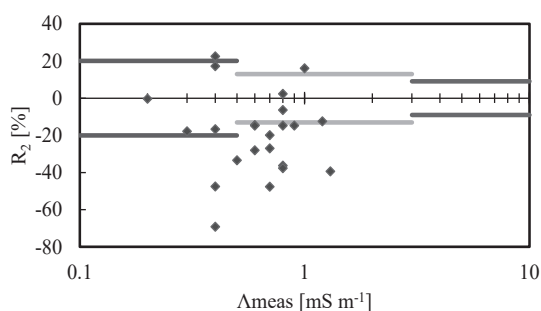


Fig. 3.11 b) Wuzhishan Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

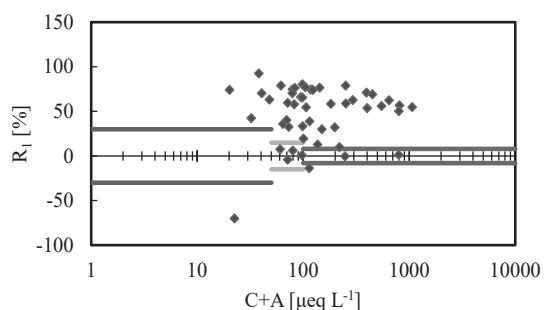


Fig. 3.12 a) Lijiang Ion Balance (R_1)

All of R_1 plots were calculated including F^-

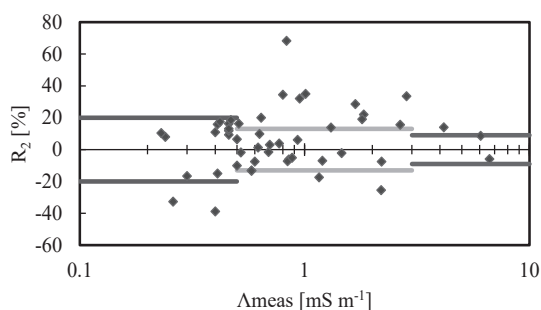


Fig. 3.12 b) Lijiang Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

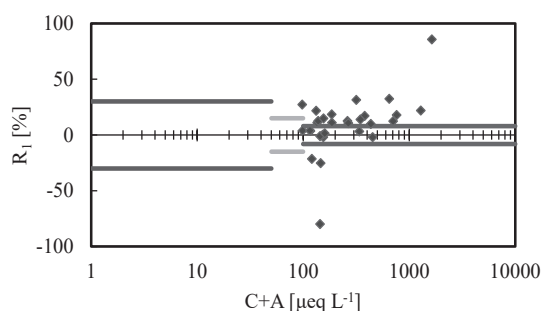


Fig. 3.13 a) Jakarta Ion Balance (R_1)

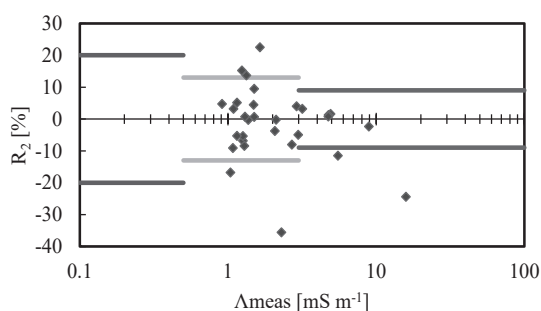


Fig. 3.13 b) Jakarta Conductivity Agreement (R_2)

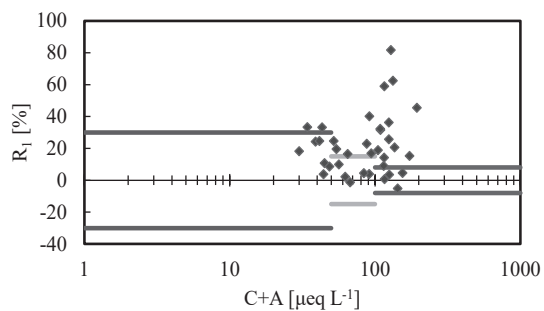


Fig. 3.14 a) Kototabang Ion Balance (R_1)

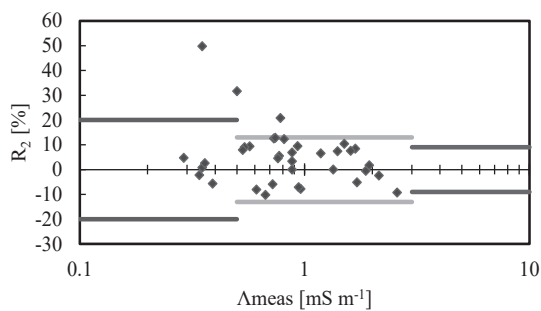


Fig. 3.14 b) Kototabang Conductivity Agreement (R_2)

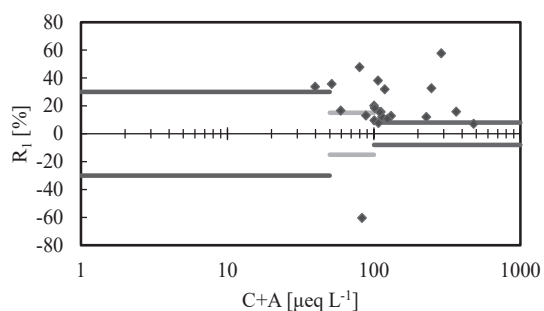


Fig. 3.15 a) Maros Ion Balance (R_1)

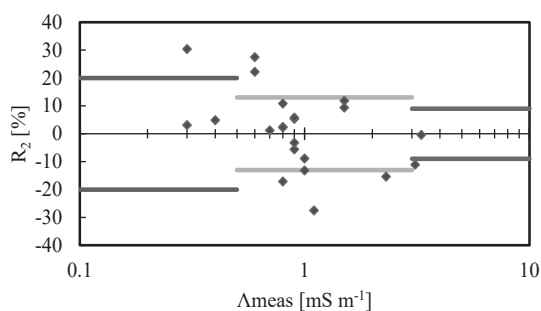


Fig. 3.15 b) Maros Conductivity Agreement (R_2)

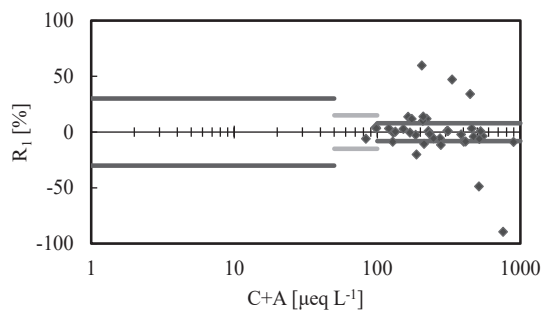


Fig. 3.16 a) Jembrana Ion Balance (R_1)

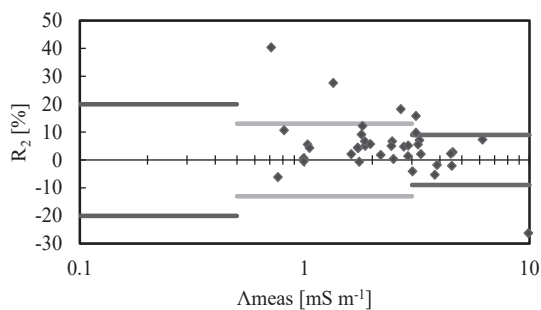


Fig. 3.16 b) Jembrana Conductivity Agreement (R_2)

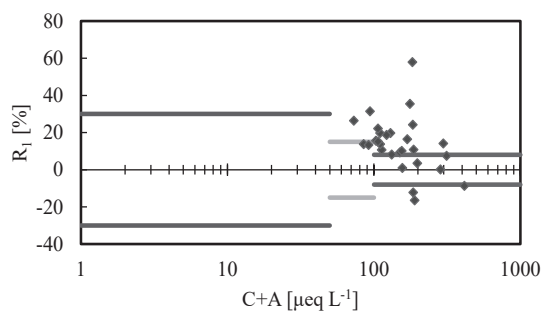


Fig. 3.17 a) Lombok Ion Balance (R_1)

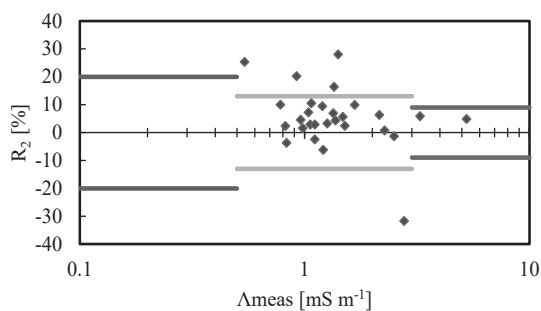


Fig. 3.17 b) Lombok Conductivity Agreement (R_2)

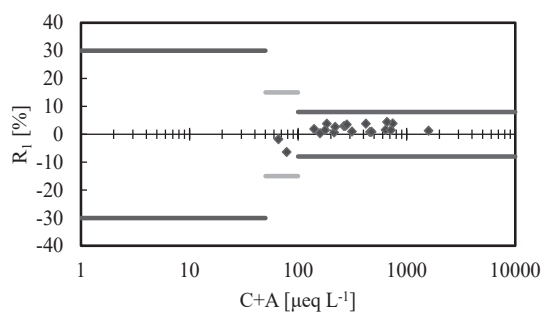


Fig. 3.18 a) Rishiri Ion Balance (R_1)

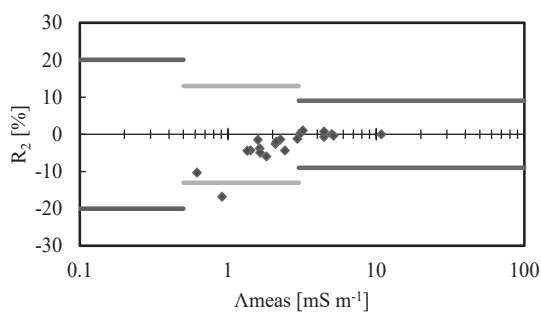


Fig. 3.18 b) Rishiri Conductivity Agreement (R_2)

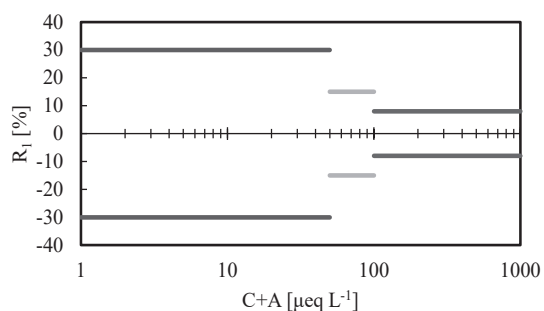


Fig. 3.19 a) Ochiishi Ion Balance (R_1)

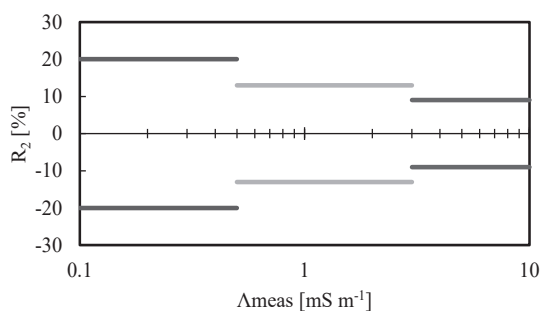


Fig. 3.19 b) Ochiishi Conductivity Agreement (R_2)

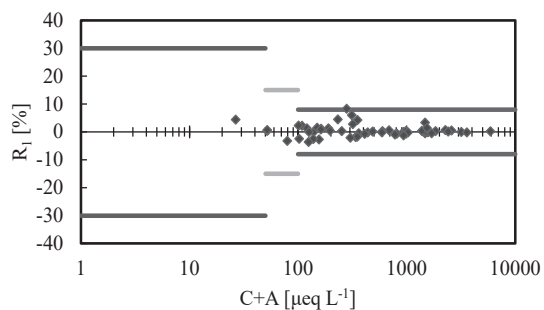


Fig. 3.20 a) Sado-seki Ion Balance (R_1)

All of R_1 plots were calculated including F^- , Br^- , NO_2^- , PO_4^{3-}

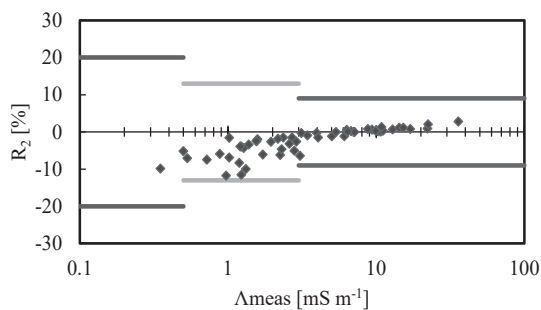


Fig. 3.20 b) Sado-seki Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^- , Br^- , NO_2^- , PO_4^{3-}

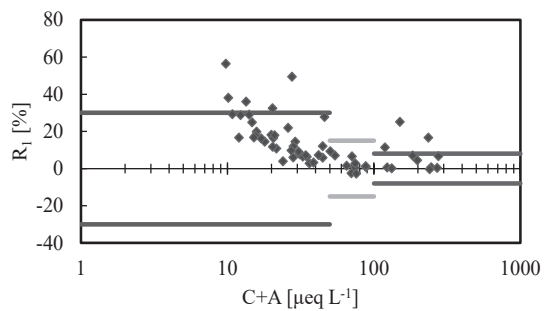


Fig. 3.21 a) Happo Ion Balance (R_1)

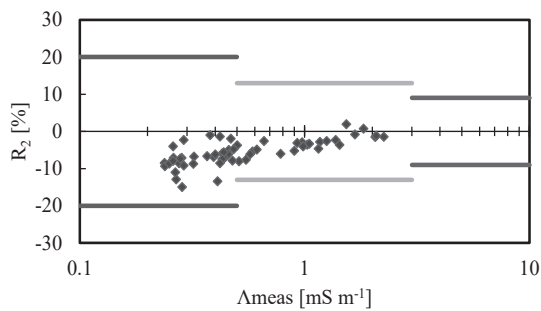


Fig. 3.21 b) Happo Conductivity Agreement (R_2)

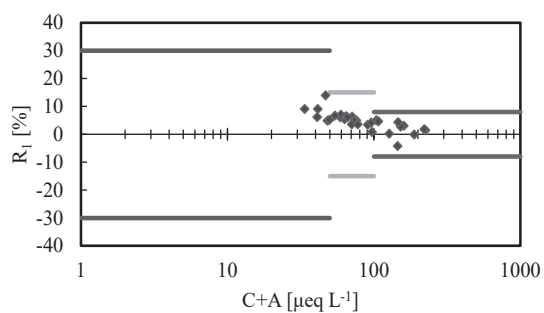


Fig. 3.22 a) Ijira Ion Balance (R_1)

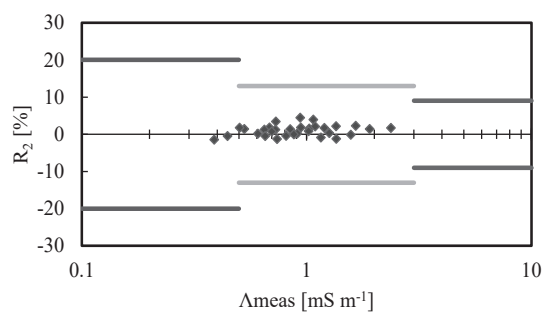


Fig. 3.22 b) Ijira Conductivity Agreement (R_2)

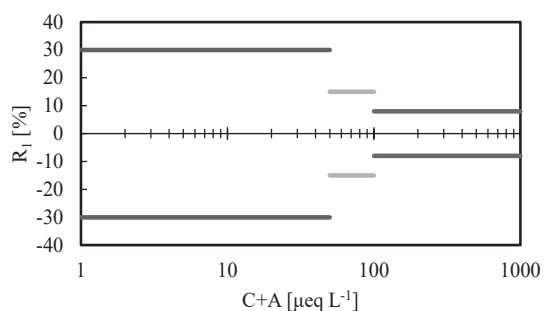


Fig. 3.23 a) Oki Ion Balance (R_1)

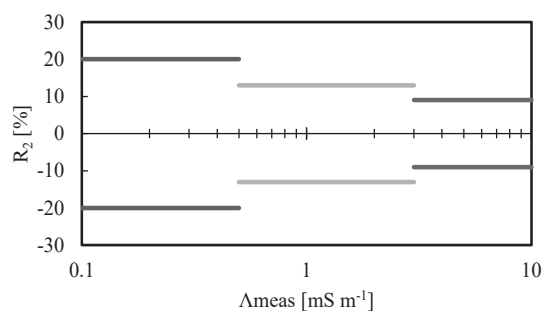


Fig. 3.23 b) Oki Conductivity Agreement (R_2)

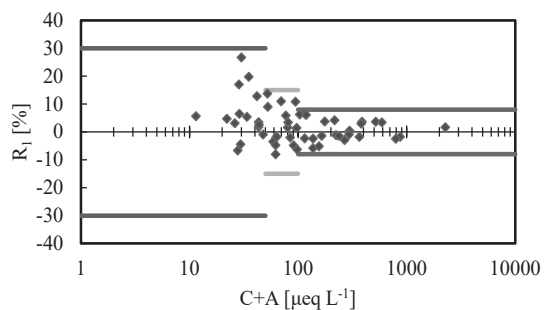


Fig. 3.24 a) Yusuhara Ion Balance (R_1)

All of R_1 plots were calculated including F^- , NO_2^- and PO_4^{3-}

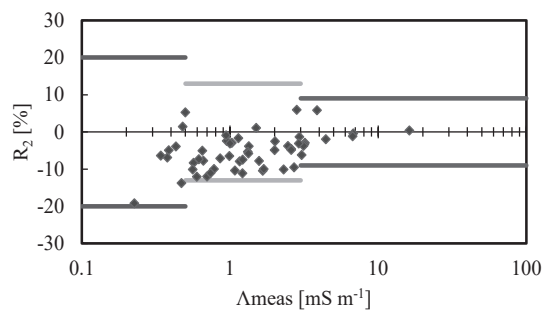


Fig. 3.24 b) Yusuhara Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^- , NO_2^- and PO_4^{3-}

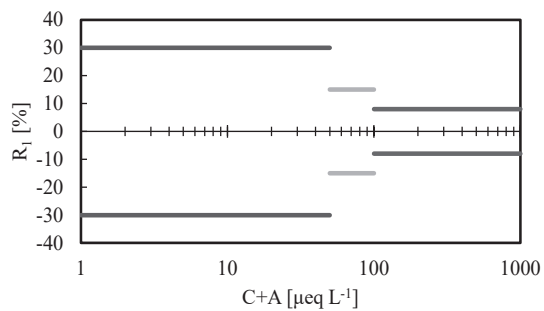


Fig. 3.25 a) Hedo Ion Balance (R_1)

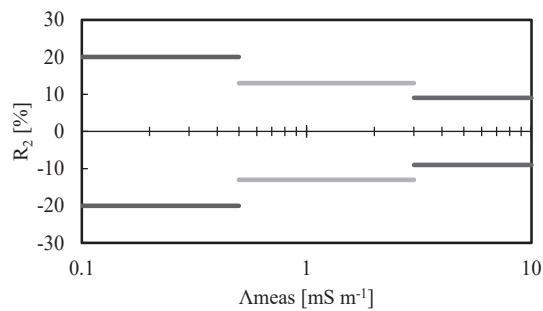


Fig. 3.25 b) Hedo Conductivity Agreement (R_2)

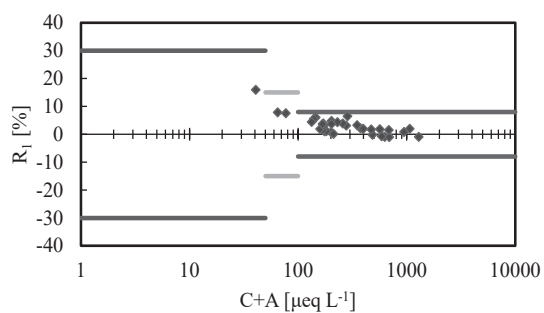


Fig. 3.26 a) Ogasawara Ion Balance (R_1)

All of R_1 plots were calculated including NO_2^-

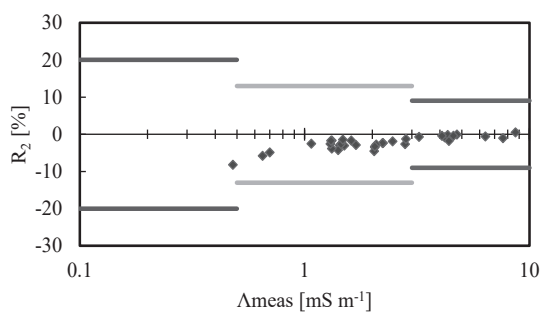


Fig. 3.26 b) Ogasawara Conductivity Agreement (R_2)

All of R_2 plots were calculated including NO_2^-

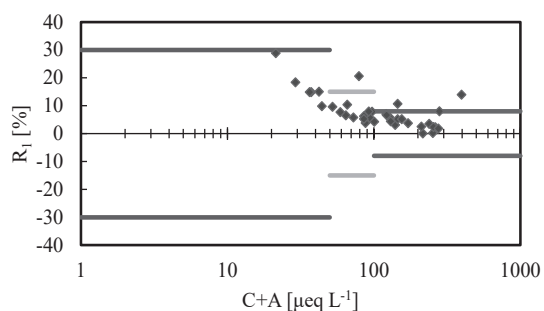


Fig. 3.27 a) Tokyo Ion Balance (R_1)

All of R_1 plots were calculated including NO_2^-

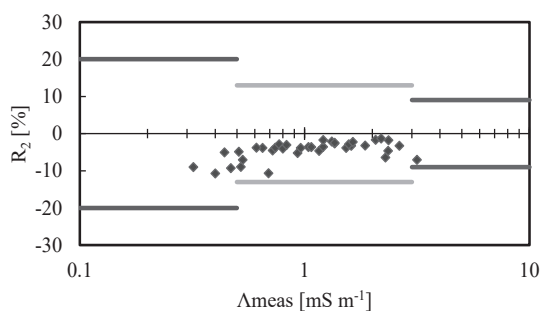


Fig. 3.27 b) Tokyo Conductivity Agreement (R_2)

All of R_2 plots were calculated including NO_2^-

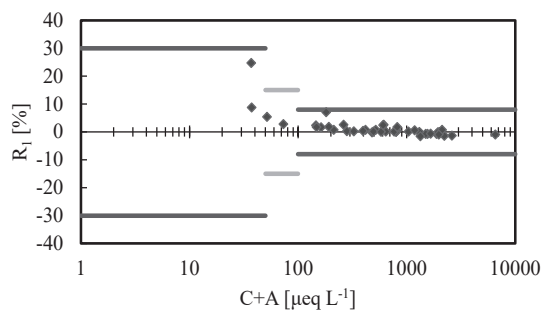


Fig. 3.28 a) Niigata-maki Ion Balance (R_1)

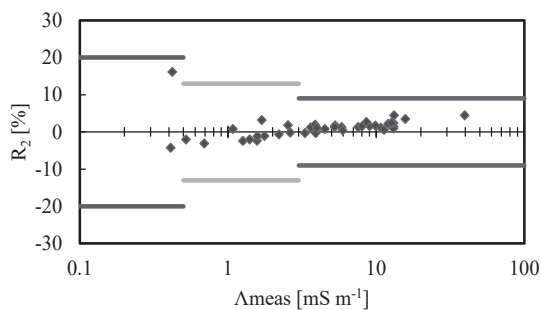


**Fig. 3.28 b) Niigata-maki
Conductivity Agreement (R_2)**

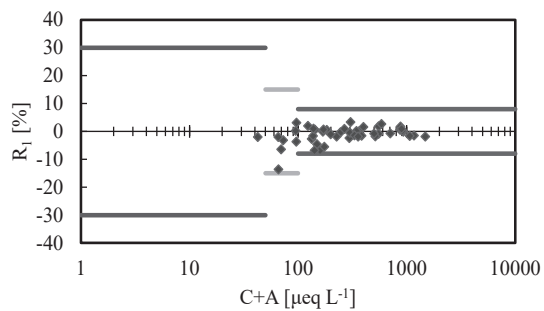


Fig. 3.29 a) Tsushima Ion Balance (R_1)

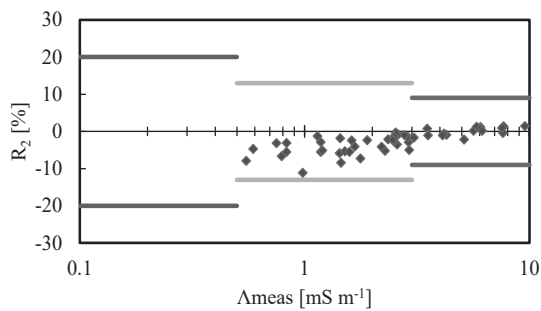


Fig. 3.29 b) Tsushima Conductivity Agreement (R_2)

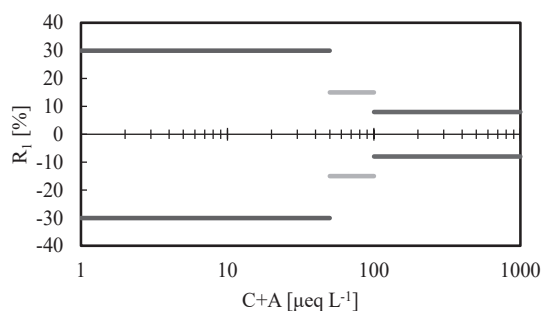


Fig. 3.30 a) Vientiane Ion Balance (R_1)

All of R_1 plots were calculated including F^- , Br^- , NO_2^- , PO_4^{3-}

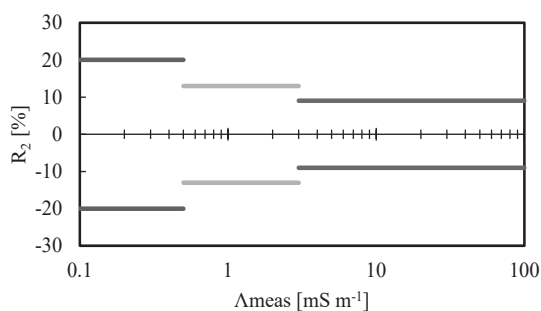


Fig. 3.30 b) Vientiane Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^- , Br^- , NO_2^- , PO_4^{3-}

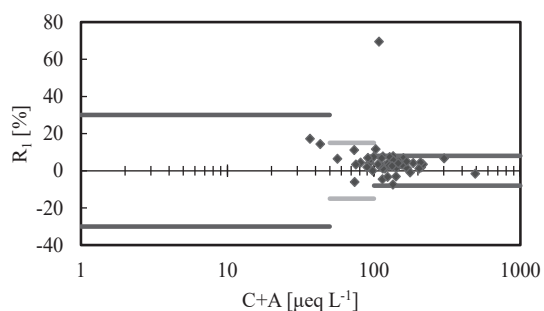


Fig. 3.31 a) Petaling Jaya Ion Balance (R_1)

All of R_1 plots were calculated including F^- , Formic, Acetic and Oxalic acid

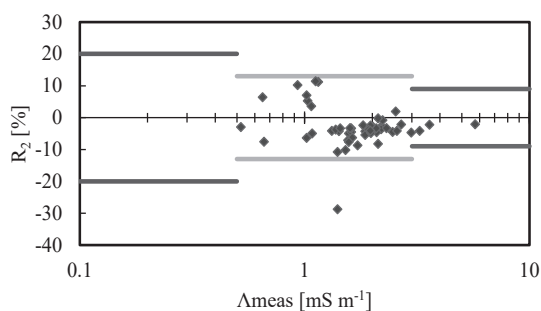


Fig. 3.31 b) Petaling Jaya

Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^- , Formic, Acetic and Oxalic acid

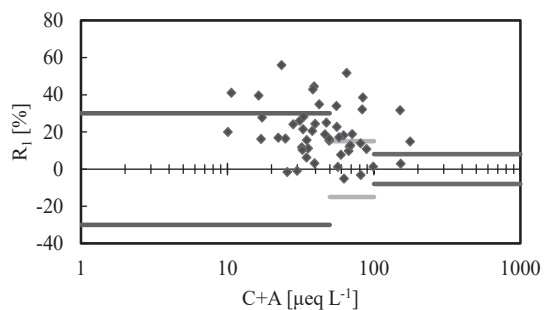


Fig. 3.32 a) Tanah Rata Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- , F^- , Formic, Acetic and Oxalic acid

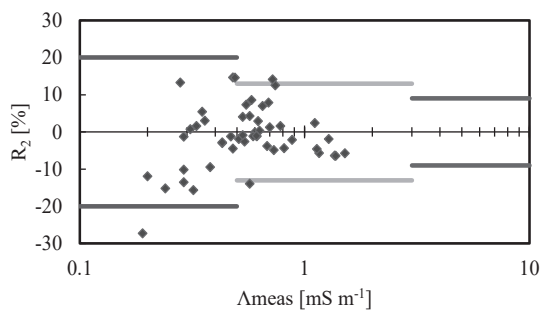


Fig. 3.32 b) Tanah Rata Conductivity Agreement (R_2)

Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^- , F^- , Formic, Acetic and Oxalic acid

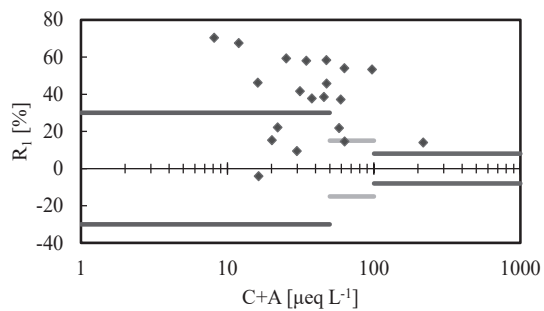


Fig. 3.33 a) Danum Valley Ion Balance (R_1)

All of R_1 plots were calculated including F^- , Formic, Acetic and Oxalic acid

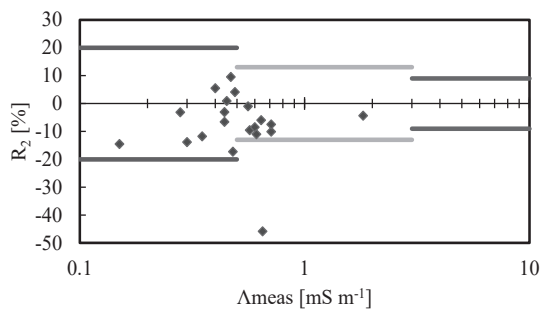


Fig. 3.33 b) Danum Valley

Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^- , Formic, Acetic and Oxalic acid

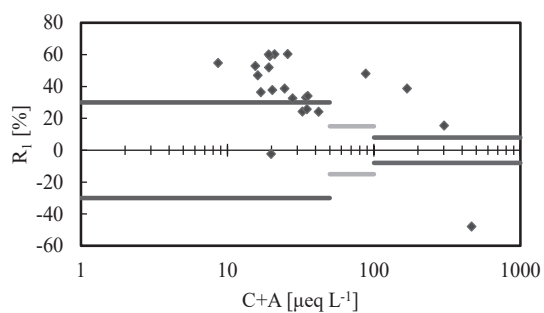


Fig. 3.34 a) Kuching Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- , F^- , Formic, Acetic and Oxalic acid

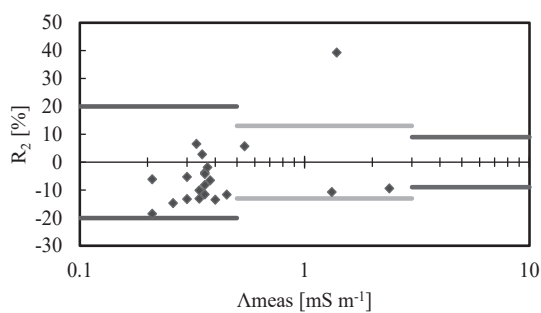


Fig. 3.34 b) Kuching Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^- , F^- , Formic, Acetic and Oxalic acid

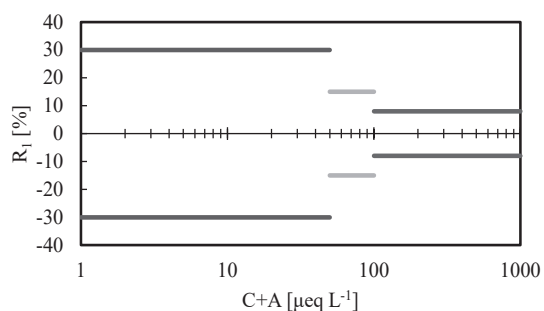


Fig. 3.35 a) Gunung Brinchang Ion Balance (R_1)

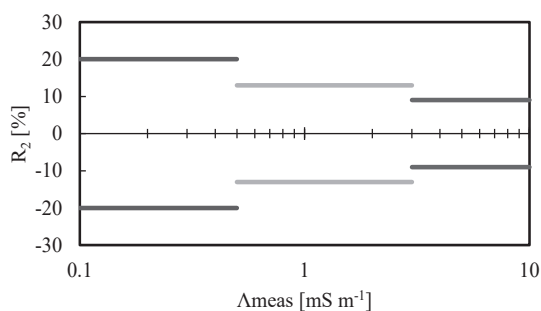


Fig. 3.35 b) Gunung Brinchang Conductivity Agreement (R_2)

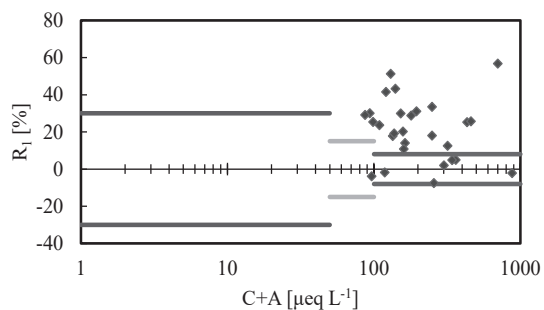


Fig. 3.36 a) Khan-Uul Ion Balance (R_1)

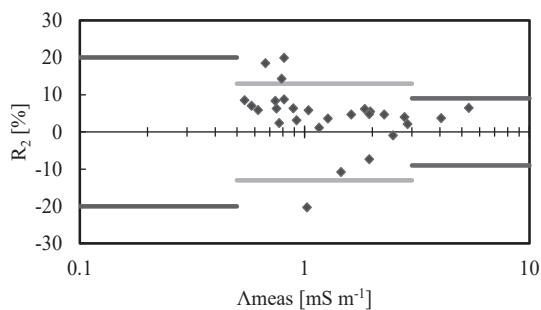


Fig. 3.36 b) Khan-Uul Conductivity Agreement (R_2)

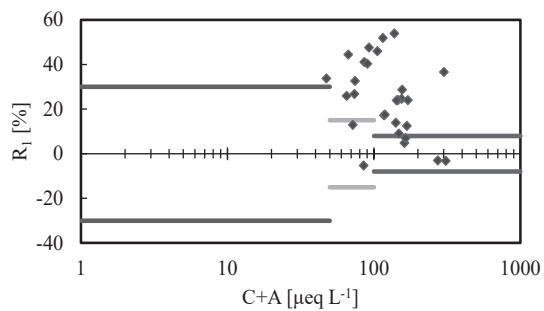


Fig. 3.37 a) Terelj Ion Balance (R_1)

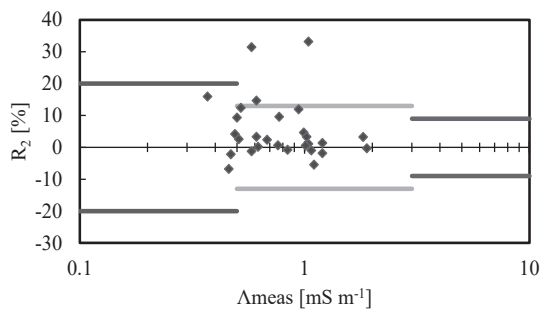


Fig. 3.37 b) Terelj Conductivity Agreement (R_2)

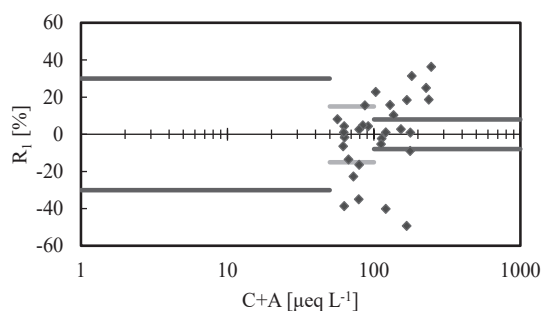


Fig. 3.38 a) Yangon Ion Balance (R_1)

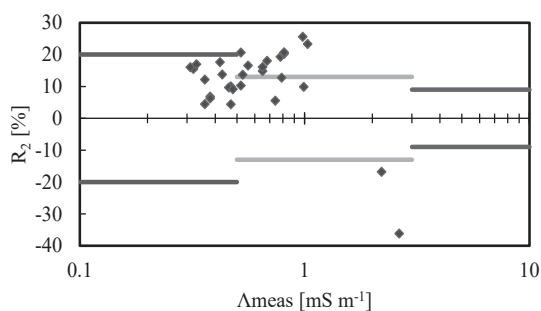


Fig. 3.38 b) Yangon Conductivity Agreement (R_2)

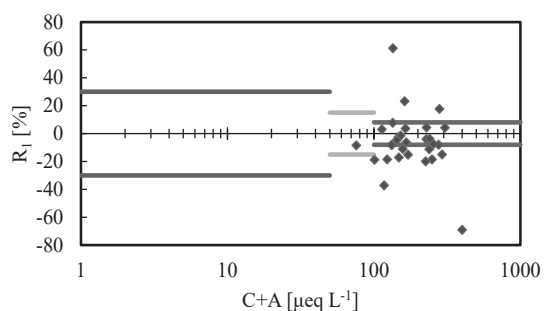


Fig. 3.39 a) Manila Observatory Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

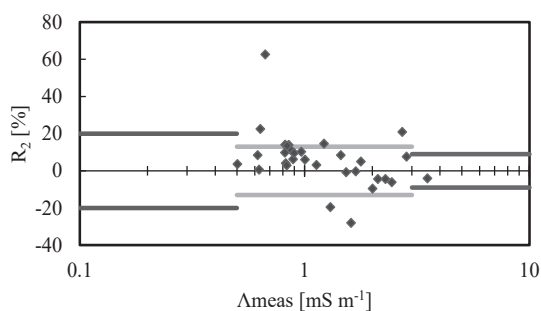


Fig. 3.39 b) Manila Observatory

Conductivity Agreement (R_2)

All of R_1 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

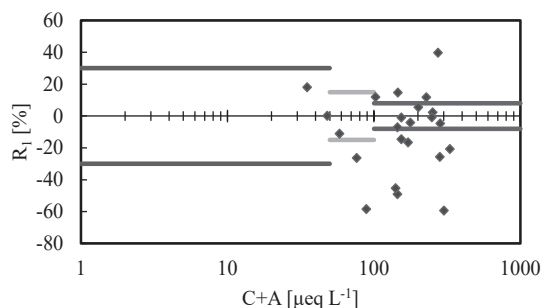


Fig. 3.40 a) Los Baños Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

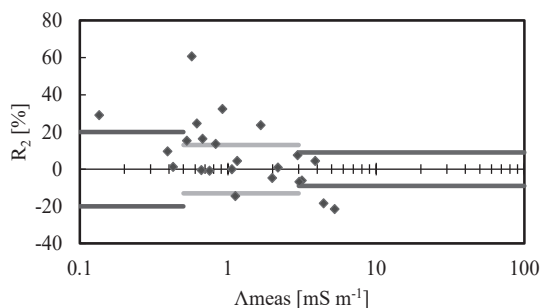


Fig. 3.40 b) Los Baños Conductivity Agreement (R_2)

All of R_1 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

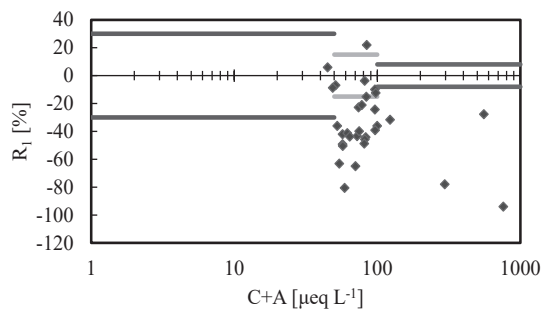


Fig. 3.41 a) Mt. Sto. Tomas Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

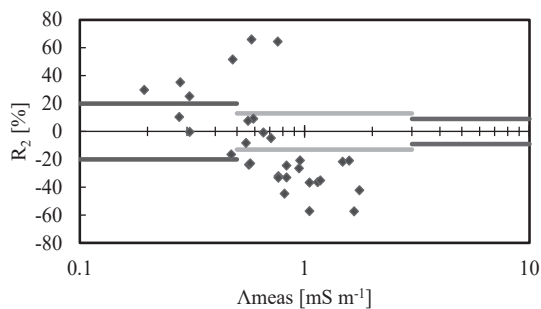


Fig. 3.41 b) Mt. Sto. Tomas

Conductivity Agreement (R_2)

All of R_1 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

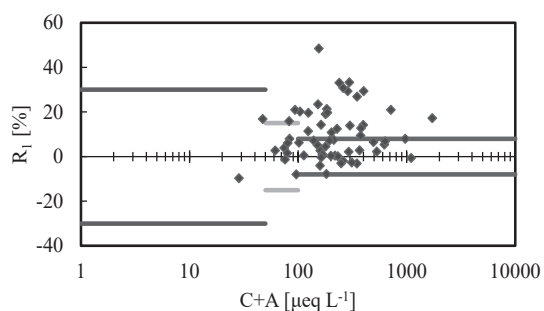


Fig. 3.42 a) Ganghwa Ion Balance (R_1)

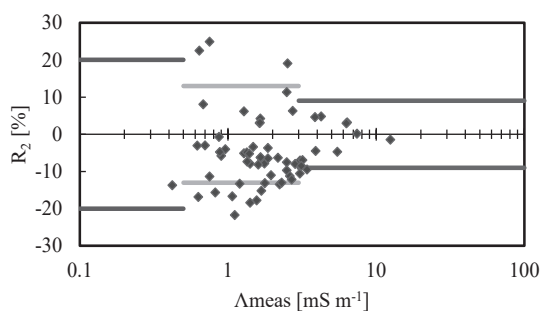


Fig. 3.42 b) Ganghwa Conductivity Agreement (R_2)

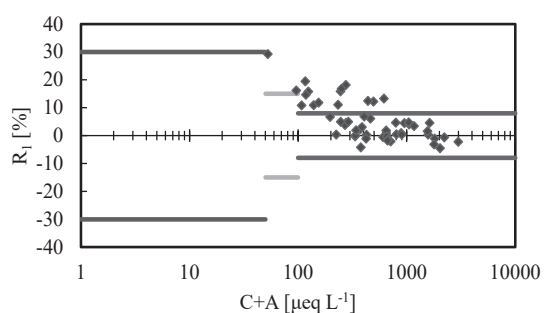


Fig. 3.43 a) Jeju Ion Balance (R_1)

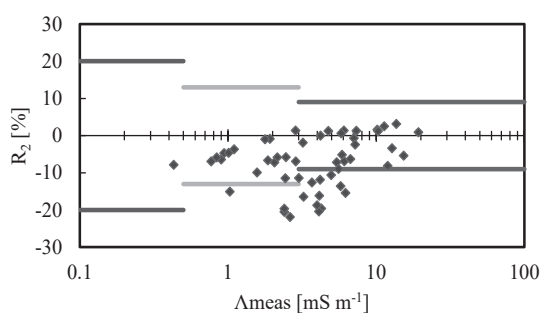


Fig. 3.43 b) Jeju Conductivity Agreement (R_2)

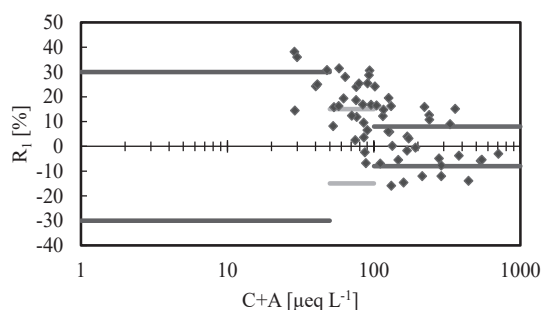


Fig. 3.44 a) Imsil Ion Balance (R_1)

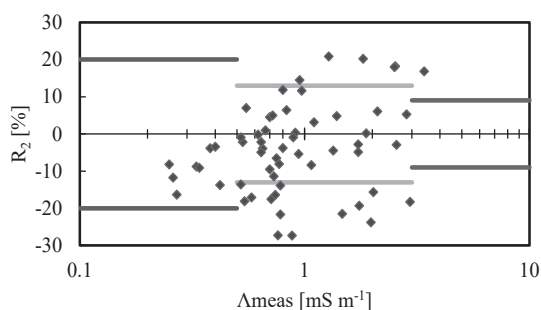


Fig. 3.44 b) Imsil Conductivity Agreement (R_2)

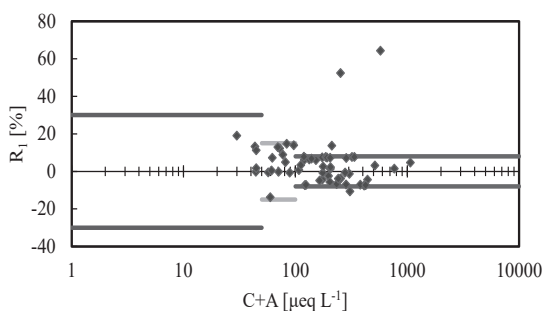


Fig. 3.46 a) Listvyanka Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

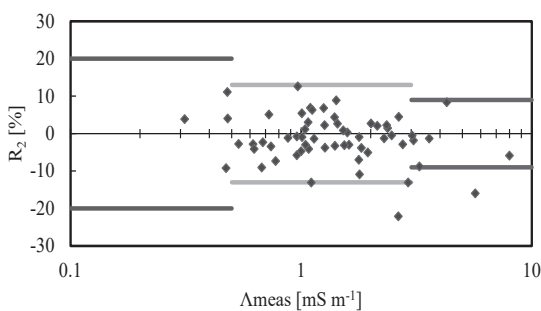


Fig. 3.46 b) Listvyanka Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

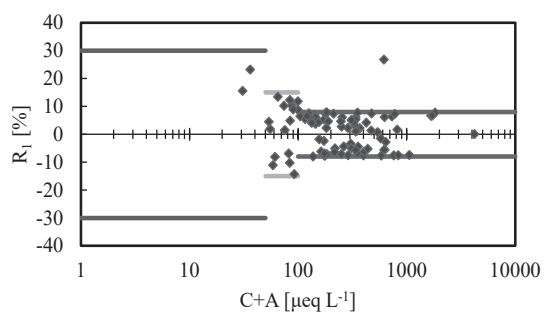


Fig. 3.46 a) Irkutsk Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

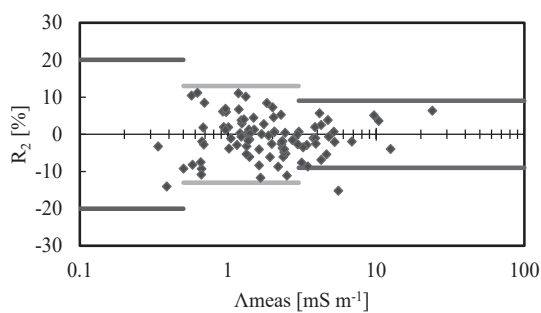


Fig. 3.46 b) Irkutsk Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^- , F^- , Br^- , NO_2^- , PO_4^{3-}

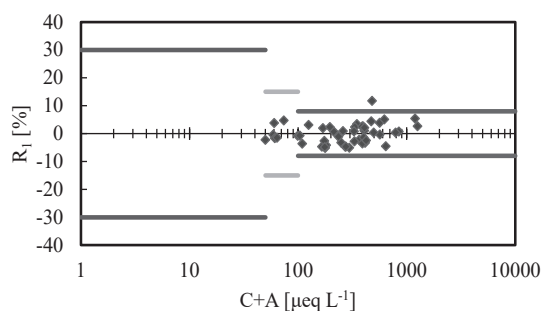


Fig. 3.47 a) Primorskaya Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^-

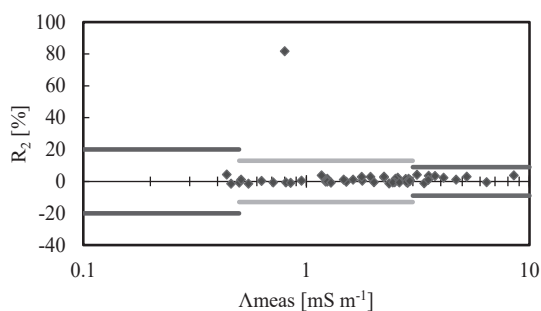


Fig. 3.47 b) Primorskaya

Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^-

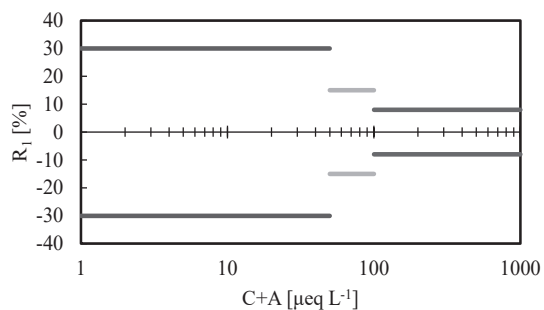


Fig. 3.48 a) Bangkok Ion Balance (R_1)

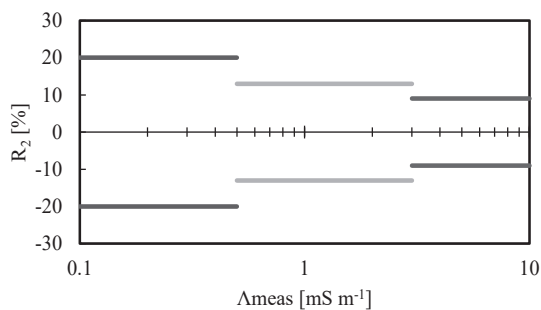


Fig. 3.48 b) Bangkok Conductivity Agreement (R_2)

Conductivity Agreement (R_2)

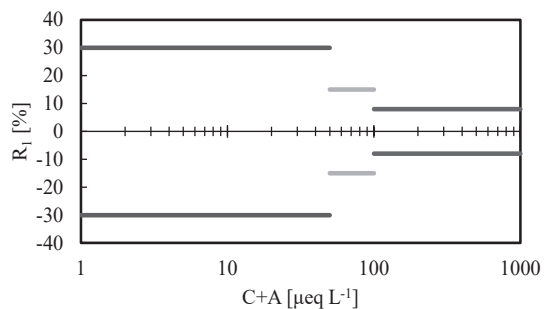


Fig. 3.49 a) Samutprakarn Ion Balance (R_1)

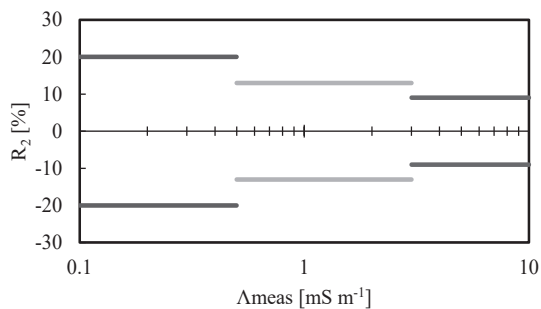


Fig. 3.49 b) Samutprakarn

Conductivity Agreement (R_2)

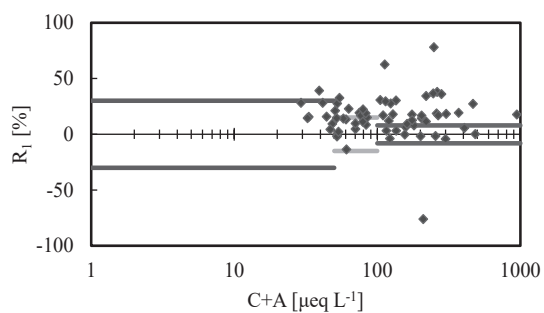


Fig. 3.50 a) Pathumthani Ion Balance (R_1)

All of R_1 plots were calculated including NO_2^- , PO_4^{3-} , Formic and Acetic acid

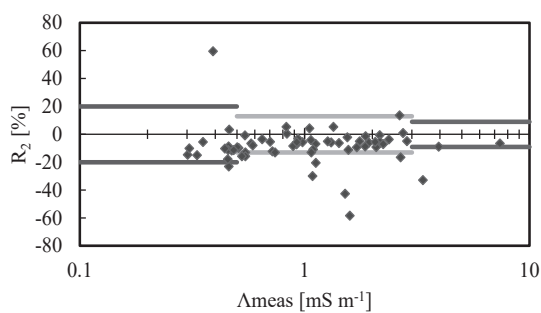


Fig. 3.50 b) Pathumthani

Conductivity Agreement (R_2)

All of R_2 plots were calculated including NO_2^- , PO_4^{3-} , Formic and Acetic acid

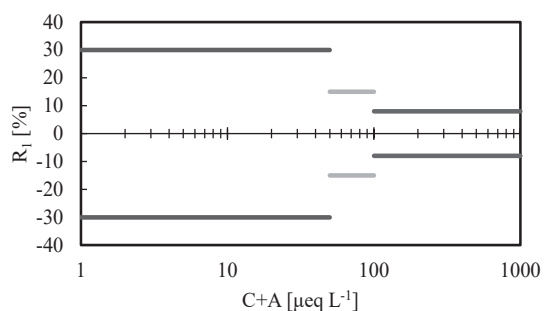


Fig. 3.51 a) Khanchanaburi Ion Balance (R_1)

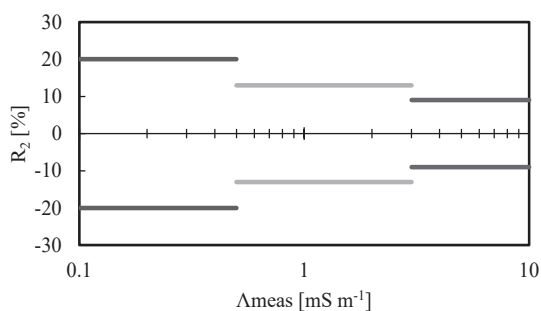


Fig. 3.51 b) Khanchanaburi

Conductivity Agreement (R_2)

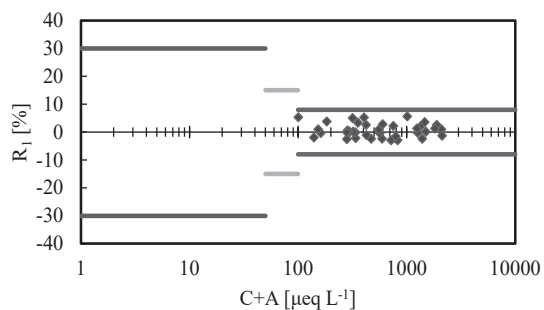


Fig. 3.52 a) Hanoi Ion Balance (R_1)

All of R_1 plots were calculated including F^-

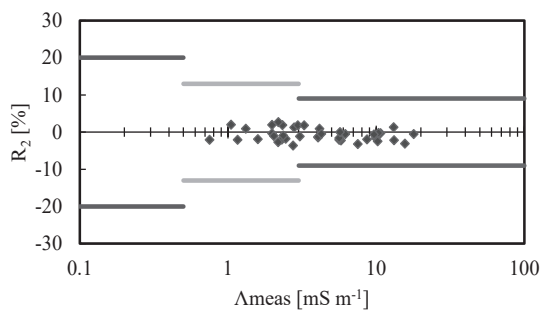


Fig. 3.52 b) Hanoi Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

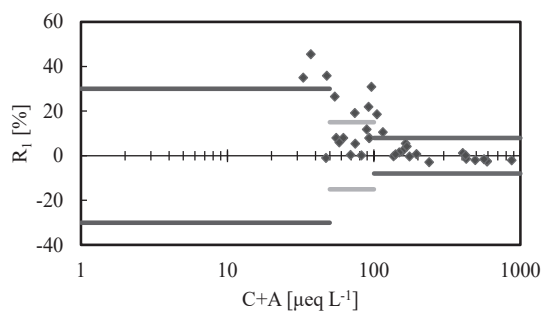


Fig. 3.53 a) Hoa Binh Ion Balance (R_1)

All of R_1 plots were calculated including F^-

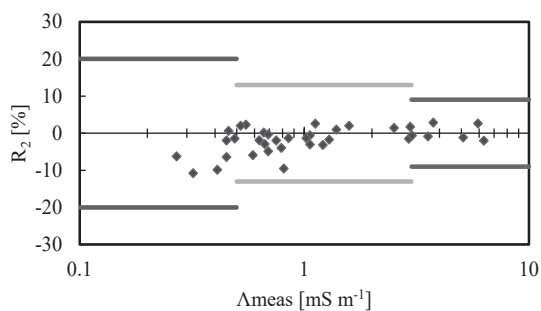


Fig. 3.53 b) Hoa Binh Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

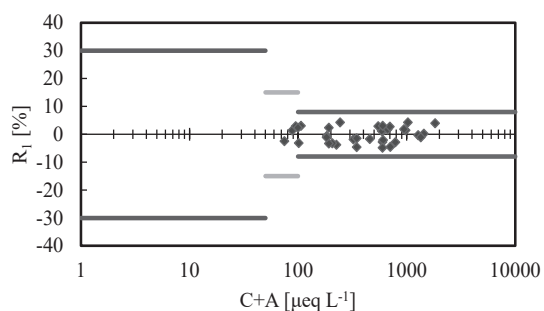


Fig. 3.54 a) Cuc Phuong Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- and F^-

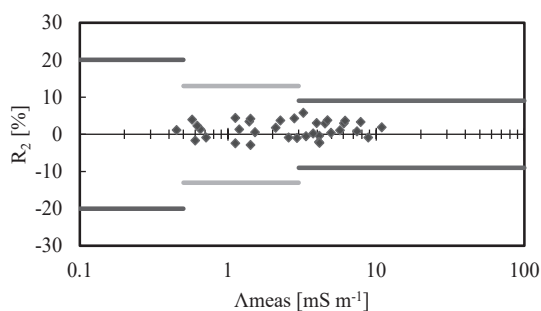


Fig. 3.54 b) Cuc Phuong Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^- and F^-

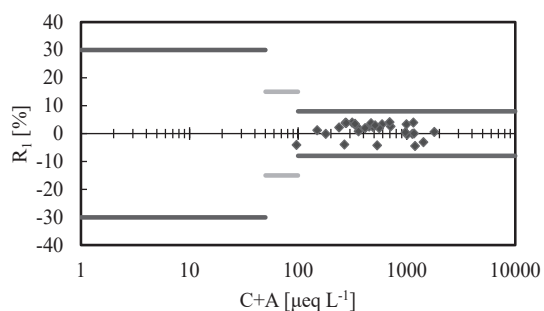


Fig. 3.55 a) Da Nang Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- and F^-

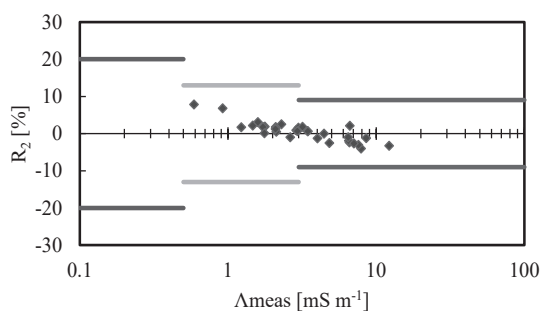


Fig. 3.55 b) Da Nang Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^- and F^-

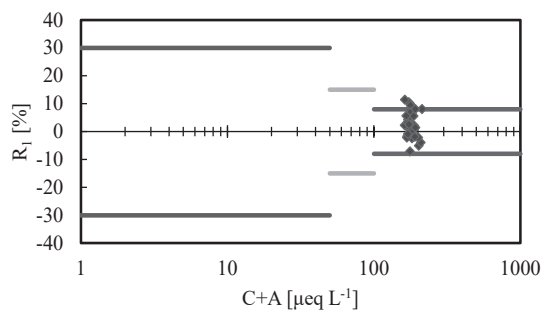


Fig. 3.56 a) Can Tho Ion Balance (R_1)

All of R_1 plots were calculated including F^-

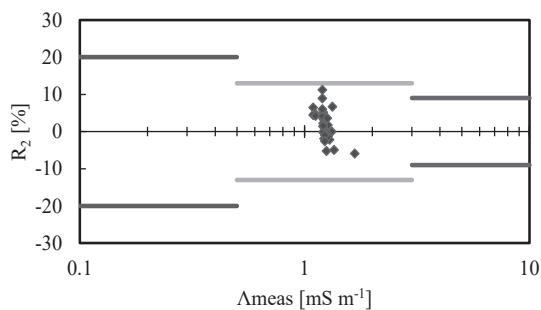


Fig. 3.56 b) Can Tho Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

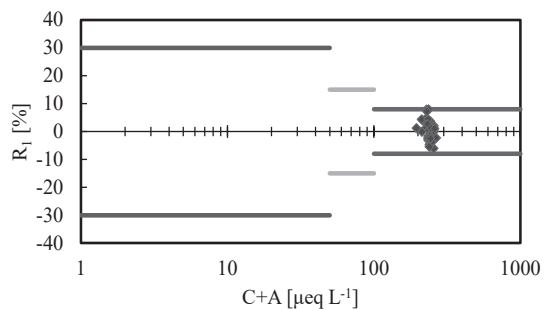


Fig. 3.57 a) Ho Chi Minh Ion Balance (R_1)

All of R_1 plots were calculated including F^-

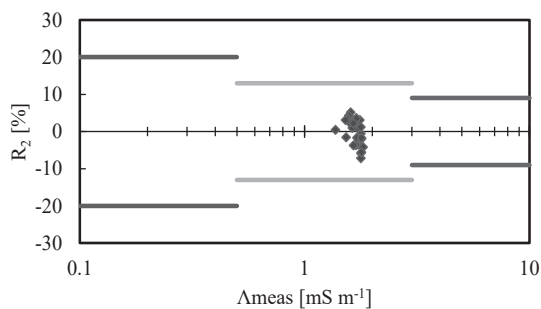


Fig. 3.57 b) Ho Chi Minh Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

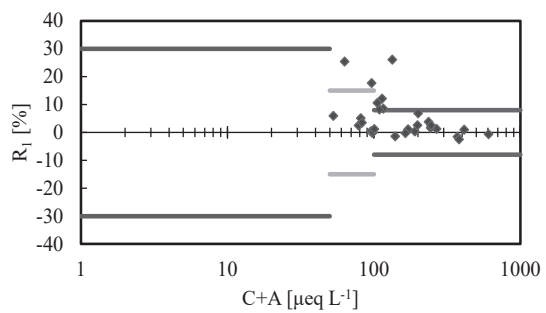


Fig. 3.58 a) Yen Bai Ion Balance (R_1)
All of R_1 plots were calculated including F^-

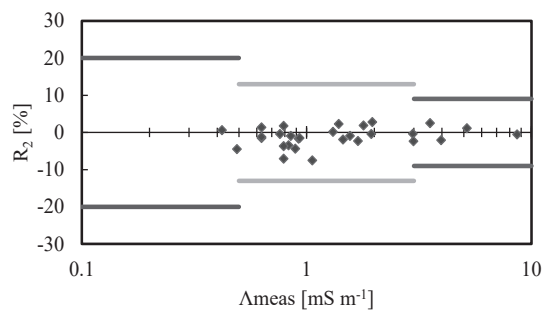


Fig. 3.58 b) Yen Bai Conductivity Agreement (R_2)
All of R_2 plots were calculated including F^-

Table 3.94 Concentration, deposition and data completeness of HCO_3^-

Precipitation amount-weighted average concentration/ Precipitation amount unit : $\mu\text{mol L}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
China	Haifu	152	147	107	59.4	60.8	38.6	48.6	8.50	51.7	66.3	68.9	103	55.0
	Jinyunshan	160	34.7	73.4	73.2	45.6	41.5	36.9	80.8	26.1	*	*	*	48.1
	Shizhan	189	134	290	106	69.8	64.2	80.6	45.4	19.2	16.1	126	--	74.5
	Jiwozi	184	50.0	149	130	42.2	23.5	71.3	67.0	49.7	57.5	46.6	--	67.0
Malaysia	Tanah Rata	*	9.19	*	*	8.98	*	*	18.3	*	*	*	*	15.2
	Kuching	*	*	*	14.2	*	*	*	27.8	14.9	*	*	*	26.0
Philippines	Manila Observatory	59.7	*	25.2	*	15.7	32.5	17.8	12.8	10.7	13.5	9.85	29.8	15.7
	Los Baños	45.4	35.2	54.9	*	7.44	5.00	31.9	*	7.20	3.85	15.0	12.3	11.6
	Mt. Sto. Tomas	<1	37.0	27.0	**	12.1	8.58	24.9	16.0	262	79.1	24.5	*	86.6
Russia	Listvyanka	<1	9.02	25.6	<1	1.57	<1	<1	3.55	2.83	32.2	<1	12.0	4.66
	Irkutsk	24.0	63.2	195	27.8	4.20	4.82	<1	<1	6.11	18.5	34.6	64.5	10.8
	Primorskaya	*	*	18.2	27.9	19.8	6.12	12.1	9.20	17.2	18.9	17.9	6.84	15.4
Vietnam	Cuc Phuong	208	40.0	428	135	65.6	242	21.0	118	34.8	67.8	20.0	*	77.4
	Da Nang	254	170	*	50.0	26.6	174	62.1	118	68.1	31.2	11.5	66.2	46.4
Wet deposition amount unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
China	Haifu	2.43	1.89	1.72	12.0	7.97	9.33	8.63	0.166	5.11	3.81	3.14	2.50	57.4
	Jinyunshan	4.87	0.584	1.52	13.1	3.94	5.98	3.72	1.45	1.28	*	*	*	37.1
	Shizhan	2.08	0.874	2.90	6.83	4.59	2.16	17.4	4.96	1.53	0.516	7.22	0.00	51.1
	Jiwozi	4.59	0.945	2.39	7.14	3.59	2.22	10.6	1.85	2.41	1.89	1.39	0.00	39.0
Malaysia	Tanah Rata	*	0.428	*	*	2.73	*	*	6.08	*	*	*	*	45.6
Malaysia	Kuching	*	*	*	2.47	*	*	*	19.9	1.44	*	*	*	130
Philippines	Manila Observatory	3.18	*	1.18	*	0.772	4.61	5.07	8.56	2.56	5.23	1.35	1.29	32.2
	Los Baños	0.995	0.320	0.690	*	1.56	0.953	3.31	*	1.84	0.854	0.882	3.78	18.2
	Mt. Sto. Tomas	<0.01	2.13	0.425	**	3.97	2.69	8.94	4.98	178	39.3	7.28	*	249
Russia	Listvyanka	<0.01	0.0406	0.450	<0.01	0.0926	0.0540	<0.01	0.326	0.125	0.721	0.0131	0.225	2.05
	Irkutsk	0.135	0.670	0.429	1.11	0.128	0.232	0.0886	0.0499	0.353	0.345	0.859	1.13	5.46
	Primorskaya	*	*	1.24	1.27	1.77	0.590	2.08	0.868	1.40	1.35	1.13	0.0506	12.3
Vietnam	Cuc Phuong	11.0	1.42	34.3	4.17	14.8	40.5	12.1	24.9	26.2	5.41	0.536	*	174
	Da Nang	9.44	1.39	*	0.220	5.50	4.57	9.95	7.23	25.2	22.7	6.47	29.2	121
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
China	Haifu	21.9	100	100	95.8	100	88.8	100	100	100	69.4	79.6	84.7	92.5
	Jinyunshan	3.3	39.9	100	17.2	76.4	12.3	45.5	93.9	100	0.0	0.0	0.0	33.0
	Shizhan	100	100	100	100	100	100	100	100	100	100	100	--	100
	Jiwozi	100	100	100	100	100	100	100	100	100	100	100	--	100
Malaysia	Tanah Rata	0.0	3.4	0.0	0.0	17.1	0.0	0.0	31.8	0.0	0.0	0.0	0.0	5.3
	Kuching	0.0	0.0	0.0	1.2	0.0	0.0	0.0	7.2	6.4	0.0	0.0	0.0	1.2
Philippines	Manila Observatory	100	0.0	100	0.0	100	15.3	100	100	68.5	100	100	100	90.4
	Los Baños	76.4	85.7	71.8	0.0	99.6	18.0	100	0.0	73.5	100	90.1	100	73.5
	Mt. Sto. Tomas	100	100	100	**	100	100	100	100	100	98.5	100	0.0	99.4
Russia	Listvyanka	100	100	100	100	100	100	100	100	99.8	100	100	100	100
	Irkutsk	100	99.1	86.4	100	100	100	100	100	100	98.7	100	100	99.9
	Primorskaya	0.0	0.0	61.3	86.6	88.8	84.4	84.7	18.0	31.0	92.0	98.1	71.6	70.3
Vietnam	Cuc Phuong	91.7	72.2	95.3	63.4	100	98.5	99.0	100	100	100	98.5	0.0	97.9
	Da Nang	93.3	84.1	0.0	100	99.9	93.5	99.3	100	99.7	100	100	100	99.7

Terms and abbreviations are given in Table 3.5.

Table 3.95 Concentration, deposition and data completeness of F⁻

Precipitation amount-weighted average concentration/ Precipitation amount															unit : $\mu\text{mol L}^{-1}$	
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		
China	Haifu	6.40	5.38	4.81	2.36	1.95	1.68	1.69	1.58	2.04	1.97	3.62	4.38	2.21		
	Jinyunshan	4.62	4.16	6.61	1.88	1.71	1.68	1.79	2.22	1.64	1.93	2.27	2.74	2.15		
	Shizhan	1.34	2.39	<1	2.01	2.29	1.35	<1	<1	<1	<1	<1	<1	<1		
	Jiwozi	3.68	6.05	1.18	3.85	<1	<1	<1	<1	<1	<1	<1	<1	<1		
	Hongwen	7.42	2.67	3.97	4.35	3.00	2.43	2.56	4.11	3.49	4.00	2.82	--	3.43		
	Xiaoping	5.17	--	3.59	4.56	6.01	6.02	4.64	5.82	4.40	4.99	4.10	--	5.23		
	Xiang Zhou	<1	--	<1	<1	<1	<1	<1	<1	<1	--	<1	--	<1		
	Zhuxiandong	4.74	3.68	<1	<1	<1	<1	<1	<1	<1	2.11	1.19	--	<1		
	Wuzhishan	--	--	<1	--	4.56	*	4.17	--	<1	<1	--	--	1.39		
Lijiang	--	<1	<1	--	<1	<1	<1	<1	<1	--	<1	--	<1			
Japan	Sado-seki	*	*	*	*	*	*	*	*	*	*	*	*	<1		
	Yusuhara	<1	<1	<1	*	*	*	*	*	*	*	*	*	<1		
Lao PDR	Vientiane	--	--	--	--	--	<1	<1	<1	<1	--	--	--	<1		
Malaysia	Petaling Jaya	<1	<1	<1	<1	<1	1.59	<1	<1	<1	<1	<1	<1	<1		
	Tanah Rata	2.66	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
	Danum Valley	* 1.50	*	*	*	<1	<1	<1	<1	<1	<1	<1	<1	* <1		
	Kuching	<1	*	* <1	<1	<1	<1	*	2.34	<1	<1	*	*	*		
Philippines	Manila Observatory	2.66	<1	<1	5.31	7.07	<1	<1	1.41	<1	<1	1.13	9.18	1.23		
	Los Baños	1.27	<1	2.95	10.1	1.51	2.07	<1	<1	<1	<1	<1	11.0	2.99		
	Mt. Sto. Tomas	<1	<1	2.37	**	1.27	1.85	1.51	1.88	1.56	1.60	1.13	<1	1.52		
Russia	Listvyanka	12.1	14.5	22.6	9.00	5.49	2.33	1.98	2.13	2.70	4.75	6.87	5.71	4.47		
	Irkutsk	21.2	12.4	35.8	7.45	4.21	3.46	1.27	<1	1.49	8.34	12.5	20.8	4.15		
Vietnam	Hanoi	10.4	17.3	7.49	15.8	23.9	4.69	2.90	2.94	2.36	5.57	9.27	2.26	6.20		
	Hoa Binh	8.57	2.58	8.89	4.06	2.01	1.84	1.39	1.45	1.02	2.35	4.94	--	1.67		
	Cuc Phuong	5.58	5.36	3.32	4.49	4.10	6.41	2.55	4.18	3.23	14.2	5.49	*	3.99		
	Da Nang	10.3	10.6	*	13.8	14.3	14.4	14.2	14.3	13.8	14.9	13.9	15.0	14.4		
	Can Tho	2.00	--	--	1.00	1.19	1.49	1.30	1.00	1.28	1.36	1.23	1.00	1.27		
	Ho Chi Minh	--	2.00	1.68	--	1.00	1.00	1.26	1.33	1.32	1.00	1.42	1.00	1.19		
	Yen Bai	2.56	2.84	1.21	4.21	3.68	2.22	2.13	1.68	2.10	3.68	--	3.84	2.39		
Wet deposition amount															unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$	
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		
China	Haifu	0.102	0.0694	0.0774	0.475	0.256	0.407	0.300	0.0308	0.201	0.113	0.165	0.106	2.30		
	Jinyunshan	0.141	0.0698	0.137	0.337	0.148	0.242	0.180	0.0397	0.0804	0.0938	0.110	0.0818	1.66		
	Shizhan	0.0148	0.0155	<0.01	0.130	0.151	0.0454	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00	0.357	
	Jiwozi	0.0919	0.114	0.0189	0.212	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00	0.442		
	Hongwen	0.0957	0.0966	0.131	1.15	0.481	0.390	0.309	0.242	0.664	0.0312	0.0418	0.00	3.63		
	Xiaoping	0.223	0.00	0.197	0.573	1.03	1.34	0.616	0.894	0.430	0.133	0.202	0.00	5.64		
	Xiang Zhou	<0.01	0.00	0.0171	0.126	0.0621	0.0241	0.0222	0.253	0.141	0.00	0.0767	0.00	0.723		
	Zhuxiandong	0.0137	<0.01	0.0211	0.0988	0.0148	<0.01	<0.01	0.143	0.176	0.0198	0.153	0.00	0.652		
	Wuzhishan	0.00	0.00	<0.01	0.00	0.465	*	0.707	0.00	<0.01	<0.01	0.00	0.00	1.21		
Lijiang	0.00	<0.01	<0.01	0.00	0.0149	0.0108	0.0128	0.0132	<0.01	0.00	<0.01	0.00	0.0601			
Japan	Sado-seki	*	*	*	*	*	*	*	*	*	*	*	*	0.0808	1.02	
	Yusuhara	0.0369	0.0956	0.0934	*	*	*	*	*	*	*	*	*	*	1.72	
Lao PDR	Vientiane	0.00	0.00	0.00	0.00	0.00	0.0195	<0.01	<0.01	0.0792	0.00	0.00	0.00	0.0999		
Malaysia	Petaling Jaya	0.143	0.169	0.346	0.141	0.229	0.423	0.0555	0.0898	0.117	0.222	0.0828	0.101	2.12		
	Tanah Rata	0.315	<0.01	0.0119	0.0132	0.0226	0.0175	0.0337	0.179	0.0255	0.267	0.0475	0.0269	0.966		
	Danum Valley	*	0.371	*	*	0.0241	0.0184	0.130	0.0134	<0.01	0.100	<0.01	*	0.746		
	Kuching	0.122	*	0.0691	0.0345	0.0862	0.0720	*	1.67	<0.01	0.0818	*	*	4.70		
Philippines	Manila Observatory	0.142	<0.01	0.0371	<0.01	0.348	0.130	0.133	0.941	0.0945	0.142	0.155	0.397	2.53		
	Los Baños	0.0278	<0.01	0.0371	0.132	0.316	0.394	0.0426	0.0744	0.122	0.124	0.0297	3.37	4.67		
	Mt. Sto. Tomas	<0.01	<0.01	0.0373	**	0.419	0.579	0.541	0.586	1.06	0.796	0.333	<0.01	4.36		
Russia	Listvyanka	0.0618	0.0654	0.398	0.173	0.325	0.208	0.102	0.196	0.119	0.107	0.109	0.107	1.97		
	Irkutsk	0.119	0.132	0.0788	0.297	0.128	0.167	0.165	0.104	0.0864	0.155	0.310	0.363	2.09		
Vietnam	Hanoi	0.512	0.404	0.166	0.496	8.54	1.57	1.79	1.37	1.84	0.289	0.0287	<0.01	17.0		
	Hoa Binh	0.278	0.0147	0.140	0.151	0.723	0.453	0.938	0.619	0.646	0.197	0.0722	0.00	4.22		
	Cuc Phuong	0.295	0.191	0.266	0.139	0.926	1.07	1.46	0.878	2.44	1.13	0.147	*	8.95		
	Da Nang	0.384	0.0872	*	0.0609	2.95	0.378	2.27	0.873	5.09	10.8	7.85	6.59	37.4		
	Can Tho	0.0840	0.00	0.00	0.0180	0.111	0.200	0.496	0.254	0.330	0.551	0.0872	0.103	2.23		
	Ho Chi Minh	0.00	0.0180	0.128	0.00	0.289	0.368	0.254	0.427	0.455	0.295	0.269	0.0230	2.53		
	Yen Bai	0.138	0.0333	0.0632	0.152	1.07	0.723	0.934	0.966	1.21	0.933	0.00	0.0523	6.27		
Data completeness															%TP	
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		
China	Haifu	100	100	100	100	100	100	100	100	100	100	100	100	100		
	Jinyunshan	100	100	100	100	100	100	100	100	100	100	100	100	100		
	Shizhan	100	100	100	100	100	100	100	100	100	100	100	--	100		
	Jiwozi	100	100	100	100	100	100	100	100	100	100	100	--	100		
	Hongwen	100	100	100	100	100	100	100	100	100	100	100	--	100		
	Xiaoping	100	--	100	100	100	100	100	100	100	100	100	--	100		
	Xiang Zhou	100	--	100	100	100	100	100	100	100	--	100	--	100		
	Zhuxiandong	100	100	100	100	100	100	100	100	100	100	100	--	100		
	Wuzhishan	--	--	100	--	100	0.0	100	--	100	100	--	--	97.0		
Lijiang	--	100	100	--	100	100	100	100	100	--	100	--	100			
Japan	Sado-seki	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.6	3.5		
	Yusuhara	97.4	100	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1		
Lao PDR	Vientiane	--	--	--	--	--	100	100	100	100	--	--	--	100		
Malaysia	Petaling Jaya	100	100	100	100	100	100	100	100	100	100	98.8	100	99.9		
	Tanah Rata	100	100	100	100	100	100	100	100	100	100	100	100	100		
	Danum Valley	0.0	41.5	0.0	0.0	27.7	100	44.8	83.1	100	96.0	18.0	0.0	46.7		
	Kuching	21.3	0.0	18.0	100	100	45.8	0.0	100	97.3	16.5	0.0	0.0	40.1		
Philippines	Manila Observatory	100	100	100	100	100	100	100	100	100	100	100	100	100		
	Los Baños	100	85.7	100	100	100	100	100	100	100	100	100	100	99.9		
	Mt. Sto. Tomas	100	100	100	**	100	100	100	100	100	100	100	70.2	99.9		
Russia	Listvyanka	100	100	100	100	100	100	100	100	99.8	100	100	75.9	99.9		
	Irkutsk	100	99.1	86.4	100	100	100	100	100	100	98.7	100	100	99.9		
Vietnam	Hanoi	99.4	95.3	92.8	96.8	100	100	100	100	100	100	100	90.0	99.8		
	Hoa Binh	100	80.7	96.2	100	100	100	100	100	100	98.7	89.7	--	99.8		
	Cuc Phuong	91.7	72.2	95.3	63.4	100	98.5	99.0	100	100	100	98.5	0.0	97.9		
	Da Nang	93.3	84.1	0.0	100	99.9	93.5	99.3	100	99.7	100	100	100	99.7		
	Can Tho	100	--	--	100	100	100	100	100	100	100	98.6	100	99.9		
	Ho Chi Minh	--	100	100	--	100	100	100	100	100	100	100	100	100		
	Yen Bai	100	100	100	100	100	100	100	100	100	100	--	100	100		

Table 3.96 Concentration, deposition and data completeness of Br⁻

Precipitation amount-weighted average concentration/ Precipitation amount unit : $\mu\text{mol L}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	1.18	<1	1.29	<1	<1	*	*	<1	<1	<1	<1	<1	<1
Lao PDR	Vientiane	--	--	--	--	--	<1	<1	<1	<1	--	--	--	<1
Philippines	Manila Observatory	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Los Baños	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Mt. Sto. Tomas	<1	1.03	<1	**	<1	<1	<1	<1	<1	<1	<1	<1	<1
Russia	Listvyanka	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Irkutsk	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Wet deposition amount unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	0.105	0.025	0.072	0.011	0.041	*	*	<0.01	0.010	0.014	0.037	0.077	0.320
Lao PDR	Vientiane	0.00	0.00	0.00	0.00	0.00	<0.01	<0.01	<0.01	<0.01	0.00	0.00	0.00	<0.01
Philippines	Manila Observatory	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.034	0.038	<0.01	<0.01	<0.01	0.025	0.106
	Los Baños	<0.01	<0.01	<0.01	<0.01	<0.01	0.024	<0.01	<0.01	<0.01	0.014	<0.01	0.094	0.164
	Mt. Sto. Tomas	<0.01	0.059	<0.01	**	<0.01	<0.01	0.019	0.016	0.035	0.046	<0.01	<0.01	0.188
Russia	Listvyanka	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Irkutsk	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	22.5	68.3	25.0	44.5	41.3	0.0	0.0	90.0	100	100	47.0	100	62.7
Lao PDR	Vientiane	--	--	--	--	--	100	100	100	100	--	--	--	100
Philippines	Manila Observatory	100	100	100	100	100	100	100	100	100	100	100	100	100
	Los Baños	100	85.7	100	100	100	100	100	100	100	100	100	100	99.9
	Mt. Sto. Tomas	100	100	100	**	100	100	100	100	100	100	100	70.2	99.9
Russia	Listvyanka	100	100	100	100	100	100	100	100	99.8	100	100	100	100
	Irkutsk	100	99.1	86.4	100	100	100	100	100	100	98.7	100	100	99.9

Terms and abbreviations are given in Table 3.5.

Table 3.97 Concentration, deposition and data completeness of NO₂⁻

Precipitation amount-weighted average concentration/ Precipitation amount														unit : $\mu\text{mol L}^{-1}$
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	<1	<1	<1	*	*	*	*	<1	<1	<1	<1	*	<1
	Yusuhara	<1	<1	<1	*	*	*	*	*	*	*	*	*	<1
	Ogasawara	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Tokyo	1.20	1.96	1.39	<1	<1	<1	1.01	<1	<1	1.16	1.76	1.60	<1
Lao PDR	Vientiane	--	--	--	--	--	<1	<1	<1	<1	--	--	--	<1
Philippines	Manila Observatory	<1	4.85	<1	1.86	<1	1.12	<1	<1	<1	<1	1.22	2.35	<1
	Los Baños	1.06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.60	<1
	Mt. Sto. Tomas	<1	4.52	<1	**	<1	<1	<1	<1	<1	<1	<1	<1	<1
Russia	Listvyanka	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Irkutsk	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thailand	Pathumthani	--	3.18	<1	--	<1	<1	1.08	<1	<1	<1	<1	--	<1
Wet deposition amount														unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	0.0266	<0.01	0.0112	*	*	*	*	<0.01	0.0269	0.0138	<0.01	*	0.124
	Yusuhara	0.0182	0.0341	0.0126	*	*	*	*	*	*	*	*	*	0.491
	Ogasawara	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Tokyo	0.0408	0.176	0.184	0.118	0.115	0.139	0.136	0.124	0.129	0.221	0.0724	<0.01	1.45
Lao PDR	Vientiane	0.00	0.00	0.00	0.00	0.00	0.0240	<0.01	0.0244	0.494	0.00	0.00	0.00	0.542
Philippines	Manila Observatory	0.0454	<0.01	0.0255	<0.01	0.0335	0.159	0.153	0.667	0.158	0.159	0.168	0.101	1.68
	Los Baños	0.0232	<0.01	<0.01	<0.01	0.0832	0.0622	0.0354	0.0165	0.0768	0.0413	<0.01	0.490	0.849
	Mt. Sto. Tomas	<0.01	0.261	<0.01	**	0.0532	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.314
Russia	Listvyanka	<0.01	<0.01	<0.01	<0.01	0.0117	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0447
	Irkutsk	<0.01	<0.01	<0.01	0.0125	<0.01	<0.01	0.0419	<0.01	<0.01	<0.01	<0.01	<0.01	0.108
Thailand	Pathumthani	0.00	<0.01	<0.01	0.00	0.0949	0.122	0.279	0.0915	0.158	0.0793	0.0296	0.00	0.863
Data completeness														%TP
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	19.1	82.8	12.5	0.0	0.0	0.0	0.0	90.0	100	100	47.0	0.0	47.5
	Yusuhara	97.4	100	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1
	Ogasawara	99.1	83.4	98.1	100	100	100	100	100	100	100	100	100	99.0
	Tokyo	100	94.4	100	100	100	100	100	100	100	100	100	100	99.7
Lao PDR	Vientiane	--	--	--	--	--	100	100	100	100	--	--	--	100
Philippines	Manila Observatory	100	100	100	100	100	100	100	100	100	100	100	100	100
	Los Baños	100	85.7	100	100	100	100	100	100	100	100	100	100	99.9
	Mt. Sto. Tomas	100	100	100	**	100	100	100	100	100	100	100	70.2	99.9
Russia	Listvyanka	100	100	100	100	100	100	100	100	99.8	100	100	100	100
	Irkutsk	100	99.1	86.4	100	100	100	100	100	100	98.7	100	100	99.9
Thailand	Pathumthani	--	100	100	--	99.6	100	100	100	100	100	100	--	99.9

Terms and abbreviations are given in Table 3.5.

Table 3.98 Concentration, deposition and data completeness of PO₄³⁻

Precipitation amount-weighted average concentration/ Precipitation amount unit : $\mu\text{mol L}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	<1	*	*	*	*	*	*	<1	*	*	*	<1	<1
	Yusuhara	<1	<1	<1	*	*	*	*	*	*	*	*	*	<1
Lao PDR	Vientiane	--	--	--	--	--	<1	<1	<1	<1	--	--	--	<1
Philippines	Manila Observatory	3.36	1.42	1.02	1.94	1.53	<1	<1	<1	1.89	<1	<1	<1	<1
	Los Baños	<1	<1	<1	2.00	<1	<1	5.74	1.04	<1	1.08	2.53	<1	1.20
	Mt. Sto. Tomas	<1	7.52	1.02	**	<1	<1	<1	<1	<1	<1	<1	<1	<1
Russia	Listvyanka	<1	<1	<1	<1	3.15	<1	<1	<1	<1	<1	<1	<1	<1
	Irkutsk	<1	<1	1.47	1.10	<1	<1	<1	<1	1.23	2.71	<1	<1	<1
Thailand	Pathumthani	--	<1	<1	--	<1	<1	1.60	2.05	<1	1.09	1.04	--	<1
Wet deposition amount unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	0.0793	*	*	*	*	*	*	<0.01	*	*	*	0.0101	0.297
	Yusuhara	<0.01	<0.01	<0.01	*	*	*	*	*	*	*	*	*	0.0763
Lao PDR	Vientiane	0.00	0.00	0.00	0.00	0.00	<0.01	<0.01	<0.01	<0.01	0.00	0.00	0.00	<0.01
Philippines	Manila Observatory	0.179	<0.01	0.0478	<0.01	0.0751	0.120	0.0775	0.457	0.452	0.109	0.0618	0.0167	1.60
	Los Baños	<0.01	<0.01	<0.01	0.0263	0.119	0.111	0.596	0.167	0.232	0.241	0.149	0.218	1.88
	Mt. Sto. Tomas	<0.01	0.434	0.0160	**	0.166	<0.01	0.283	0.0492	<0.01	<0.01	<0.01	<0.01	0.949
Russia	Listvyanka	<0.01	<0.01	<0.01	<0.01	0.186	0.0276	0.0347	0.0269	<0.01	<0.01	<0.01	<0.01	0.302
	Irkutsk	<0.01	<0.01	<0.01	0.0438	0.0269	0.0273	0.0266	0.0195	0.0711	0.0506	<0.01	<0.01	0.280
Thailand	Pathumthani	0.00	<0.01	<0.01	0.00	0.0579	0.0707	0.412	0.216	0.113	0.146	0.0343	0.00	1.05
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Sado-seki	13.4	0.0	0.0	0.0	0.0	0.0	0.0	90.0	0.0	0.0	0.0	56.4	6.1
	Yusuhara	97.4	100	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1
Lao PDR	Vientiane	--	--	--	--	--	100	100	100	100	--	--	--	100
Philippines	Manila Observatory	100	100	100	100	100	100	100	100	100	100	100	100	100
	Los Baños	100	85.7	100	100	100	100	100	100	100	100	100	100	99.9
	Mt. Sto. Tomas	100	100	100	**	100	100	100	100	100	100	100	70.2	99.9
Russia	Listvyanka	100	100	100	100	100	100	100	100	99.8	100	100	100	100
	Irkutsk	100	99.1	86.4	100	100	100	100	100	100	98.7	100	100	99.9
Thailand	Pathumthani	--	100	100	--	99.6	100	100	100	100	100	100	--	99.9

Terms and abbreviations are given in Table 3.5.

Table 3.99 Concentration, deposition and data completeness of Formic Acid

Precipitation amount-weighted average concentration/ Precipitation amount unit : $\mu\text{mol L}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Tanah Rata	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.34	<1	<1	<1
	Danum Valley	*	<1	*	*	<1	<1	<1	1.38	<1	2.13	<1	*	<1
	Kuching	<1	*	<1	<1	<1	<1	*	<1	<1	<1	*	*	<1
Thailand	Pathumthani	--	<1	<1	--	1.17	1.41	<1	<1	<1	1.13	<1	--	<1
Wet deposition amount unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	<0.01	0.0116	0.0111	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0445
	Tanah Rata	<0.01	<0.01	<0.01	<0.01	<0.01	0.0232	0.0186	<0.01	0.0482	0.580	0.125	0.297	1.12
	Danum Valley	*	0.0436	*	*	<0.01	0.125	0.0382	0.336	0.0495	0.738	<0.01	*	2.57
	Kuching	<0.01	*	<0.01	<0.01	<0.01	<0.01	*	<0.01	<0.01	0.0153	*	*	0.0174
Thailand	Pathumthani	0.00	<0.01	<0.01	0.00	0.241	0.337	0.0180	0.0166	0.220	0.151	<0.01	0.00	0.992
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	100	100	100	100	100	100	100	100	100	100	98.8	100	99.9
	Tanah Rata	100	100	100	100	100	100	100	100	100	100	100	100	100
	Danum Valley	0.0	41.5	0.0	0.0	27.7	100	44.8	83.1	100	96.0	18.0	0.0	46.7
	Kuching	21.3	0.0	18.0	100	100	45.8	0.0	100	97.3	16.5	0.0	0.0	40.1
Thailand	Pathumthani	--	100	100	--	99.6	100	100	100	100	100	100	--	99.9

Terms and abbreviations are given in Table 3.5.

Table 3.100 Concentration, deposition and data completeness of Acetic Acid

Precipitation amount-weighted average concentration/ Precipitation amount unit : $\mu\text{mol L}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Tanah Rata	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Danum Valley	*	<1	*	*	<1	<1	<1	<1	<1	<1	<1	*	<1
	Kuching	<1	*	<1	<1	<1	<1	*	<1	<1	<1	*	*	<1
Thailand	Pathumthani	--	<1	<1	--	<1	1.20	<1	<1	1.67	1.51	<1	--	<1
Wet deposition amount unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0233
	Tanah Rata	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0483	0.0461	0.0595	0.0402	0.227
	Danum Valley	*	0.0184	*	*	<0.01	0.0127	0.0482	<0.01	0.0414	<0.01	<0.01	*	0.179
	Kuching	<0.01	*	<0.01	<0.01	<0.01	<0.01	*	<0.01	<0.01	<0.01	*	*	<0.01
Thailand	Pathumthani	0.00	<0.01	<0.01	0.00	0.116	0.288	0.0314	0.0828	0.605	0.203	<0.01	0.00	1.33
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	100	100	100	100	100	100	100	100	100	100	98.8	100	99.9
	Tanah Rata	100	100	100	100	100	100	100	100	100	100	100	100	100
	Danum Valley	0.0	41.5	0.0	0.0	27.7	100	44.8	83.1	100	96.0	18.0	0.0	46.7
	Kuching	21.3	0.0	18.0	100	100	45.8	0.0	100	97.3	16.5	0.0	0.0	40.1
Thailand	Pathumthani	--	100	100	--	99.6	100	100	100	100	100	100	--	99.9

Terms and abbreviations are given in Table 3.5.

Table 3.101 Concentration, deposition and data completeness of Oxalic Acid

Precipitation amount-weighted average concentration/ Precipitation amount														unit : $\mu\text{mol L}^{-1}$
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Tanah Rata	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Danum Valley	*	<1	*	*	<1	<1	<1	<1	<1	<1	<1	*	<1
	Kuching	<1	*	<1	<1	<1	<1	*	<1	<1	<1	*	*	<1
Wet deposition amount														unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0257	<0.01	0.0422	0.104
	Tanah Rata	<0.01	<0.01	<0.01	<0.01	0.0129	0.0124	<0.01	<0.01	0.0250	0.0652	0.0234	<0.01	0.151
	Danum Valley	*	<0.01	*	*	0.0362	0.0359	<0.01	<0.01	<0.01	0.0441	<0.01	*	0.197
	Kuching	<0.01	*	0.0307	<0.01	0.0264	0.0279	*	0.0122	<0.01	0.0489	*	*	0.173
Data completeness														%TP
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	100	100	100	100	100	100	100	100	100	100	98.8	100	99.9
	Tanah Rata	100	100	100	100	100	100	100	100	100	100	100	100	100
	Danum Valley	0.0	41.5	0.0	0.0	27.7	100	44.8	83.1	100	96.0	18.0	0.0	46.7
	Kuching	21.3	0.0	18.0	100	100	45.8	0.0	100	97.3	16.5	0.0	0.0	40.1

Terms and abbreviations are given in Table 3.5.

CHAPTER 4

Air Concentration and Dry Deposition Monitoring

4. Air Concentration and Dry Deposition Monitoring

4.1 Method

Automatic monitoring and manual monitoring methods were used to implement air concentration and dry deposition monitoring in 2024. The monitoring items were selected considering the priority chemical species defined in *Strategy Paper for Future Direction of Dry Deposition Monitoring of EANET (2016-2020 Edition, 2015)*.

4.1.1 Automatic Monitoring Method

The priority chemical species of SO₂, O₃, NO, NO₂ (urban), PM₁₀ and PM_{2.5} are monitored by automatic monitoring methods. The criteria and quality assurance/quality control (QA/QC) for automatic monitoring methods are described in Chapter 3 of *Technical Manual for Air Concentration Monitoring in East Asia* (Technical Manual, EANET, 2013).

4.1.2 Manual Monitoring Method

Filter pack and passive sampler are used for manual monitoring in EANET. The filter pack method is used to determine gaseous substances (SO₂, HNO₃, HCl, NH₃) and particulate matter components (PMCs; SO₄²⁻, NO₃⁻, Cl⁻, NH₄⁺, Na⁺, K⁺, Mg²⁺, Ca²⁺), which are identified as the priority chemical species in EANET. The passive sampler method is also used to determine gaseous species of SO₂, NH₃, NO₂ and O₃. The recommended monitoring method by means of the four-stage filter pack is explained in the Technical Manual, EANET, 2013. The basic flow chart of the four-stage filter pack method is shown in Figure 4.1. The QA/QC for the manual monitoring methods is described in Chapter 4 of the Technical Manual, EANET, 2013.

4.1.3 Monitoring Sites

The measurement methods, monitoring intervals (time intervals of submitted data), and parameters at each monitoring site for air concentration and dry deposition monitoring in 2024 are shown in Table 4.1.1. Automatic monitors were used in Cambodia, China, Japan, Lao PDR, Mongolia, Myanmar, Philippines, Republic of Korea, Thailand, and Vietnam. The methods of automatic monitors are shown in Table 4.1.2.

The filter pack method was used in Cambodia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand and Vietnam, and no passive sampler method was conducted in any country in 2024.

Preparation of filter pack

Stage	Specification of filter	Collected species
1 st (F0)	PTFE filter (pore size: 0.8 µm, diameter: 47 mm)	Aerosols
2 nd (F1)	Polyamide filter (pore size: 0.45 µm, diameter: 47 mm)	HNO ₃ , SO ₂ , HCl, NH ₃
3 rd (F2)	Impregnated cellulose filter Solution: 6% K ₂ CO ₃ + 2% glycerin	SO ₂ , HCl
4 th (F3)	Impregnated cellulose filter Solution: 5% H ₃ PO ₄ + 2% glycerin	NH ₃



Sampling on site

Air flow rate: approximately 1 or 2 liter/minute
Sampling period: one week or two weeks



Extraction of filter pack

Stage	Solvent	Extracted species
F0	Extraction with 20 mL of deionized water	SO ₄ ²⁻ , NO ₃ ⁻ , Cl ⁻ , NH ₄ ⁺ , Na ⁺ , K ⁺ , Mg ²⁺ , Ca ²⁺
F1	Extraction with 20 mL of deionized water	SO ₄ ²⁻ , NO ₃ ⁻ , Cl ⁻ , NH ₄ ⁺
F2	Extraction with 20mL of 0.05% H ₂ O ₂	SO ₄ ²⁻ , Cl ⁻
F3	Extraction with 20mL of deionized water	NH ₄ ⁺



Chemical analysis

By ion chromatography or other suitable analytical methods

Figure 4.1 Flow chart of the four-stage filter pack method

Table 4.1.1 Sampling methods and parameters for air concentration and dry deposition monitoring in 2024

Country	Site	Method	Monitoring Interval*1	Parameter
Cambodia	Phnom Penh	AT FP*4	Hourly 2 weeks	NO, NO ₂ , NO _x , O ₃ , PM _{2.5} SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
China	Chongqing	AT	Daily	SO ₂ , NO, NO _x *, O ₃ -8h, PM ₁₀ , PM _{2.5}
	- Jinyunshan	AT	Daily	SO ₂ , NO ₂ , O ₃ -8h, PM ₁₀ , PM _{2.5}
	Xiamen	AT	Daily	SO ₂ , NO ₂ , O ₃ -8h, PM ₁₀ , PM _{2.5}
	- Hongwen	AT	Daily	SO ₂ , NO ₂ , PM ₁₀
	Zhuhai	AT	Daily	SO ₂ , NO ₂ , PM ₁₀
	- Haibin-Park	AT	Daily	SO ₂ , NO ₂ , PM ₁₀
Indonesia	Wuzhishan	PS*4	Monthly	SO ₂ , NO ₂
	Lijiang	PS*4	Monthly	SO ₂ , NO ₂
Japan	Jakarta	AT	Hourly	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
	Kototabang	FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Rishiri	AT	Hourly	SO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
	Ochiichi	FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Sado-seki	AT	Hourly	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Happo	AT	Hourly	SO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Ijira	AT	Hourly	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Oki	AT	Hourly	SO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Yusuhara	AT	Hourly	SO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Hedo	AT	Hourly	SO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP*4	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Ogasawara	AT	Hourly	SO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Tokyo	FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
		AT	Hourly	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
	Niigata-maki	FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
		AT	Hourly	O ₃ , PM ₁₀ , PM _{2.5}
	Tsushima	FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
		AT	Hourly	O ₃ , PM ₁₀ , PM _{2.5}
		FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
Lao PDR	Vientiane	AT	Hourly	NO, NO ₂ , NO _x , PM ₁₀ , PM _{2.5}
		FP*4	monthly	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
Malaysia	Petaling Jaya	FP	1week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Tanah Rata	FP	1week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Danum Valley	FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs

Table 4.1.1 Sampling methods and parameters for air concentration and dry deposition monitoring in 2024 (continued)

Country	Site	Method	Monitoring Interval* ¹	Parameter
Mongolia	Ulaanbaatar	AT	Hourly	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	-Bayanzurkh	FP	1 week	SO ₂ , HNO ₃ , HCl, PMCs
	-Khan-Uul	FP	2 weeks	SO ₂ , HNO ₃ , HCl, PMCs
Myanmar	Yangon	AT	Hourly	PM _{2.5}
		FP	2 weeks	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
Philippines	Metro Manila	AT	Hourly/Daily	SO ₂ , NO ₂ , O ₃
	-Manila Observatory	FP	4-17 days* ³	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	-North Caloocan	AT* ⁴	Hourly/Daily	PM ₁₀ , PM _{2.5}
	Laguna	FP	5-28 days* ³	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	-Los Baños	AT	Hourly/Daily	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
	-Sta. Rosa	AT	Hourly/Daily	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
	Benguet	AT	Hourly/Daily	PM ₁₀ , PM _{2.5}
	-Mt. Sto. Tomas	FP* ⁴	1 week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
Republic of Korea	Ganghwa	AT	Hourly	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	Once every 6 days	HNO ₃ , HCl, NH ₃ , PMCs in PM _{2.5}
	Jeju	AT	Hourly	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	Once every 6 days	HNO ₃ , HCl, NH ₃ , PMCs in PM _{2.5}
	Imsil	AT	Hourly	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	Once every 6 days	HNO ₃ , HCl, NH ₃ , PMCs in PM _{2.5}
Russia	Listvyanka	FP	1 week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Irkutsk	FP	1 week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Primorskaya	FP	15 days	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
Thailand	Bangkok	AT	Hourly	NO, NO ₂ , O ₃ , PM ₁₀ , PM _{2.5} ,
		FP* ⁴	10 days	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Samutprakarn	AT	Hourly	SO ₂ , NO, NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
	Khanchanaburi	AT	Hourly	SO ₂ , NO, NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
	Chiang Mai	AT	Hourly	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	-Chang Phueak	AT	Hourly	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	-Si Phum	AT	Hourly	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	Nakhon Ratchasima	AT	Hourly	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
Vietnam	Hanoi	FP	1 week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Hoa Binh	AT	Hourly	PM _{2.5}
		FP	1 week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Can Tho	FP	1 week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Ho Chi Minh	FP	1 week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs
	Yen Bai	FP	1 week	SO ₂ , HNO ₃ , HCl, NH ₃ , PMCs

Table 4.1.1 is based on their national monitoring plans.

AT: Automatic monitor, FP: Filter pack, PMCs: particulate matter components.

NOx*: NOx measured by CLD in remote or rural sites.

- *1 The Monitoring interval in Table 4.1.1 refers to the time intervals for submitted data from participating countries for each site and method. The submitted data are disclosed on the EANET website: <https://monitoring.eanet.asia/document/register/index> (registration required).
- *2 FP sampling at the Ganghwa, Jeju, and Imsil sites in the Republic of Korea is conducted once every six days for a 24-hour period using a PM_{2.5} cyclone.
- *3 Their sampling periods are basically 1 week, 2 weeks, 3 weeks or 1 month, however, sometimes change irregularly.
- *4 Their monitoring results were not submitted yet.

Table 4.1.2 Methods of automatic monitors in 2024

Country	Site	Parameter				
		SO ₂	NO _x	O ₃	PM ₁₀	PM _{2.5}
Cambodia	Phnom Penh	--	CLD	UVP	--	β-ray
China	Jinyunshan	UVF	CLD		β-ray	β-ray
	Hongwen	DOAS	DOAS		TEOM	β-ray
	Haibin-Park	DOAS	DOAS		TEOM	β-ray
	Wuzhishan	UVF	CLD	--	β-ray	--
	Lijiang	UVF	CLD	--	β-ray	--
Japan	Rishiri	UVF	CLD	UVP	β-ray	β-ray
	Ochiishi	UVF	--	UVP	β-ray	β-ray
	Sado-seki	UVF	CLD	UVP	β-ray	β-ray
	Happo	UVF	--	UVP	β-ray	β-ray
	Ijira	--	--	--	β-ray	β-ray
	Oki	--	--	UVP	β-ray	β-ray
	Yusuhara	--	--	--	β-ray	β-ray
	Hedo	UVF	--	--	β-ray	β-ray
	Ogasawara	--	--	UVP	β-ray	β-ray
	Niigata-maki	UVF	CLD	UVP	β-ray	β-ray
	Tsushima	--	--	UVP	β-ray	β-ray

Table 4.1.2 Methods of automatic monitors in 2024 (continued)

Country	Site	Parameter				
		SO ₂	NO _x	O ₃	PM ₁₀	PM _{2.5}
Mongolia	Ulaanbaatar	UVF	CLD	UVP	β-ray	β-ray
Myanmar	Yangon	--	--	--	--	β-ray
Philippines	Manila Observatory	--	CLD	UVP	--	--
	North Caloocan	--	--	--	--	β-ray
	Sta. Rosa	DOAS	DOAS	--	TEOM	TEOM
	Mt. Sto. Tomas	--	--	--	--	β-ray
	Lower Session Road	--	--	--	--	--
Republic of Korea	Ganghwa	UVF	CLD	UVP	β-ray	β-ray
	Jeju (Kosan)	UVF	CLD	UVP	β-ray	β-ray
	Imsil	UVF	CLD	UVP	β-ray	β-ray
Thailand	Bangkok	--	--	--	β-ray	β-ray
	Samutprakarn	--	--	--	--	β-ray
	Khanchanaburi	--	--	--	--	β-ray
	Chiang Mai					
	- Chang Phueak	--	--	--	--	β-ray
	- Si Phum	--	--	--	--	β-ray
	Nakhon Ratchasima					
	- Nai Mueang	UVF	--	UVP	--	β-ray
Vietnam	Hoa Binh	--	--	--	--	β-ray

UVF: Ultraviolet fluorescent method, CLD: Chemiluminescence detection method, UVP: Ultraviolet photometric method, β-ray: β-ray absorption method, TEOM: Tapered element oscillating microbalance method, LS: Light scattering method, DOAS: Differential optical absorption spectroscopy method, "--": no monitoring by auto monitors.

4.2 Results of Monitoring

Monitoring data were summarized into monthly average values accompanied with maximum, minimum and data completeness monthly. Summarized data in 2024 are presented in Table 4.3.1 through Table 4.20.2. Some sites have monitored SO₂, NH₃, and/or O₃ with 2 methods. On data report 2024, those values are all shown in each table. The terms and abbreviations are given in Table 4.2.

Table 4.2 Terms and abbreviations

Term/Abbreviation	Definition
Mean	Monthly or annual arithmetic average values
Max-d	Maximum values of daily data
Min-d	Minimum values of daily data

Table 4.2 Terms and abbreviations (continued)

Term/Abbreviation	Definition
Max-10d	Maximum values of 10-day sampling data
Min-10d	Minimum values of 10-day sampling data
Max-w	Maximum values of weekly data
Min-w	Minimum values of weekly data
Max-2w	Maximum values of biweekly data
Min-2w	Minimum values of biweekly data
Max-15d	Maximum values of 15-day sampling data
Min-15d	Minimum values of 15-day sampling data
Max-m	Maximum values of monthly data
Min-m	Minimum values of monthly data
Max-irreg	Maximum values of data during irregular sampling periods (See *3 of Table 4.1.1)
Min-irreg	Minimum values of data during irregular sampling periods (See *3 of Table 4.1.1)
Max-8h d	Maximum of the daily maximum 8-hour average ozone concentrations in the month
Min-8h d	Minimum of the daily maximum 8-hour average ozone concentrations in the month
%	Percentages of monthly or annual data completeness
[<1]	The monthly or the annual value was lower than their reporting limits of O ₃ , PM ₁₀ or PM _{2.5} .
[<0.1]	The monthly or the annual value was lower than their reporting limits of gaseous substances (SO ₂ , HNO ₃ , HCl, NH ₃).
[<0.01]	The monthly or the annual value was lower than their reporting limits of particulate matter components (PMC).
()	Reference data
[***]	No data or no measurement
Data in hatched cell ()	Annual data completeness was not satisfied with EANET criteria. (<70%)
Black cell ()	Monitoring was not carried out.

For information on long-term trends of air concentrations, annual averages of gases and particulate matter concentrations from 2010 to 2024 are summarized in Table 4.21 through Table 4.38.

Monthly and annual dry deposition amounts of gaseous and particulate substances in 2024 are summarized in Table 4.39 through Table 4.49. The Inferential Method is adopted to estimate the dry depositions of EANET priority chemical species. Dry deposition amounts of gaseous and particulate substances are estimated by the product of an atmospheric concentration and a

deposition velocity expressed as, $F_{dry} = V_d \times C$, where F_{dry} , V_d , and C denote the dry deposition flux, the calculated deposition velocity, and the measured atmospheric concentrations, respectively for each species and type of surface. The V_d was calculated by meteorological parameters at the site and parameterization described in the “Technical Manual on Dry Deposition Flux Estimation in East Asia (Network Center for EANET, 2010)”. Since V_d of gases and particulate matter is different in different types of land surfaces, the V_d at each site was first calculated for forest and grass surfaces, and the weighted-average of V_d was then estimated according to the land-use ratio of forest and grass within 1 km square from the site. The estimation of dry deposition flux was made only for the sites in which hourly meteorological data and land use data are available.

In Table 4.3.1 through Table 4.38, ppb unit is used for gases and $\mu\text{g}/\text{m}^3$ unit for particulate matter concentrations. In Table 4.39 through Table 4.49, mmol m^{-2} unit is used for monthly or annual dry deposition amounts. For comparing the other networks’ data, conversion ratios from ppb to $\mu\text{g}/\text{m}^3$, which are based on 20 °C, 1 atm, are provided in Table 4.50.

Reporting limits for individual species depend on specifications of instruments and/or procedures of sampling and analyzing. The NC sets up the reporting limits as shown in Table 4.51 considering methods adopted by each country. The data that air concentrations were less than the reporting limit are specified in the summarized tables. Regarding the particulate matter components measured by the filter pack method, their detection limits for particulate matter components were determined as $0.01 \mu\text{g}/\text{m}^3$ for sampled air volume of 20.16 m^3 considering the value of 3σ , where σ is the standard deviation of blank values obtained at Japan sites in 2003.

Table 4.3.1 SO₂ - Measured by AT

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Mean	3.5	3.8	3.9	3.1	3.2	3.0	3.1	3.5	5.1	2.4	2.0	2.1	3.2
		%	100	100	100	100	100	100	100	97	100	100	97	100	99
		Max-d	4.9	5.6	6.8	3.8	4.5	4.5	4.5	5.3	6.8	3.0	3.0	3.8	6.8
		Min-d	2.3	3.0	2.6	2.3	2.3	2.3	2.3	2.3	1.9	1.1	1.5	1.5	1.1
	Hongwen	Mean	1.1	0.7	1.0	0.7	0.9	1.0	1.2	1.5	1.2	0.6	0.7	0.9	1.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	1.5	1.9	1.9	1.1	1.5	1.5	2.3	2.6	3.0	1.1	1.1	1.5	3.0
		Min-d	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.8	0.4	0.4	0.4	0.4
	Haibin-Park	Mean	1.5	1.5	1.8	2.2	2.7	2.3	2.4	1.6	1.9	2.5	2.5	2.7	2.1
		%	100	100	100	100	100	97	100	100	100	100	100	100	100
		Max-d	1.9	2.3	2.3	2.6	3.4	3.0	3.0	2.3	2.3	3.0	3.4	3.4	3.4
		Min-d	1.1	1.1	1.5	1.9	2.3	1.5	1.1	1.1	1.5	2.3	1.9	2.3	1.1
	Wuzhishan	Mean	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	0.2	0.3	0.5	0.6	0.5	0.3	0.3	0.2	0.2	0.9	1.2	0.7	1.2
		Min-d	< 0.1	< 0.1	0.1	< 0.1	0.2	0.2	0.1	0.2	< 0.1	< 0.1	0.3	0.1	< 0.1
	Lijiang	Mean	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	< 0.1	0.2	0.2	0.1
		%	100	100	97	100	100	100	100	100	100	97	100	90	99
		Max-d	0.6	0.4	0.3	0.2	0.3	0.2	0.2	0.5	0.3	0.2	0.5	0.6	0.6
		Min-d	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	< 0.1
Japan	Rishiri	Mean	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1
		%	98	98	92	98	99	98	98	98	85	98	99	98	97
		Max-d	0.4	0.3	0.2	0.2	0.2	< 0.1	0.1	0.1	< 0.1	0.2	0.2	0.3	0.4
		Min-d	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Ochiishi	Mean	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1
		%	97	97	96	97	90	97	96	96	97	97	90	97	95
		Max-d	0.4	0.2	0.3	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.2	0.7	0.7
		Min-d	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Sado-seki	Mean	0.1	0.1	< 0.1	***	***	***	***	***	***	***	***	***	0.1
		%	98	98	91	***	***	***	***	***	***	***	***	***	24
		Max-d	0.3	1.0	0.4	***	***	***	***	***	***	***	***	***	1.0
		Min-d	< 0.1	< 0.1	< 0.1	***	***	***	***	***	***	***	***	***	< 0.1
	Happo	Mean	< 0.1	< 0.1	< 0.1	***	***	***	***	***	***	***	***	***	< 0.1
		%	98	98	98	***	***	***	***	***	***	***	***	***	24
		Max-d	0.3	0.3	0.3	***	***	***	***	***	***	***	***	***	0.3
		Min-d	< 0.1	< 0.1	< 0.1	***	***	***	***	***	***	***	***	***	< 0.1
	Ijira	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Oki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Yusuhara	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Hedo	Mean	0.1	< 0.1	0.1	< 0.1	***	***	***	***	***	***	***	***	0.1
		%	98	98	98	24	***	***	***	***	***	***	***	***	26
		Max-d	0.3	0.2	0.3	0.1	***	***	***	***	***	***	***	***	0.3
		Min-d	< 0.1	< 0.1	< 0.1	< 0.1	***	***	***	***	***	***	***	***	< 0.1
	Ogasawara	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Niigata-maki	Mean	< 0.1	0.1	< 0.1	***	***	***	***	***	***	***	***	***	< 0.1
		%	98	98	90	***	***	***	***	***	***	***	***	***	24
		Max-d	0.3	0.5	0.3	***	***	***	***	***	***	***	***	***	0.5
		Min-d	< 0.1	< 0.1	< 0.1	***	***	***	***	***	***	***	***	***	< 0.1
Mongolia	Bayanzurkh	Mean	24.1	20.3	13.7	6.3	3.9	1.4	1.8	1.0	2.7	7.3	12.9	25.0	10.3
		%	100	99	99	73	89	100	90	89	98	99	100	99	94
		Max-d	42.8	40.1	23.8	11.2	7.4	4.1	3.8	2.2	9.8	15.4	25.1	48.1	48.1
		Min-d	7.8	5.8	2.0	1.7	0.2	0.4	0.7	0.3	0.5	1.7	3.4	5.7	0.2

Table 4.3.1 SO₂ - Measured by AT (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Sta. Rosa	Mean	8.7	9.3	3.2	8.1	8.8	10.1	25.4	40.3	18.2	12.3	1.4	3.7	11.1
		%	88	92	100	59	100	100	93	14	100	93	47	55	78
		Max-d	11.9	10.9	8.6	10.2	13.5	15.0	274.8	121.4	60.8	85.7	4.2	6.4	274.8
		Min-d	6.4	7.8	2.4	6.7	6.3	6.3	3.8	6.3	3.9	3.7	0.7	2.3	0.7
	Lower Session Road	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	Mean	2.2	2.3	2.3	2.0	2.3	2.8	2.5	2.4	2.2	1.9	2.3	2.8	2.3
		%	97	98	93	95	98	97	97	97	98	97	90	94	96
		Max-d	4.0	3.3	3.6	4.4	4.1	4.5	2.8	3.2	2.7	2.8	3.1	4.0	4.5
		Min-d	1.2	1.7	1.7	1.2	1.4	2.2	2.2	2.0	2.0	1.2	1.5	1.9	1.2
	Jeju	Mean	0.5	0.4	0.5	0.6	0.8	0.5	0.4	0.5	0.7	0.5	0.5	0.5	0.5
		%	98	98	99	98	97	98	96	97	89	94	89	98	96
		Max-d	1.2	1.2	0.7	1.7	3.3	1.9	1.0	1.1	1.8	1.5	0.6	1.0	3.3
		Min-d	0.1	0.3	0.2	0.3	0.3	0.1	0.3	0.4	0.4	0.3	0.4	0.4	0.1
	Imsil	Mean	1.6	1.5	1.6	1.6	1.6	1.6	1.5	1.4	1.3	1.3	1.3	1.6	1.5
		%	89	97	98	94	98	98	97	98	98	98	85	94	95
		Max-d	2.1	1.8	1.9	3.6	2.2	2.1	1.8	1.7	1.5	1.4	1.8	1.9	3.6
		Min-d	1.2	1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.1	1.1	1.1	1.3	1.1
Thailand	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Si Phum	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	1.7	2.1	2.1	2.2	2.0	2.2	2.2	2.4	2.4	0.7	0.1	0.2	1.7
		%	96	96	96	95	96	96	90	48	96	86	95	96	90
		Max-d	2.7	2.6	2.9	2.7	2.3	2.4	2.4	2.7	2.7	2.3	0.6	0.7	2.9
		Min-d	1.2	1.8	1.7	1.7	1.8	2.0	2.0	2.3	2.1	<0.1	<0.1	<0.1	<0.1

Table 4.3.2 SO₂ - Measured by FP

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.1	0.2	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.2
		Min-2w	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1
	Ochiishi	Mean	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.3	0.2
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.3	0.3
		Min-2w	0.1	0.2	0.1	<0.1	0.1	<0.1	0.2	0.1	0.2	0.1	0.1	0.3	<0.1
	Sado-seki	Mean	0.1	0.1	<0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.1	<0.1	<0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.2	0.1	0.2	0.3	0.4	0.3	0.1	0.4	0.1	0.1	<0.1	0.4
		Min-2w	<0.1	<0.1	<0.1	0.2	0.3	0.2	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1

Table 4.3.2 SO₂ - Measured by FP (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Japan	Happo	Mean	0.2	0.2	0.2	0.4	0.5	0.3	0.1	0.4	0.3	0.4	0.3	0.1	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.3	0.2	0.4	0.5	0.3	0.2	0.5	0.4	0.4	0.3	0.1	0.5
		Min-2w	0.1	0.2	0.1	0.3	0.5	0.3	0.1	0.3	0.3	0.4	0.3	0.1	0.1
	Ijira	Mean	<0.1	0.2	<0.1	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.1	0.3	<0.1	0.2	0.3	0.2	<0.1	0.1	0.1	<0.1	<0.1	<0.1	0.3
		Min-2w	<0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Oki	Mean	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	<0.1	<0.1	<0.1	0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	<0.1	<0.1	0.2	0.3
		Min-2w	<0.1	<0.1	0.1	0.2	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Yusuhara	Mean	0.7	0.6	0.3	0.3	0.2	0.3	1.1	<0.1	<0.1	<0.1	0.1	0.3	0.3
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.8	0.8	0.4	0.5	0.2	0.5	1.5	<0.1	<0.1	<0.1	0.1	0.4	1.5
		Min-2w	0.6	0.5	0.2	<0.1	0.1	<0.1	0.7	<0.1	<0.1	<0.1	0.1	0.3	<0.1
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2
		Min-2w	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Tokyo	Mean	0.6	0.5	0.4	0.6	0.7	0.7	0.9	1.0	0.5	0.4	0.5	0.7	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.6	0.5	0.6	0.6	0.9	0.8	1.0	1.1	0.6	0.4	0.5	0.7	1.1
		Min-2w	0.6	0.5	0.3	0.6	0.5	0.7	0.8	0.9	0.4	0.4	0.4	0.7	0.3
	Niigata-maki	Mean	<0.1	0.2	<0.1	***	***	***	***	***	***	***	***	***	0.1
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	<0.1	0.3	0.1	***	***	***	***	***	***	***	***	***	0.3
		Min-2w	<0.1	0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
	Tsushima	Mean	0.3	0.3	0.2	0.3	0.5	0.5	<0.1	0.1	0.2	0.2	0.3	0.3	0.3
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	0.3	0.3	0.3	0.4	0.6	0.8	0.1	0.1	0.3	0.2	0.3	0.4	0.8
		Min-2w	0.3	0.3	0.2	0.2	0.4	0.2	<0.1	0.1	<0.1	<0.1	0.3	0.3	<0.1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.4	0.3	0.5	0.7	0.3	0.6	0.4	0.6	0.7	0.5	0.3	0.3	0.5
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	0.9	0.5	1.0	1.0	0.5	0.9	0.5	1.0	1.2	0.8	0.5	0.7	1.2
		Min-w	<0.1	0.1	0.3	0.3	0.1	0.3	0.2	0.3	0.5	0.2	0.2	0.1	<0.1
	Tanah Rata	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Danum Valley	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mongolia	Khan-Uul	Mean	5.7	4.1	4.1	2.4	2.0	0.8	0.3	0.3	1.1	1.6	1.2	3.5	2.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	10.9	9.7	5.9	2.9	3.9	1.0	0.4	0.4	1.6	2.7	1.5	4.8	10.9
		Min-w	2.4	0.3	2.3	1.4	1.3	0.4	0.2	0.1	0.4	0.9	0.9	2.6	0.1
	Terelj	Mean	1.2	0.8	1.0	0.2	0.3	0.2	<0.1	0.1	0.2	0.3	0.2	0.5	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.3	1.0	1.7	0.5	0.4	0.3	<0.1	0.2	0.4	0.4	0.2	0.5	1.7
		Min-2w	1.2	0.6	0.4	<0.1	0.2	<0.1	<0.1	<0.1	0.1	0.2	0.2	0.5	<0.1
Myanmar	Yangon	Mean	0.3	0.2	0.3	0.3	0.3	0.1	<0.1	0.1	<0.1	0.4	0.3	0.3	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.4	0.5	0.4	0.3	0.2	<0.1	0.1	<0.1	0.5	0.4	0.3	0.5
		Min-2w	0.3	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	0.1	<0.1	0.3	0.3	0.3	<0.1

Table 4.3.2 SO₂ - Measured by FP (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.5	0.6	0.7	0.5	0.5	1.6	0.4	0.3	<0.1	0.3	0.7	0.2	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.7	0.9	1.0	0.9	1.4	2.6	0.4	0.6	0.1	0.8	1.7	0.5	2.6
		Min-irreg	0.4	0.3	0.4	0.2	<0.1	0.4	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Los Baños	Mean	<0.1	0.1	0.1	0.3	0.7	1.1	<0.1	2.4	1.3	0.4	0.8	0.9	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.2	0.3	0.2	0.6	2.6	2.2	<0.1	3.3	1.5	0.5	1.4	2.3	3.3
		Min-irreg	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	1.5	0.9	0.3	0.2	0.1	<0.1
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	12.8	7.6	3.7	1.7	0.7	0.8	1.1	0.9	1.1	5.4	2.5	5.7	3.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	15.2	13.9	7.6	2.1	1.7	1.3	1.5	0.9	1.3	14.0	4.1	6.8	15.2
		Min-w	10.8	1.8	1.4	1.2	0.2	0.4	0.9	0.9	0.9	0.9	1.6	4.6	0.2
	Irkutsk	Mean	17.9	9.9	9.5	3.9	1.2	1.8	1.8	3.8	5.1	7.5	7.4	24.2	7.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	30.2	17.6	20.1	4.2	1.9	3.6	3.9	6.0	7.7	11.3	20.1	28.5	30.2
		Min-w	9.0	1.4	2.3	3.6	0.5	0.8	0.5	1.6	3.4	1.9	3.2	21.4	0.5
	Primorskaya	Mean	0.2	0.4	0.2	0.5	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.2	0.5	0.2	0.5	0.3	0.4	0.5	0.3	0.2	0.2	0.2	0.2	0.5
		Min-15d	0.2	0.3	0.2	0.4	0.3	0.3	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	0.5	0.4	0.5	0.4	0.5	0.7	0.7	0.7	0.7	0.8	1.1	0.9	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.7	0.5	0.6	0.5	0.6	0.9	1.0	1.0	1.1	1.1	1.4	1.0	1.4
		Min-w	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.9	0.9	0.3
	Hoa Binh	Mean	0.5	0.6	1.2	1.1	0.8	0.9	0.8	0.9	1.4	0.8	0.9	1.4	0.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.6	0.7	1.6	1.8	1.5	1.4	1.1	1.3	2.0	0.9	1.2	1.6	2.0
		Min-w	0.4	0.4	1.0	0.6	0.5	0.6	0.6	0.6	0.9	0.7	0.6	1.2	0.4
	Can Tho	Mean	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.6	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.6	0.7
		Min-w	0.6	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5
	Ho Chi Minh	Mean	0.5	0.6	0.6	0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.6	0.7	0.6	0.6	0.7	0.8	0.8	0.7	0.6	0.8	0.6	0.6	0.8
		Min-w	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
	Yen Bai	Mean	0.5	0.7	0.5	0.6	0.6	0.7	0.6	0.6	0.8	1.0	0.7	0.7	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.6	0.8	0.6	0.9	0.8	1.1	0.6	0.8	1.0	1.1	0.9	0.8	1.1
		Min-w	0.4	0.5	0.4	0.5	0.4	0.6	0.5	0.5	0.7	0.8	0.6	0.5	0.4

Table 4.3.3 SO₂ - Measured by PS

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Jakarta	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
	Kototabang	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.4.1 HNO₃ - Measured by FP

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ochiishi	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Sado-seki	Mean	<0.1	<0.1	<0.1	<0.1	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.1	<0.1	<0.1	0.1	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Happo	Mean	<0.1	<0.1	<0.1	0.1	0.2	0.4	0.2	0.3	0.1	<0.1	0.1	<0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.1	<0.1	<0.1	0.2	0.2	0.5	0.3	0.3	0.2	<0.1	0.1	<0.1	0.5
		Min-2w	<0.1	<0.1	<0.1	0.1	0.2	0.3	0.2	0.2	<0.1	<0.1	0.1	<0.1	<0.1
	Ijira	Mean	<0.1	<0.1	<0.1	0.2	0.1	0.2	0.1	0.3	0.1	<0.1	<0.1	<0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.1	<0.1	0.1	0.2	0.2	0.3	0.1	0.3	0.1	<0.1	<0.1	<0.1	0.3
		Min-2w	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	0.3	0.1	<0.1	<0.1	<0.1	<0.1
	Oki	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	<0.1	0.1	<0.1	0.2	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Yusuhara	Mean	<0.1	0.1	<0.1	0.1	0.2	0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.1
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.3	0.1	<0.1	0.1	<0.1	0.3
		Min-2w	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Tokyo	Mean	0.2	0.2	0.2	0.4	0.3	0.7	1.8	0.9	0.3	0.2	0.2	0.2	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.3	0.3	0.6	0.3	1.0	1.9	1.2	0.3	0.2	0.2	0.2	1.9
		Min-2w	0.2	0.2	0.2	0.3	0.3	0.5	1.8	0.6	0.2	0.1	0.2	0.2	0.1
	Niigata-maki	Mean	<0.1	<0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	<0.1	<0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
		Min-2w	<0.1	<0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
	Tsushima	Mean	<0.1	<0.1	<0.1	0.1	0.2	0.4	<0.1	0.2	<0.1	<0.1	<0.1	0.1	0.1
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	<0.1	0.2	0.1	0.2	0.2	0.4	0.1	0.3	<0.1	<0.1	0.1	0.2	0.4
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 4.4.1 HNO₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.4	0.5	0.6	0.6	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.5	0.5
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	1.0	0.8	0.8	0.8	0.6	0.6	0.7	0.6	0.5	0.7	0.6	0.6	1.0
		Min-w	0.1	0.2	0.3	0.5	0.3	0.3	0.4	0.4	0.2	0.3	0.3	0.4	0.1
	Tanah Rata	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	0.2
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Danum Valley	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mongolia	Khan-Uul	Mean	0.2	0.2	0.2	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	0.2	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.4	0.6	0.3	<0.1	0.2	0.2	0.3	0.3	<0.1	<0.1	<0.1	0.2	0.6
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Terej	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Myanmar	Yangon	Mean	0.1	0.2	0.2	<0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.3	0.4	<0.1	0.3	0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.3	0.4
		Min-2w	0.1	0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1
Philippines	Manila Observatory	Mean	0.2	0.2	0.3	<0.1	<0.1	0.3	<0.1	0.2	0.2	0.3	0.2	<0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.3	0.2	0.6	<0.1	0.2	0.8	0.1	0.3	0.3	0.5	0.5	<0.1	0.8
		Min-irreg	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
	Los Baños	Mean	0.1	0.2	<0.1	<0.1	<0.1	0.5	0.4	0.1	0.7	0.2	0.1	1.3	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.2	0.8	<0.1	0.2	0.2	1.2	0.4	0.2	1.3	0.4	0.3	3.8	3.8
		Min-irreg	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	Mean	0.4	0.1	0.3	0.3	0.2	0.6	<0.1	0.1	0.2	0.2	0.3	0.1	0.3
		%	13	17	16	17	16	17	13	13	17	16	10	3	15
		Max-d	0.7	0.4	0.5	0.7	0.4	1.0	<0.1	0.2	0.4	0.7	0.5	0.1	1.0
		Min-d	0.1	<0.1	0.2	0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
	Jeju	Mean	0.1	0.2	0.4	0.6	0.4	0.5	0.4	0.1	0.1	0.5	0.4	0.1	0.3
		%	13	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	0.2	0.2	0.9	0.8	1.3	1.8	1.1	0.2	0.2	1.2	0.8	0.2	1.8
		Min-d	<0.1	<0.1	<0.1	0.3	0.1	0.1	0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1
	Imsil	Mean	***	***	***	0.3	0.3	0.3	0.1	0.2	<0.1	0.1	0.1	<0.1	0.2
		%	***	***	***	3	16	17	16	16	17	16	13	13	10
		Max-d	***	***	***	0.3	0.7	0.5	0.4	0.3	<0.1	0.4	0.2	<0.1	0.7
		Min-d	***	***	***	0.3	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Russia	Listvyanka	Mean	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.2	0.1	0.3	0.3	<0.1	<0.1	0.2	<0.1	<0.1	0.1	0.1	<0.1	0.3
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Irkutsk	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	0.1	0.2	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.3	0.3	0.3	0.3
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Primorskaya	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Min-15d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 4.4.1 HNO₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	0.6	0.4	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.8	1.1	1.1	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.9	0.6	0.4	0.6	0.5	0.6	0.8	0.6	0.8	1.2	1.4	1.3	1.4
		Min-w	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.5	0.3	0.3	0.9	0.9	0.2
	Hoa Binh	Mean	0.4	0.6	0.9	0.7	0.7	0.7	0.6	0.8	0.9	0.6	0.6	1.0	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.5	0.8	1.4	1.0	1.1	1.0	0.9	1.1	1.1	0.7	0.9	1.0	1.4
		Min-w	0.2	0.4	0.7	0.4	0.4	0.2	0.4	0.6	0.3	0.4	0.4	0.9	0.2
	Can Tho	Mean	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		Min-w	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<0.1	0.1	0.1	0.1	<0.1
	Ho Chi Minh	Mean	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.7	0.5	0.7	0.5	0.6	0.6	0.6	0.7	0.5	0.7	0.7	0.5	0.7
		Min-w	0.4	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3
	Yen Bai	Mean	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.8	0.7	0.8	0.6	0.6	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.6	0.8	0.9	0.8	0.7	0.9	0.8	1.1	1.1	1.0	0.9	0.8	1.1
		Min-w	0.4	0.4	0.5	0.3	0.5	0.3	0.5	0.4	0.4	0.6	0.4	0.5	0.3

Terms and abbreviations are given in Table 4.2.

Table 4.5.1 HCl - Measured by FP

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.2	0.3	0.2	0.4	0.5	0.5	0.6	0.4	0.3	0.4	0.4	0.4	0.4
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.2	0.3	0.2	0.6	0.6	0.5	0.6	0.4	0.3	0.4	0.5	0.4	0.6
		Min-2w	0.2	0.2	0.2	0.3	0.4	0.4	0.6	0.4	0.3	0.4	0.4	0.4	0.2
	Ochiishi	Mean	<0.1	0.2	0.1	0.5	0.3	0.5	0.5	0.3	0.3	0.1	<0.1	<0.1	0.3
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	0.1	0.2	0.1	0.7	0.3	0.5	0.6	0.3	0.5	0.1	<0.1	<0.1	0.7
		Min-2w	<0.1	0.1	0.1	0.2	0.3	0.5	0.4	0.3	0.2	0.1	<0.1	<0.1	<0.1
	Sado-seki	Mean	0.3	0.4	0.3	0.5	0.6	0.6	0.8	0.7	0.4	0.5	0.4	0.2	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.5	0.4	0.5	0.6	0.9	0.8	0.8	0.4	0.5	0.5	0.2	0.9
		Min-2w	0.3	0.4	0.2	0.4	0.6	0.3	0.7	0.7	0.3	0.5	0.3	0.2	0.2
	Happo	Mean	<0.1	<0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	<0.1	0.2	<0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	<0.1	0.2	0.1	0.2
		Min-2w	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	0.2	<0.1	<0.1	0.2	<0.1	<0.1
	Ijira	Mean	<0.1	<0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.2	0.1	<0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.1	<0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.7	0.2	0.2	<0.1	0.7
		Min-2w	<0.1	<0.1	0.1	0.1	0.2	0.2	<0.1	0.1	<0.1	0.2	<0.1	<0.1	<0.1
	Oki	Mean	0.4	0.3	0.4	0.5	0.5	0.7	0.5	0.6	0.4	0.3	0.3	0.4	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.4	0.4	0.6	0.5	0.6	0.7	0.6	0.6	0.4	0.4	0.3	0.5	0.7
		Min-2w	0.4	0.2	0.3	0.5	0.5	0.6	0.4	0.6	0.4	0.3	0.2	0.3	0.2
	Yusuhara	Mean	0.3	0.2	0.2	0.3	0.2	0.1	0.3	0.2	0.2	0.1	0.1	0.2	0.2
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.3	0.3	0.2	0.5	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.5
		Min-2w	0.2	0.2	0.2	0.1	0.1	<0.1	0.2	0.2	<0.1	0.1	<0.1	0.1	<0.1
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	0.4	0.4	0.4	0.3	0.4	<0.1	0.3	0.4	<0.1	0.1	0.2	0.3	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.4	0.4	0.4	0.3	0.5	0.1	0.3	0.7	<0.1	0.2	0.2	0.3	0.7
		Min-2w	0.4	0.4	0.3	0.2	0.2	<0.1	0.2	0.2	<0.1	<0.1	0.2	0.3	<0.1
	Tokyo	Mean	0.3	0.4	0.4	0.9	0.9	0.7	0.8	0.8	1.0	0.9	0.4	0.3	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.4	0.5	0.9	0.9	0.8	0.9	1.0	1.1	1.0	0.5	0.4	1.1
		Min-2w	0.3	0.3	0.3	0.9	0.9	0.6	0.7	0.7	0.8	0.7	0.3	0.3	0.3
	Niigata-maki	Mean	0.3	0.3	0.2	***	***	***	***	***	***	***	***	***	0.3
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	0.3	0.3	0.3	***	***	***	***	***	***	***	***	***	0.3
		Min-2w	0.3	0.3	0.2	***	***	***	***	***	***	***	***	***	0.2
	Tsushima	Mean	0.3	0.3	0.1	1.3	0.8	0.3	0.5	0.5	0.3	0.3	0.4	0.4	0.5
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	0.3	0.3	0.3	1.7	0.9	0.4	0.7	0.5	0.6	0.4	0.4	0.4	1.7
		Min-2w	0.3	0.3	<0.1	0.9	0.7	0.3	0.4	0.5	0.1	0.1	0.4	0.4	<0.1

Table 4.5.1 HCl - Measured by FP (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.8	0.8	0.9	1.0	0.6	0.7	0.9	0.6	0.7	0.6	0.7	0.6	0.7
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	1.1	1.0	1.1	1.2	0.7	0.9	1.1	1.0	0.8	0.7	1.0	0.7	1.2
		Min-w	0.6	0.5	0.7	0.5	0.5	0.4	0.7	0.5	0.6	0.6	0.5	0.5	0.4
	Tanah Rata	Mean	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.2
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.5	0.7	0.7
		Min-w	<0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Danum Valley	Mean	0.3	0.4	0.4	0.3	0.2	<0.1	0.2	0.10	0.10	0.1	0.1	0.1	0.2
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.4	0.4	0.5	0.3	0.2	<0.1	0.2	0.20	0.10	0.1	0.2	0.2	0.5
		Min-2w	0.2	0.4	0.4	0.2	0.1	<0.1	<0.1	0.10	<0.1	<0.1	<0.1	0.1	<0.1
Mongolia	Khan-Uul	Mean	2.6	1.8	1.6	1.9	3.8	2.9	3.9	2.6	0.7	0.5	0.2	0.2	1.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.2	2.3	1.7	2.1	5.5	3.9	5.3	3.1	0.8	0.7	0.2	0.3	5.5
		Min-w	2.2	1.1	1.5	1.7	3.0	2.3	2.6	2.1	0.6	0.2	0.1	0.2	0.1
	Terelj	Mean	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.2	<0.1	0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	<0.1	0.1	0.1	0.4
		Min-2w	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.2	<0.1	<0.1	<0.1
Myanmar	Yangon	Mean	0.4	0.4	0.6	0.8	0.7	0.4	0.2	0.2	0.8	0.5	0.3	0.6	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.5	0.5	0.7	1.2	0.7	0.5	0.4	0.3	1.3	0.7	0.5	0.6	1.3
		Min-2w	0.3	0.4	0.6	<0.1	0.6	0.3	0.1	<0.1	0.2	0.2	0.1	0.6	<0.1
Philippines	Manila Observatory	Mean	0.4	0.7	0.8	0.4	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.6	0.8	1.0	0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.6	0.2	1.0
		Min-irreg	<0.1	0.7	0.4	0.2	0.3	0.2	<0.1	<0.1	0.1	0.1	0.2	0.2	<0.1
	Los Baños	Mean	1.4	2.3	3.0	3.6	3.1	2.2	0.1	0.3	1.4	0.3	0.4	1.9	1.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	3.7	2.7	3.6	5.0	4.4	4.5	0.1	0.4	1.9	0.6	0.6	3.4	5.0
		Min-irreg	<0.1	1.8	2.2	2.8	1.4	0.3	0.1	0.2	0.6	<0.1	0.2	1.0	<0.1
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	Mean	0.3	0.3	0.3	0.3	***	***	<0.1	<0.1	<0.1	0.1	0.5	0.4	0.2
		%	13	17	16	17	***	***	16	6	10	16	10	3	11
		Max-d	0.5	0.7	0.5	0.4	***	***	0.2	<0.1	<0.1	0.2	0.6	0.4	0.7
		Min-d	0.2	0.1	0.1	0.1	***	***	<0.1	<0.1	<0.1	<0.1	0.5	0.4	<0.1
	Jeju	Mean	0.1	0.2	0.1	0.1	0.1	<0.1	0.2	0.1	***	<0.1	0.1	0.2	0.1
		%	13	17	6	10	13	7	6	10	***	16	17	13	9
		Max-d	0.2	0.2	0.2	0.3	0.2	<0.1	0.3	0.3	***	<0.1	0.3	0.2	0.3
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	***	<0.1	<0.1	0.1	<0.1
	Imsil	Mean	***	***	***	<0.1	***	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1
		%	***	***	***	3	***	7	10	3	17	16	13	10	5
		Max-d	***	***	***	<0.1	***	<0.1	<0.1	<0.1	0.5	0.2	0.1	0.2	0.5
		Min-d	***	***	***	<0.1	***	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Russia	Listvyanka	Mean	0.4	0.8	0.5	0.3	0.5	0.5	0.6	0.1	0.2	0.3	0.4	0.3	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.4	0.9	1.2	0.4	0.7	0.6	0.9	0.2	0.2	0.5	0.5	0.4	1.2
		Min-w	0.3	0.7	0.3	0.2	0.3	0.4	0.4	0.1	0.1	0.2	0.3	0.2	0.1
	Irkutsk	Mean	0.5	0.2	0.2	0.2	0.1	0.1	<0.1	0.1	0.1	0.3	0.6	0.8	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.8	0.4	0.3	0.2	0.3	0.3	0.1	0.2	0.2	0.4	0.8	0.8	0.8
		Min-w	0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	0.7	<0.1
	Primorskaya	Mean	0.2	0.5	0.5	1.0	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.2	0.9	0.6	1.3	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.3
		Min-15d	0.1	0.1	0.4	0.7	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 4.5.1 HCl - Measured by FP (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	1.2	1.2	0.9	1.0	0.9	1.6	1.9	1.5	1.8	1.8	2.8	2.5	1.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.6	1.5	1.1	1.3	1.1	2.0	3.0	2.6	2.8	2.5	2.9	2.9	3.0
		Min-w	0.9	0.9	0.7	0.8	0.8	0.9	1.1	0.9	1.0	0.8	2.6	2.0	0.7
	Hoa Binh	Mean	1.4	1.9	3.8	3.3	2.7	3.3	2.4	2.4	2.8	2.9	1.8	3.8	2.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.1	2.2	4.2	4.1	3.0	4.2	3.1	3.5	3.7	3.6	2.7	4.8	4.8
		Min-w	1.1	1.3	3.1	2.6	2.4	2.0	1.6	1.7	2.2	2.1	1.0	2.7	1.0
	Can Tho	Mean	1.9	1.6	1.7	1.9	2.0	1.7	1.8	1.7	1.8	1.8	1.8	1.9	1.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.0	2.0	2.2	2.3	2.2	1.9	2.2	2.1	2.1	2.2	1.8	2.0	2.3
		Min-w	1.7	1.3	1.2	1.5	1.8	1.4	1.7	1.5	1.6	1.3	1.7	1.7	1.2
	Ho Chi Minh	Mean	1.9	1.8	1.9	1.7	1.7	1.8	2.0	1.7	2.1	1.7	1.6	1.4	1.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.5	2.5	2.2	2.2	2.0	2.3	2.4	2.1	2.5	2.0	2.0	1.7	2.5
		Min-w	1.6	1.4	1.5	1.3	1.5	1.5	1.8	1.4	1.8	1.4	1.3	1.3	1.3
	Yen Bai	Mean	1.3	1.7	1.5	1.6	1.7	1.8	1.6	2.0	2.8	1.9	1.8	1.6	1.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.4	2.4	2.2	1.7	2.4	2.1	1.9	2.8	3.5	2.5	3.0	2.0	3.5
		Min-w	1.0	0.9	0.9	1.3	1.1	1.5	1.2	1.3	2.5	1.4	1.2	1.1	0.9

Terms and abbreviations are given in Table 4.2.

Table 4.6.1 NH₃ - Measured by FP

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.5	0.5	0.5	1.0	0.9	1.2	1.4	1.3	0.9	1.2	0.6	0.4	0.9
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.7	0.7	0.7	1.4	1.3	1.4	1.6	1.3	1.3	1.2	0.6	0.5	1.6
		Min-2w	0.3	0.2	0.4	0.6	0.5	1.0	1.2	1.2	0.6	1.2	0.6	0.3	0.2
	Ochiishi	Mean	0.1	0.1	0.1	0.3	0.3	0.4	0.6	0.4	0.5	0.5	0.7	0.3	0.4
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	0.1	0.2	0.1	0.4	0.4	0.6	0.6	0.5	0.6	0.5	0.8	0.3	0.8
		Min-2w	0.1	0.1	0.1	0.2	0.3	0.2	0.6	0.4	0.4	0.5	0.6	0.3	0.1
	Sado-seki	Mean	0.3	0.7	0.7	1.2	1.3	1.8	1.2	1.4	1.1	1.0	0.6	0.2	1.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	1.0	0.8	1.7	1.3	1.9	1.5	1.5	1.3	1.1	0.8	0.3	1.9
		Min-2w	0.2	0.4	0.6	1.0	1.3	1.6	0.9	1.3	0.8	0.9	0.3	0.2	0.2
	Happo	Mean	<0.1	0.1	0.5	1.0	0.8	1.1	0.6	0.5	0.4	0.3	0.2	0.1	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.2	0.7	1.6	0.8	1.3	0.7	0.6	0.4	0.3	0.2	0.1	1.6
		Min-2w	<0.1	<0.1	0.2	0.5	0.8	0.9	0.5	0.3	0.3	0.3	0.2	0.1	<0.1
	Ijira	Mean	0.3	0.4	0.5	1.0	0.8	1.1	1.2	1.4	1.1	0.6	0.4	0.3	0.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.6	0.6	1.1	0.9	1.2	1.5	1.5	1.2	0.7	0.5	0.3	1.5
		Min-2w	0.2	0.2	0.4	0.9	0.7	1.0	0.9	1.3	0.9	0.5	0.2	0.2	0.2
	Oki	Mean	0.3	0.3	0.9	1.2	0.8	1.3	0.7	1.2	0.8	0.7	0.4	0.4	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.4	0.3	1.2	1.2	0.8	1.5	0.7	1.2	0.9	0.7	0.5	0.5	1.5
		Min-2w	0.3	0.2	0.6	1.2	0.7	1.1	0.6	1.1	0.7	0.6	0.4	0.2	0.2
	Yusuhara	Mean	0.2	0.2	0.5	0.5	0.8	0.6	0.5	0.7	0.5	0.4	0.3	0.2	0.5
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.2	0.2	0.6	0.6	0.9	0.6	0.6	0.9	0.5	0.5	0.3	0.2	0.9
		Min-2w	0.1	0.2	0.3	0.5	0.7	0.5	0.5	0.6	0.5	0.4	0.2	0.2	0.1
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	0.3	0.4	0.5	0.6	0.7	0.6	0.5	0.9	0.5	0.5	0.5	0.4	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.3	0.4	0.6	0.6	0.9	0.6	0.5	1.1	0.6	0.5	0.6	0.4	1.1
		Min-2w	0.3	0.4	0.4	0.5	0.6	0.5	0.4	0.8	0.4	0.5	0.4	0.4	0.3
	Tokyo	Mean	3.9	3.1	2.2	3.7	3.2	4.1	4.9	4.1	3.5	4.0	3.6	3.6	3.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	4.4	3.1	2.5	3.7	3.4	4.5	5.6	4.2	3.9	4.1	4.2	3.7	5.6
		Min-2w	3.4	3.0	1.8	3.7	2.9	3.8	4.3	4.0	3.1	3.9	3.0	3.5	1.8
	Niigata-maki	Mean	0.5	0.8	0.8	***	***	***	***	***	***	***	***	***	0.7
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	0.6	0.9	0.9	***	***	***	***	***	***	***	***	***	0.9
		Min-2w	0.3	0.7	0.8	***	***	***	***	***	***	***	***	***	0.3
	Tsushima	Mean	0.3	0.3	1.1	1.5	1.3	1.4	2.0	1.6	2.3	0.6	0.7	0.5	1.1
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	0.3	0.3	1.3	1.6	1.6	1.6	3.1	1.6	3.6	0.6	0.8	0.6	3.6
		Min-2w	0.3	0.3	0.8	1.4	1.0	1.2	0.9	1.5	1.0	0.6	0.6	0.5	0.3

Table 4.6.1 NH₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	8.6	8.2	8.2	9.6	7.1	7.8	5.1	6.9	6.5	6.3	6.0	6.7	7.2
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	9.8	10.5	9.8	14.7	8.5	9.3	7.1	7.5	8.0	7.2	8.7	8.4	14.7
		Min-w	7.3	7.2	7.3	7.3	6.2	5.2	2.7	5.9	5.6	5.6	1.2	4.1	1.2
	Tanah Rata	Mean	1.4	1.7	2.1	1.7	1.7	1.8	1.4	1.2	1.1	1.1	1.4	1.8	1.5
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	1.6	2.0	2.7	1.8	1.9	2.0	1.8	1.4	1.4	1.4	1.7	3.3	3.3
		Min-w	0.9	1.2	1.6	1.6	1.5	1.4	0.8	0.9	0.8	0.7	1.2	1.2	0.7
	Danum Valley	Mean	1.3	1.4	1.6	1.5	1.8	1.2	2.0	1.10	1.20	1.1	1.1	1.0	1.3
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	1.6	1.4	1.8	1.7	2.1	1.2	2.4	1.40	1.20	1.3	1.3	1.0	2.4
		Min-2w	1.2	1.4	1.4	1.4	1.4	1.2	1.5	0.90	1.10	0.9	1.0	0.9	0.9
Mongolia	Khan-Uul	Mean	8.1	6.4	6.6	8.0	9.0	15.0	23.9	17.1	2.9	1.3	<0.1	0.3	8.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	11.6	8.1	8.1	13.7	10.3	18.4	28.1	22.8	4.2	3.4	<0.1	1.1	28.1
		Min-w	4.9	5.6	5.8	5.6	6.9	13.4	18.0	8.2	1.3	<0.1	<0.1	<0.1	<0.1
	Terej	Mean	1.0	0.8	0.8	1.3	1.7	1.4	1.5	2.7	1.5	1.2	<0.1	<0.1	1.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.2	0.8	1.1	1.6	2.2	2.0	1.8	3.6	1.8	1.3	<0.1	<0.1	3.6
		Min-2w	0.7	0.7	0.6	1.0	1.1	0.9	1.3	1.7	1.0	1.2	<0.1	<0.1	<0.1
Myanmar	Yangon	Mean	0.8	1.1	0.3	1.2	1.6	2.0	0.3	0.6	1.1	1.7	0.7	0.2	1.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.8	1.7	0.4	1.8	2.5	2.4	0.4	0.9	1.3	2.4	1.1	0.2	2.5
		Min-2w	0.8	0.5	0.2	0.5	0.6	1.6	0.2	0.3	1.0	1.2	0.2	0.1	0.1
Philippines	Manila Observatory	Mean	21.5	18.3	13.0	8.7	7.1	6.5	2.2	2.6	4.9	5.1	6.2	6.3	8.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	29.2	21.5	24.9	14.6	11.0	7.8	3.8	2.8	7.3	6.0	7.2	7.2	29.2
		Min-irreg	15.1	10.7	0.5	2.6	4.4	5.4	1.4	2.4	3.6	4.4	5.4	5.5	0.5
	Los Baños	Mean	4.7	6.8	3.5	5.0	2.2	2.4	1.9	3.6	2.9	0.8	3.0	3.0	3.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	5.7	11.8	4.0	6.9	4.5	2.6	1.9	6.2	4.2	1.6	4.1	4.6	11.8
		Min-irreg	3.1	3.7	2.9	2.3	<0.1	2.0	1.9	1.0	1.8	<0.1	2.4	2.1	<0.1
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	Mean	3.4	4.1	3.4	1.1	3.1	2.8	2.7	4.1	4.0	4.5	2.6	1.0	3.2
		%	13	17	16	13	16	17	16	13	17	16	10	3	15
		Max-d	4.8	11.0	5.9	1.8	4.8	4.4	3.5	6.9	7.4	8.7	4.2	1.0	11.0
		Min-d	1.4	1.6	1.1	0.6	1.9	0.9	1.8	1.7	2.1	1.8	1.3	1.0	0.6
	Jeju	Mean	1.9	3.2	2.7	4.3	2.3	4.7	4.6	4.7	3.7	2.9	3.0	1.0	3.6
		%	10	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	2.9	4.5	4.6	5.4	3.7	5.3	5.8	6.8	4.6	4.8	5.6	2.8	6.8
		Min-d	1.0	2.3	1.6	3.0	1.2	3.8	4.1	3.1	3.0	1.9	1.2	<0.1	1.0
	Imsil	Mean	***	***	***	4.8	5.3	6.9	5.4	5.4	1.6	1.2	1.2	0.7	4.8
		%	***	***	***	3	16	17	16	16	17	16	13	13	10
		Max-d	***	***	***	4.8	7.5	8.2	7.7	6.3	3.4	1.7	1.5	0.9	8.2
		Min-d	***	***	***	4.8	3.6	5.1	3.5	4.1	0.2	0.8	1.0	0.5	0.2
Russia	Listvyanka	Mean	0.9	0.7	1.3	3.9	4.2	2.0	2.7	1.9	1.5	2.2	1.9	1.4	2.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.3	0.8	2.0	6.0	6.8	2.7	4.5	3.4	2.6	3.3	2.2	1.6	6.8
		Min-w	0.7	0.7	<0.1	0.8	<0.1	1.5	<0.1	0.4	1.5	1.4	1.2	1.2	<0.1
	Irkutsk	Mean	2.3	1.8	2.2	0.9	6.5	8.1	6.9	4.4	4.0	3.7	5.5	5.8	4.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.0	3.5	3.5	2.2	12.2	11.8	9.6	8.1	5.6	5.3	8.9	10.1	12.2
		Min-w	0.8	0.6	1.6	<0.1	2.3	3.8	2.3	1.1	1.9	1.8	3.3	3.4	<0.1
	Primorskaya	Mean	0.2	0.4	0.1	0.9	1.1	1.6	1.9	3.7	1.9	0.9	0.7	0.5	1.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.3	0.4	0.2	1.8	1.3	2.2	3.7	3.7	2.5	1.2	1.1	0.5	3.7
		Min-15d	0.1	0.4	<0.1	<0.1	0.9	1.0	<0.1	3.7	1.3	0.5	0.3	0.4	<0.1

Table 4.6.1 NH₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	2.1	2.0	1.6	1.8	1.9	2.5	3.0	2.8	2.8	3.3	3.9	3.7	2.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.5	2.6	1.7	2.2	2.3	3.3	4.0	4.2	3.5	4.8	4.4	4.2	4.8
		Min-w	1.4	1.6	1.4	1.6	1.5	1.7	1.8	2.0	2.2	1.5	3.5	2.7	1.4
	Hoa Binh	Mean	1.6	1.8	2.6	2.2	2.2	2.1	1.7	2.0	2.6	2.1	1.8	2.3	2.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.0	3.2	3.4	2.4	2.7	2.5	1.8	2.3	2.8	2.9	2.3	2.7	3.4
		Min-w	1.4	1.2	2.1	1.7	1.6	1.8	1.4	1.6	2.4	1.7	1.5	2.1	1.2
	Can Tho	Mean	5.2	4.0	5.0	4.7	4.4	4.4	4.6	4.7	4.4	4.3	4.2	4.0	4.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	6.2	5.0	5.5	5.6	5.7	4.8	4.9	5.3	5.0	5.0	4.8	4.7	6.2
		Min-w	4.4	3.2	4.2	4.1	3.2	4.0	4.3	4.0	3.9	3.9	3.3	3.7	3.2
	Ho Chi Minh	Mean	3.2	2.7	2.7	2.7	2.4	2.5	3.1	2.5	3.0	2.8	2.5	2.7	2.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.7	3.0	2.8	4.0	2.8	2.8	4.0	3.0	3.1	3.1	3.1	3.0	4.0
		Min-w	2.7	2.5	2.6	2.1	2.2	2.0	2.3	2.0	2.9	2.1	1.9	2.2	1.9
	Yen Bai	Mean	2.9	2.9	3.0	2.7	3.0	2.9	2.7	3.0	3.2	2.5	3.3	3.0	2.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.4	3.3	3.3	3.5	3.4	3.2	3.6	3.3	3.8	2.9	3.6	3.4	3.8
		Min-w	2.6	2.2	2.6	1.6	2.6	2.5	2.2	2.7	2.5	2.0	3.1	2.8	1.6

Terms and abbreviations are given in Table 4.2.

Table 4.7 NO - Measured by AT

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	2.1	0.6	0.7	***	1.6	1.0	1.1	***	***	***	0.7	1.2	1.1
		%	12	8	60	***	11	100	27	***	***	***	17	100	28
		Max-d	3.8	0.6	1.6	***	2.6	4.0	2.2	***	***	***	0.9	3.2	4.0
		Min-d	0.9	0.6	0.4	***	1.0	0.4	0.4	***	***	***	0.6	0.5	0.4
China	Jinyunshan	Mean	2.2	1.7	1.8	1.6	1.6	1.6	1.5	1.6	1.6	1.8	1.8	2.0	1.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	5.6	2.4	2.4	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	4.0	5.6
		Min-d	1.6	1.6	1.6	1.6	0.8	1.6	0.8	1.6	0.8	1.6	1.6	1.6	0.8
Japan	Rishiri	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	98	98	91	98	98	98	98	97	84	98	98	98	96
		Max-d	<0.1	<0.1	<0.1	0.2	0.2	0.1	0.1	0.2	0.3	<0.1	<0.1	<0.1	0.3
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Sado-seki	Mean	<0.1	<0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
		%	97	97	90	***	***	***	***	***	***	***	***	***	24
		Max-d	0.1	<0.1	0.2	***	***	***	***	***	***	***	***	***	0.2
		Min-d	<0.1	<0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
	Ijira	Mean	0.2	0.2	0.1	***	***	***	***	***	***	***	***	***	0.2
		%	98	98	100	***	***	***	***	***	***	***	***	***	25
		Max-d	0.4	0.3	0.4	***	***	***	***	***	***	***	***	***	0.4
		Min-d	<0.1	<0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
	Niigata-maki	Mean	0.1	<0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
		%	95	96	89	***	***	***	***	***	***	***	***	***	23
		Max-d	0.5	0.3	0.1	***	***	***	***	***	***	***	***	***	0.5
		Min-d	<0.1	<0.1	<0.1	***	***	***	***	***	***	***	***	***	<0.1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Bayanzurkh	Mean	92.0	74.2	54.6	44.8	38.2	27.3	29.6	34.9	45.3	68.9	55.2	97.6	55.3
		%	100	100	99	98	92	100	100	98	98	95	98	99	98
		Max-d	138.4	136.2	84.1	74.0	66.6	42.8	46.5	51.1	81.2	122.8	109.1	186.3	186.3
		Min-d	36.5	20.6	17.6	15.9	16.1	13.2	16.7	17.9	15.7	21.4	11.0	17.1	11.0
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkom Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Si Phum	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.8.1 NO₂ - Measured by AT

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	2.1	3.9	3.8	***	4.7	3.9	3.0	***	***	***	2.2	3.7	3.6
		%	12	8	60	***	11	100	27	***	***	***	17	100	28
		Max-d	3.1	4.1	5.8	***	5.0	6.6	4.1	***	***	***	3.5	5.0	6.6
		Min-d	1.9	2.6	3.0	***	3.8	2.2	2.0	***	***	***	1.3	2.5	1.3
China	Hongwen	Mean	13.8	5.1	11.4	7.5	6.1	3.5	2.4	6.6	4.6	3.4	4.3	8.8	6.5
		%	100	100	100	100	100	100	100	100	100	100	97	100	100
		Max-d	23.5	14.6	22.5	14.1	12.0	10.5	7.3	12.6	11.5	11.0	9.4	16.7	23.5
		Min-d	7.3	1.6	4.2	2.1	3.1	1.0	1.0	1.6	1.0	1.0	1.0	4.7	1.0
	Haibin-Park	Mean	14.6	11.1	12.7	6.9	7.6	3.7	4.3	6.0	7.3	9.3	13.3	18.3	9.6
		%	100	100	100	100	100	97	97	97	100	97	100	100	99
		Max-d	31.9	24.6	25.1	16.2	13.1	11.5	7.3	11.5	11.0	13.6	18.8	33.5	33.5
		Min-d	3.1	5.2	6.3	3.1	2.1	1.0	2.6	3.1	2.6	5.8	9.4	11.0	1.0
	Wuzhishan	Mean	1.2	0.8	1.1	0.6	0.5	0.4	0.4	0.5	0.5	0.9	1.5	2.4	0.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	3.3	1.5	2.6	1.3	1.3	0.9	0.6	0.8	0.8	2.3	3.1	4.6	4.6
		Min-d	0.6	0.5	0.3	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.4	<0.1
	Lijiang	Mean	0.8	0.6	0.8	1.0	1.1	0.9	0.7	0.7	0.7	0.6	0.7	0.6	0.8
		%	97	100	100	100	100	97	100	97	100	100	100	84	98
		Max-d	2.3	1.2	1.7	1.5	1.5	2.1	1.0	1.1	1.4	1.0	1.6	1.3	2.3
		Min-d	0.1	0.3	0.4	0.8	0.6	0.5	0.4	0.2	0.4	<0.1	0.3	0.2	<0.1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Bayanzurkh	Mean	32.2	29.2	24.3	18.2	16.9	13.5	14.7	14.9	16.3	21.4	16.2	28.3	20.5
		%	100	100	99	98	92	100	100	98	98	95	98	99	98
		Max-d	41.2	42.1	34.4	25.0	23.6	18.2	22.7	21.9	24.8	29.2	22.5	43.6	43.6
		Min-d	15.3	9.5	9.1	8.2	8.1	5.8	8.2	8.9	6.4	9.5	5.3	7.6	5.3
Philippines	Manila Observatory	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Sta. Rosa	Mean	27.0	27.3	125.3	18.7	19.3	18.2	40.2	49.5	46.0	41.3	42.8	148.0	48.3
		%	94	94	100	59	100	100	93	14	100	93	47	55	79
		Max-d	63.7	53.4	165.2	35.4	32.2	24.0	61.1	52.4	174.7	77.6	57.3	199.1	199.1
		Min-d	14.4	15.7	81.4	11.5	10.5	12.3	22.5	40.1	20.9	16.9	33.3	101.3	10.5
	Lower Session Road	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	Mean	7.1	5.7	6.2	4.6	2.8	2.9	3.6	3.1	4.1	6.0	6.9	6.8	5.0
		%	97	98	93	95	98	96	97	95	98	97	97	94	96
		Max-d	26.1	16.4	17.1	10.3	5.8	6.2	5.6	6.0	7.2	11.5	20.1	29.1	29.1
		Min-d	1.5	1.1	1.7	1.3	0.8	0.3	2.2	1.9	2.5	3.5	2.9	2.9	0.3
	Jeju	Mean	3.5	2.7	2.9	3.9	2.6	2.5	1.6	2.4	3.0	2.8	2.7	2.5	2.7
		%	98	98	99	98	97	98	97	98	94	91	89	98	96
		Max-d	7.0	5.7	6.2	9.9	4.4	4.1	2.9	3.7	4.4	4.1	3.9	5.0	9.9
		Min-d	0.8	1.3	1.4	1.9	1.5	1.4	0.9	1.1	1.0	1.8	1.6	1.2	0.8
	Imsil	Mean	6.8	5.3	5.3	5.0	3.7	3.5	2.3	2.5	2.4	2.8	4.3	5.0	4.1
		%	97	96	98	94	98	98	97	98	98	95	98	97	97
		Max-d	13.9	16.5	8.4	7.5	5.5	4.0	3.3	3.1	2.9	3.7	7.4	9.3	16.5
		Min-d	3.1	2.6	2.9	3.6	2.6	2.4	1.8	1.9	1.9	1.8	2.4	3.1	1.8

Table 4.8.1 NO₂ - Measured by AT (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Si Phum	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.8.2 NO₂ - Measured by PS

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Jakarta	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
	Kototabang	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.9 NOx - Measured by AT

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	4.2	4.4	4.5	***	6.3	5.0	4.1	***	***	***	2.9	4.9	4.7
		%	12	8	60	***	11	100	27	***	***	***	17	100	28
		Max-d	6.9	4.6	6.7	***	7.3	10.6	6.4	***	***	***	4.3	7.6	10.6
		Min-d	2.8	3.2	3.5	***	4.8	2.6	2.9	***	***	***	1.9	3.2	1.9
China	Jinyunshan (NOx*)	Mean	12.7	8.6	11.0	7.7	7.1	6.4	6.3	7.2	7.7	8.7	8.9	12.6	8.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	20.3	13.6	18.1	8.9	9.4	8.9	8.9	11.5	10.5	12.3	15.0	19.7	20.3
		Min-d	8.4	6.3	6.3	5.8	4.5	4.7	3.9	5.3	6.0	4.7	5.3	8.4	3.9
Japan	Rishiri (NOx*)	Mean	0.6	0.5	0.5	0.5	0.4	0.3	0.2	0.3	0.5	0.6	0.5	0.4	0.4
		%	98	98	91	98	98	98	98	97	84	98	98	98	96
		Max-d	1.6	1.5	0.9	1.3	1.9	1.1	0.8	1.5	0.7	1.0	1.4	1.1	1.9
		Min-d	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.3	0.1	0.3	<0.1
	Sado-seki (NOx*)	Mean	0.6	0.5	1.0	***	***	***	***	***	***	***	***	***	0.7
		%	97	97	90	***	***	***	***	***	***	***	***	***	24
		Max-d	1.2	1.3	2.6	***	***	***	***	***	***	***	***	***	2.6
		Min-d	0.3	0.2	0.3	***	***	***	***	***	***	***	***	***	0.2
	Ijira (NOx*)	Mean	0.6	1.0	1.3	***	***	***	***	***	***	***	***	***	1.0
		%	98	98	100	***	***	***	***	***	***	***	***	***	25
		Max-d	1.6	3.3	3.3	***	***	***	***	***	***	***	***	***	3.3
		Min-d	<0.1	0.3	0.3	***	***	***	***	***	***	***	***	***	<0.1
	Niigata-maki (NOx*)	Mean	1.9	1.9	1.8	***	***	***	***	***	***	***	***	***	1.9
		%	95	96	89	***	***	***	***	***	***	***	***	***	23
		Max-d	4.9	3.3	4.4	***	***	***	***	***	***	***	***	***	4.9
		Min-d	0.4	0.8	0.4	***	***	***	***	***	***	***	***	***	0.4
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Bayanzurkh	Mean	124.2	103.4	79.0	63.0	55.1	40.8	44.4	49.8	61.5	90.3	71.3	125.8	75.9
		%	100	100	99	98	92	100	100	98	98	95	98	99	98
		Max-d	179.3	177.0	117.7	97.7	89.4	60.6	69.2	73.0	106.0	150.6	129.9	229.9	229.9
		Min-d	51.8	30.1	26.7	24.1	24.2	18.9	25.2	26.8	22.1	30.8	16.3	24.8	16.3
Thailand	Khanchanaburi(NOx*) (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Si Phum	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

NOx* : NOx measured by CLD in remote or rural sites

Terms and abbreviations are given in Table 4.2.

Table 4.10.1 O₃ - Measured by AT

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	31	30	32	28	24	20	16	17	15	21	24	29	24
		%	100	100	85	100	100	100	99	100	100	100	100	100	99
		Max-d	41	40	40	38	43	38	25	31	22	31	41	41	43
		Min-d	17	24	22	18	13	13	11	11	9	14	16	15	9
Japan	Rishiri	Mean	37	42	45	45	40	33	28	19	30	36	33	35	35
		%	99	99	93	99	100	99	99	99	85	99	100	99	98
		Max-d	47	53	48	61	56	47	45	36	40	44	47	42	61
		Min-d	30	37	41	32	22	18	14	7	21	30	26	31	7
	Ochiishi	Mean	32	37	40	41	39	33	33	21	32	34	31	32	34
		%	99	100	99	100	93	99	99	99	99	99	92	100	98
		Max-d	38	47	43	48	64	48	44	37	38	43	39	37	64
		Min-d	28	32	37	35	24	24	21	9	22	26	25	28	9
	Sado-seki	Mean	39	42	49	53	52	52	35	29	38	39	38	37	42
		%	99	98	99	99	99	99	99	97	99	99	99	99	99
		Max-d	46	46	69	65	75	66	49	42	47	46	43	40	75
		Min-d	32	40	44	38	38	33	25	19	28	33	32	32	19
	Happo	Mean	44	47	53	63	***	***	32	32	32	40	43	43	42
		%	99	98	98	17	***	***	40	99	99	99	99	99	71
		Max-d	50	51	67	67	***	***	50	43	52	50	48	54	67
		Min-d	33	43	45	57	***	***	18	18	13	26	37	39	13
	Ijira	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Oki	Mean	41	44	52	54	53	53	30	32	33	43	40	42	44
		%	99	99	99	99	99	99	99	5	85	99	99	84	89
		Max-d	48	51	72	64	65	74	51	35	50	48	49	51	74
		Min-d	35	39	43	41	40	17	18	35	17	35	33	32	17
	Yusuhara	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	***	***	***	***	***	13	10	15	13	32	36	42	25
		%	***	***	***	***	***	74	61	87	57	90	98	99	47
		Max-d	***	***	***	***	***	39	20	31	22	44	51	48	51
		Min-d	***	***	***	***	***	6	6	6	7	16	13	32	6
	Niigata-maki	Mean	33	36	42	***	***	***	***	***	***	***	***	***	37
		%	99	99	91	***	***	***	***	***	***	***	***	***	24
		Max-d	40	40	64	***	***	***	***	***	***	***	***	***	64
		Min-d	25	31	32	***	***	***	***	***	***	***	***	***	25
	Tsushima	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Bayanzurkh	Mean	4	7	9	10	11	12	11	8	7	6	4	3	8
		%	100	100	99	99	92	100	99	99	100	99	100	100	99
		Max-d	13	15	17	18	18	23	18	13	13	13	12	13	23
		Min-d	<1	1	5	6	6	5	4	3	3	<1	<1	<1	<1
Philippines	Manila Observatory	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Sta. Rosa	Mean	125	127	169	109	127	138	20	25	27	29	26	195	98
		%	100	100	100	59	100	100	93	14	99	100	47	55	81
		Max-d	149	141	260	130	161	153	36	30	47	47	39	265	265
		Min-d	107	114	98	93	101	121	11	23	18	19	19	130	11
	Lower Session Road	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.10.1 O₃ - Measured by AT (continued)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	32	39	45	50	44	46	35	43	40	41	37	33	40
		%	97	98	93	95	97	97	97	97	95	97	97	94	96
		Max-d	40	50	55	72	66	73	58	70	63	56	55	39	73
		Min-d	12	26	35	33	32	27	16	24	18	25	23	12	12
	Jeju	Mean	42	43	52	52	55	47	25	40	31	47	42	44	43
		%	100	100	100	99	99	100	99	100	96	91	90	100	98
		Max-d	52	62	61	66	71	64	50	72	61	67	56	65	72
		Min-d	34	28	43	40	42	24	12	23	11	32	35	39	11
	Imsil	Mean	31	36	46	45	42	42	23	24	20	25	27	28	32
		%	97	97	98	94	98	98	97	98	98	98	98	97	97
		Max-d	39	48	61	57	53	58	47	35	34	37	37	38	61
		Min-d	15	26	35	30	34	23	10	13	10	13	15	16	10
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	19	24	28	33	23	15	11	15	16	23	29	***	21
		%	96	96	96	95	96	96	95	96	96	96	95	***	88
		Max-d	35	35	42	48	38	21	19	23	21	39	50	***	50
		Min-d	11	14	14	24	6	10	8	8	11	11	<1	***	<1

Table 4.10.2 O₃-8h - Measured by AT (monthly and annual averages were calculated using 8-hour moving averages.)

Unit : ppb

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Max-8h d* ¹	56	67	92	93	87	101	89	105	116	64	45	50	116
		Min-8h d* ²	15	13	23	29	26	33	27	38	27	17	13	17	13
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Mean	29	33	50	49	60	54	55	78	76	41	29	33	49
	Hongwen	Max-8h d* ¹	76	58	76	72	61	50	41	71	67	89	65	61	89
		Min-8h d* ²	25	22	9	19	11	9	9	22	13	22	25	22	9
		%	100	100	100	100	100	97	100	100	97	100	97	100	99
		Mean	47	39	46	36	34	22	19	43	33	47	40	44	38
	Haibin-Park	Max-8h d* ¹	111	51	125	76	105	76	53	77	118	131	109	88	131
		Min-8h d* ²	11	10	12	19	20	18	15	19	27	41	17	32	10
		%	100	100	100	97	94	90	100	100	100	100	100	97	98
		Mean	48	29	46	35	54	33	26	38	56	72	56	61	46

*1 Max-8h d: Maximum of the daily maximum 8-hour average ozone concentrations in the month

*2 Min-8h d: Minimum of the daily maximum 8-hour average ozone concentrations in the month

Terms and abbreviations are given in Table 4.2.

Table 4.11 PM₁₀ - Measured by ATUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Mean	53	55	51	23	23	17	17	21	22	25	26	52	32
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	112	256	86	51	49	41	48	57	56	65	60	85	256
		Min-d	18	11	13	9	9	6	8	6	7	9	7	10	6
	Hongwen	Mean	56	36	58	32	29	16	17	29	24	29	29	47	34
		%	100	100	100	100	94	100	100	100	100	100	100	100	99
		Max-d	99	132	102	55	53	26	27	51	44	47	46	84	132
		Min-d	22	10	11	15	9	5	9	8	5	7	8	26	5
	Haibin-Park	Mean	51	32	44	27	24	18	14	20	20	40	41	63	33
		%	100	100	100	97	94	90	97	100	100	100	100	94	98
		Max-d	83	57	84	43	47	27	25	35	30	67	62	104	104
		Min-d	24	9	23	17	9	13	9	12	12	25	11	44	9
	Wuzhishan	Mean	12	16	18	21	12	9	6	8	6	16	11	16	13
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	19	25	59	34	30	17	12	12	16	94	26	33	94
		Min-d	3	2	3	12	3	3	2	6	<1	<1	<1	1	<1
	Lijiang	Mean	10	8	12	15	12	7	5	8	6	5	6	6	8
		%	100	100	100	100	100	100	100	100	100	100	97	90	99
		Max-d	28	22	25	24	23	17	9	17	12	17	14	15	28
		Min-d	3	2	2	5	2	2	<1	<1	<1	<1	<1	1	<1
Japan	Rishiri	Mean	14	23	20	28	27	21	22	15	21	22	21	13	21
		%	83	100	100	100	100	99	100	100	88	100	100	100	97
		Max-d	34	134	73	68	72	56	62	57	44	56	66	31	134
		Min-d	8	6	9	9	4	5	7	5	7	6	7	8	4
	Ochiishi	Mean	12	12	16	15	16	11	13	11	14	17	13	8	13
		%	99	95	99	100	99	99	100	98	99	99	99	98	99
		Max-d	23	26	51	43	43	19	28	34	42	34	29	19	51
		Min-d	4	7	6	4	6	4	4	3	4	6	5	3	3
	Sado-seki	Mean	19	16	24	39	19	17	24	14	12	15	17	20	20
		%	100	100	100	100	100	100	100	100	99	96	100	100	99
		Max-d	40	39	80	154	50	59	50	29	23	37	34	34	154
		Min-d	3	3	7	4	11	6	8	5	8	6	5	9	3
	Happo	Mean	***	3	18	30	14	20	11	13	8	5	4	3	11
		%	***	38	31	67	99	100	99	72	100	100	100	87	74
		Max-d	***	11	38	101	39	69	25	24	21	11	9	8	101
		Min-d	***	<1	7	2	3	4	4	3	2	2	1	<1	<1
	Ijira	Mean	5	7	12	23	13	15	22	18	18	11	8	6	14
		%	100	64	100	100	100	99	99	100	100	99	99	63	94
		Max-d	12	17	35	86	23	34	52	33	31	19	20	14	86
		Min-d	2	2	<1	6	4	7	10	7	4	1	3	2	<1
	Oki	Mean	35	29	41	38	23	23	26	19	18	25	27	31	28
		%	100	100	94	100	97	100	100	100	97	100	95	84	97
		Max-d	59	60	87	143	52	65	54	35	45	55	45	49	143
		Min-d	14	10	13	13	11	6	7	8	7	8	18	6	6
	Yusuhara	Mean	8	7	12	11	10	9	9	11	8	5	8	9	9
		%	100	100	99	100	100	99	100	96	100	98	100	100	99
		Max-d	18	30	41	48	23	20	17	20	21	14	16	21	48
		Min-d	2	1	<1	<1	1	<1	1	1	<1	1	2	3	<1
	Hedo	Mean	***	***	***	***	***	***	29	27	33	37	31	23	30
		%	***	***	***	***	***	***	23	99	99	100	100	99	44
		Max-d	***	***	***	***	***	***	39	60	67	62	50	33	67
		Min-d	***	***	***	***	***	***	15	15	11	18	17	10	10
	Ogasawara	Mean	16	18	20	21	23	13	13	19	18	25	18	14	18
		%	99	100	99	100	100	100	99	100	100	99	99	94	99
		Max-d	32	35	34	75	39	25	44	37	38	45	46	22	75
		Min-d	9	12	12	7	6	3	6	9	6	12	7	6	3
	Niigata-maki	Mean	21	20	30	***	***	***	***	***	***	***	***	***	24
		%	100	100	92	***	***	***	***	***	***	***	***	***	24
		Max-d	39	44	104	***	***	***	***	***	***	***	***	***	104
		Min-d	5	9	11	***	***	***	***	***	***	***	***	***	5
	Tsushima	Mean	15	12	24	36	19	16	11	15	16	15	18	18	18
		%	100	100	94	100	100	100	100	99	99	93	100	100	99
		Max-d	43	56	61	270	53	53	18	37	36	26	33	41	270
		Min-d	5	<1	4	3	12	1	4	8	9	3	5	8	<1

Table 4.11 PM₁₀ - Measured by AT (continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Bayanzurkh	Mean	92	79	67	99	72	72	56	54	60	90	78	95	76
		%	100	100	96	98	92	98	100	99	100	70	75	99	94
		Max-d	168	131	103	511	137	160	101	83	87	147	149	211	511
		Min-d	34	36	22	17	24	35	20	17	19	22	21	11	11
Philippines	North Caloocan	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Sta. Rosa	Mean	45	48	81	79	46	70	72	135	88	44	178	38	69
		%	94	94	94	58	82	100	98	92	92	73	5	97	82
		Max-d	71	82	141	118	83	187	128	333	161	59	<1	62	333
		Min-d	33	33	38	99	27	26	30	47	29	24	<1	20	<1
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	Mean	41	41	60	50	34	31	26	29	24	28	31	29	35
		%	97	85	73	97	97	99	97	94	82	97	93	94	92
		Max-d	79	74	225	100	90	43	53	42	38	55	61	57	225
		Min-d	17	13	13	20	22	21	14	18	15	12	8	11	8
	Jeju	Mean	25	22	31	43	30	19	19	23	22	26	37	34	27
		%	92	93	98	91	88	96	97	94	97	97	98	89	94
		Max-d	84	75	78	188	102	62	26	43	32	48	59	67	188
		Min-d	4	3	4	6	8	6	10	14	12	14	16	14	3
	Imsil	Mean	29	27	38	35	22	20	13	16	12	14	18	22	22
		%	97	97	88	93	87	98	96	98	80	95	98	91	93
		Max-d	60	85	90	128	81	39	26	28	24	27	36	48	128
		Min-d	6	5	9	6	6	9	8	5	5	5	8	12	5
Thailand	Bangkok	Mean	48	41	36	39	34	22	21	20	23	26	33	43	32
		%	100	100	100	100	100	100	99	99	100	100	100	100	100
		Max-d	76	79	60	70	63	29	27	25	35	40	53	63	79
		Min-d	35	26	26	24	19	15	15	15	18	15	22	29	15
	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Si Phum	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.12 PM_{2.5} - Measured by ATUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	35	31	40	30	20	13	12	13	12	13	16	15	20
		%	84	83	100	100	100	100	99	99	100	99	100	100	97
		Max-d	55	49	59	48	28	19	23	24	21	26	29	23	59
		Min-d	20	21	31	18	11	6	7	6	7	7	8	7	6
China	Jinyunshan	Mean	38	34	33	15	10	9	10	10	11	15	17	37	20
		%	100	100	100	100	97	100	100	100	100	100	100	100	100
		Max-d	84	89	65	35	21	16	19	25	30	42	46	65	89
		Min-d	13	12	13	7	4	4	4	4	6	5	5	7	4
	Hongwen	Mean	36	24	29	22	16	9	7	18	13	14	13	24	19
		%	100	93	100	100	100	100	100	100	100	100	100	100	99
		Max-d	65	100	48	37	27	21	12	32	30	28	25	48	100
		Min-d	14	7	8	10	6	3	3	4	3	3	4	11	3
	Haibin-Park	Mean	29	19	23	17	14	11	7	12	12	19	22	39	19
		%	100	100	100	100	100	90	100	97	100	97	100	100	99
		Max-d	64	50	46	32	22	22	14	25	26	31	36	68	68
		Min-d	9	3	5	7	6	5	4	7	5	9	7	22	3
Japan	Rishiri	Mean	6	8	7	10	8	6	8	4	5	7	8	6	7
		%	83	100	100	100	100	100	100	100	88	100	100	100	98
		Max-d	19	44	16	16	18	15	29	9	8	13	26	13	44
		Min-d	2	3	3	3	1	1	2	2	2	2	2	4	1
	Ochiishi	Mean	5	5	7	6	8	5	6	4	4	6	6	3	5
		%	99	95	99	100	99	99	100	98	99	99	99	98	99
		Max-d	11	12	21	13	18	9	16	11	12	12	19	8	21
		Min-d	1	3	2	2	2	2	2	<1	1	2	2	1	<1
	Sado-seki	Mean	7	6	9	13	8	10	10	6	5	6	6	5	8
		%	100	100	100	100	100	100	100	100	99	96	100	100	99
		Max-d	14	16	29	40	14	18	40	13	9	12	15	12	40
		Min-d	1	2	3	2	5	4	4	3	2	1	2	2	1
	Happo	Mean	***	2	11	15	10	14	8	9	6	3	3	1	7
		%	***	38	31	67	99	100	99	72	100	100	100	87	74
		Max-d	***	7	21	35	23	27	20	18	16	8	7	5	35
		Min-d	***	<1	3	1	2	2	3	1	1	<1	<1	<1	<1
	Ijira	Mean	3	5	7	12	7	7	5	6	5	5	5	4	6
		%	100	64	100	100	100	99	99	100	100	99	99	63	94
		Max-d	8	14	18	37	14	11	10	11	12	10	14	10	37
		Min-d	<1	1	<1	3	<1	2	2	<1	<1	<1	1	<1	<1
	Oki	Mean	9	7	11	10	8	8	5	6	4	5	8	8	7
		%	100	100	94	100	97	100	100	100	97	100	95	84	97
		Max-d	18	15	24	31	11	14	11	15	8	10	13	17	31
		Min-d	4	2	3	1	3	2	1	2	2	<1	2	3	<1
	Yusuhara	Mean	7	6	9	8	8	7	6	10	6	4	6	7	7
		%	100	100	99	100	100	99	100	96	100	98	100	100	99
		Max-d	14	27	20	23	17	17	13	17	17	12	13	14	27
		Min-d	2	2	1	<1	2	<1	<1	1	<1	1	2	3	<1
	Hedo	Mean	***	***	***	***	***	***	5	8	7	8	9	9	8
		%	***	***	***	***	***	***	23	99	99	100	100	99	44
		Max-d	***	***	***	***	***	***	8	16	15	14	15	15	16
		Min-d	***	***	***	***	***	***	3	3	3	4	4	5	3
	Ogasawara	Mean	6	6	8	7	6	2	3	4	3	5	5	5	5
		%	99	100	99	100	100	100	100	100	100	100	99	94	99
		Max-d	12	10	11	28	16	3	11	11	6	10	10	11	28
		Min-d	3	4	4	2	1	<1	1	1	1	2	1	2	<1
	Niigata-maki	Mean	5	5	7	***	***	***	***	***	***	***	***	***	6
		%	100	100	92	***	***	***	***	***	***	***	***	***	24
		Max-d	8	11	23	***	***	***	***	***	***	***	***	***	23
		Min-d	1	2	3	***	***	***	***	***	***	***	***	***	1
	Tsushima	Mean	9	7	12	15	10	10	5	9	8	6	8	10	9
		%	100	100	94	100	100	100	100	99	99	93	100	100	99
		Max-d	25	44	30	89	20	23	10	24	26	9	16	24	89
		Min-d	1	<1	2	2	5	<1	2	3	3	2	3	4	<1

Table 4.12 PM_{2.5} - Measured by AT(continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	30	42	49	89	27	24	27	14	15	***	45	26	37
		%	97	97	100	100	100	100	52	100	43	***	67	55	76
		Max-d	48	63	128	516	103	139	100	81	94	***	233	52	516
		Min-d	15	24	9	25	5	4	4	4	5	***	13	8	4
Mongolia	Bayanzurkh	Mean	44	33	21	16	12	17	18	15	8	17	26	48	23
		%	100	100	98	99	92	98	94	94	100	99	100	99	98
		Max-d	76	64	40	43	20	60	44	36	15	35	49	109	109
		Min-d	17	11	7	7	6	7	7	5	3	7	8	10	3
Myanmar	Yangon	Mean	45	52	44	37	17	8	9	9	11	16	23	33	25
		%	99	86	96	96	99	99	99	100	98	99	100	100	98
		Max-d	61	61	57	52	34	12	14	14	20	34	30	50	61
		Min-d	21	29	34	20	6	5	5	5	7	6	9	23	5
Philippines	North Caloocan	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Sta. Rosa	Mean	22	25	25	21	38	62	70	138	89	40	194	24	53
		%	95	91	85	47	78	100	98	91	92	72	4	95	79
		Max-d	32	72	44	29	72	188	129	321	164	54	<1	40	321
		Min-d	14	14	15	28	19	20	26	43	27	22	<1	16	<1
	Mt. Sto. Tomas	Mean	6	11	10	11	5	***	***	***	***	***	***	***	8
		%	94	99	99	2	44	***	***	***	***	***	***	***	28
		Max-d	12	43	32	<1	7	***	***	***	***	***	***	***	43
		Min-d	2	2	3	<1	2	***	***	***	***	***	***	***	<1
Republic of Korea	Ganghwa	Mean	32	33	28	20	9	9	7	9	7	16	20	19	18
		%	93	93	89	97	94	98	77	90	88	95	86	91	91
		Max-d	60	61	70	38	28	19	29	16	19	35	36	36	70
		Min-d	13	10	14	6	3	5	2	2	2	6	10	8	2
	Jeju	Mean	17	15	16	17	14	9	7	12	10	13	20	19	14
		%	92	94	95	90	86	84	97	95	98	97	97	89	93
		Max-d	60	59	37	47	33	23	16	32	22	27	30	37	60
		Min-d	3	3	2	5	3	4	3	5	3	6	9	8	2
	Imsil	Mean	24	25	22	17	12	13	7	10	8	10	13	14	15
		%	97	97	88	93	84	97	93	95	75	94	98	91	92
		Max-d	54	73	50	36	21	23	16	20	16	21	26	25	73
		Min-d	7	5	7	3	7	3	2	2	2	4	5	4	2
Thailand	Bangkok	Mean	29	23	20	22	16	8	9	8	11	13	17	21	16
		%	99	100	99	100	99	99	99	99	100	100	100	100	100
		Max-d	49	53	39	47	39	12	11	13	19	25	27	27	53
		Min-d	19	11	13	10	5	4	5	5	6	7	10	13	4
	Samutprakarn	Mean	41	31	27	27	22	14	15	15	17	19	21	29	23
		%	100	100	99	100	100	98	100	100	89	89	83	100	96
		Max-d	64	78	53	50	41	18	24	20	29	35	36	42	78
		Min-d	27	17	19	15	11	7	12	9	12	8	13	15	7
	Khanchanaburi (Vajiralongkorn Dam)	Mean	50	50	44	46	26	20	19	15	24	30	34	35	33
		%	100	97	98	97	91	100	97	95	95	88	96	97	96
		Max-d	88	119	88	74	46	25	26	26	50	51	56	50	119
		Min-d	31	18	30	26	15	16	6	9	13	10	17	20	6
	Chang Phueak	Mean	27	35	70	84	36	13	12	10	12	17	21	26	30
		%	99	99	99	99	99	99	100	99	94	98	97	100	99
		Max-d	35	54	137	157	108	25	18	14	16	29	26	34	157
		Min-d	18	17	29	35	10	7	8	8	8	9	9	10	7
	Si Phum	Mean	24	34	74	82	29	9	9	9	9	14	17	22	28
		%	100	99	99	99	99	100	100	100	100	100	100	100	100
		Max-d	38	54	153	164	90	23	15	14	13	23	22	30	164
		Min-d	15	15	30	28	5	6	6	6	7	7	6	7	5
	Nai Mueang	Mean	36	47	40	39	24	16	16	17	17	20	23	28	27
		%	100	100	100	99	100	100	98	100	100	100	94	100	99
		Max-d	57	69	52	61	43	19	19	21	21	30	38	42	69
		Min-d	18	26	23	23	12	12	12	13	12	11	14	14	11
Vietnam	Hoa Binh	Mean	24	18	32	***	***	***	***	8	9	16	30	58	25
		%	3	100	19	***	***	***	***	61	100	100	100	100	48
		Max-d	24	34	55	***	***	***	***	18	28	32	77	116	116
		Min-d	24	4	10	***	***	***	***	3	2	5	15	14	2

Terms and abbreviations are given in Table 4.2.

Table 4.13.1 Particulate matter component: SO₄²⁻ - Measured by FP

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	1.02	2.38	1.62	2.28	1.74	1.99	1.62	1.09	1.09	1.32	1.78	1.18	1.63
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	1.16	2.89	1.69	2.56	2.16	2.50	1.72	1.23	1.17	1.32	2.00	1.22	2.89
		Min-2w	0.88	1.87	1.55	2.02	1.31	1.49	1.52	0.95	1.01	1.32	1.56	1.14	0.88
	Ochiishi	Mean	0.93	2.22	2.55	1.04	2.03	1.72	1.66	1.52	1.50	1.36	1.30	1.26	1.61
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	1.48	2.86	2.97	1.67	2.19	1.90	1.90	1.72	1.82	1.36	1.95	1.26	2.97
		Min-2w	0.39	1.58	2.13	0.40	1.86	1.53	1.41	1.33	1.32	1.36	0.65	1.26	0.39
	Sado-seki	Mean	1.71	2.17	2.62	2.29	1.23	2.15	2.36	2.18	1.14	1.62	1.61	2.03	1.91
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.75	2.36	3.16	2.82	1.76	2.60	2.83	2.29	1.33	1.96	1.87	2.15	3.16
		Min-2w	1.67	1.98	2.09	2.02	0.71	1.70	1.88	2.06	0.98	1.28	1.34	1.90	0.71
	Happo	Mean	0.35	0.56	1.24	1.59	0.84	1.99	0.73	2.24	1.25	1.01	0.94	0.33	1.14
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.36	0.77	1.82	2.13	0.84	2.62	0.93	2.42	2.79	1.01	0.94	0.40	2.79
		Min-2w	0.34	0.35	0.65	0.99	0.84	1.37	0.53	2.05	0.37	1.01	0.94	0.25	0.25
	Ijira	Mean	0.79	0.58	1.75	1.86	1.70	1.87	1.79	2.49	1.63	1.12	1.24	0.78	1.49
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.96	1.03	2.15	2.00	1.93	1.95	2.16	2.65	2.08	1.21	1.65	0.82	2.65
		Min-2w	0.63	0.13	1.34	1.66	1.46	1.79	1.42	2.32	0.88	1.04	0.84	0.74	0.13
	Okii	Mean	2.82	2.41	3.63	2.49	2.29	3.08	2.17	2.89	1.52	1.71	2.33	2.87	2.48
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	3.08	2.68	3.90	2.49	2.36	3.59	2.77	3.13	1.53	1.90	2.57	3.49	3.90
		Min-2w	2.55	2.13	3.36	2.49	2.21	2.58	1.56	2.65	1.52	1.33	2.09	2.25	1.33
	Yusuhara	Mean	1.64	1.83	2.00	1.64	1.85	1.97	2.07	2.30	1.49	1.19	1.65	1.69	1.76
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	2.00	2.09	2.25	2.05	2.33	2.04	2.10	2.59	2.33	1.22	1.96	1.75	2.59
		Min-2w	1.29	1.57	1.75	1.23	1.37	1.91	2.05	2.01	0.54	1.15	1.34	1.62	0.54
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	1.80	2.24	2.30	1.57	1.50	0.68	0.82	1.57	0.60	1.03	1.20	1.61	1.35
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	1.80	2.24	2.52	1.74	2.11	0.72	0.82	2.51	0.86	1.14	1.49	1.75	2.52
		Min-2w	1.80	2.24	2.07	1.43	0.89	0.65	0.82	0.64	0.35	0.90	0.91	1.47	0.35
	Tokyo	Mean	0.96	1.30	1.56	2.45	1.91	2.28	3.86	3.04	1.91	1.69	1.22	0.77	1.92
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.98	1.44	2.11	2.60	2.05	2.62	4.42	3.12	2.20	1.78	1.66	0.82	4.42
		Min-2w	0.93	1.15	1.02	2.17	1.77	1.94	3.31	2.96	1.62	1.61	0.77	0.72	0.72
	Niigata-maki	Mean	1.5	1.4	2.2	***	***	***	***	***	***	***	***	***	1.70
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	1.7	1.7	2.6	***	***	***	***	***	***	***	***	***	2.59
		Min-2w	1.4	1.1	1.8	***	***	***	***	***	***	***	***	***	1.14
	Tsushima	Mean	2.2	1.8	2.7	1.84	2.37	3.30	0.97	3.41	3.23	1.61	1.99	1.86	2.25
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	2.8	2.1	2.9	1.95	2.78	4.75	1.28	3.65	3.70	1.90	2.11	2.08	4.75
		Min-2w	1.7	1.6	2.5	1.74	1.96	1.86	0.66	3.17	2.75	1.16	1.86	1.63	0.66

Table 4.13 Particulate matter component: SO₄²⁻ - Measured by FP (continued)

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	1.32	3.25	4.28	3.68	2.68	3.71	2.94	3.73	2.79	2.74	2.17	2.07	2.97
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	2.17	5.00	6.57	5.98	3.61	4.94	3.46	5.23	3.49	3.81	3.14	2.65	6.57
		Min-w	0.02	1.09	2.53	2.33	2.00	1.72	2.21	1.64	2.08	2.07	0.88	1.37	0.02
	Tanah Rata	Mean	1.00	1.89	2.70	2.24	2.28	2.05	1.70	1.91	1.37	1.28	0.85	0.88	1.68
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	1.44	2.14	4.30	2.85	3.36	2.52	2.58	2.68	1.76	2.24	1.31	1.45	4.30
		Min-w	0.61	1.51	1.68	1.41	1.06	1.16	1.22	0.93	1.22	0.34	0.12	0.22	0.12
	Danum Valley	Mean	0.90	1.36	1.47	1.07	0.85	0.55	0.48	1.25	1.24	1.26	1.46	0.71	1.03
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	1.18	1.36	1.81	1.21	0.94	0.73	0.52	1.63	1.34	1.86	2.17	0.83	2.17
		Min-2w	0.73	1.36	1.12	0.93	0.77	0.38	0.45	0.79	1.15	0.67	0.76	0.57	0.38
Mongolia	Khan-Uul	Mean	2.22	2.12	2.96	0.99	0.82	1.09	0.80	1.10	0.63	0.89	1.54	5.54	1.69
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.54	2.56	6.83	1.27	1.24	1.63	1.03	1.36	1.02	2.30	3.20	11.21	11.21
		Min-w	1.77	1.49	1.40	0.71	0.61	0.59	0.70	0.89	0.21	0.27	0.26	1.08	0.21
	Terehj	Mean	0.34	0.12	0.25	0.15	0.13	0.18	0.13	0.11	0.17	0.17	0.16	0.32	0.18
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.37	0.14	0.28	0.17	0.17	0.19	0.21	0.11	0.22	0.27	0.25	0.46	0.46
		Min-2w	0.30	0.09	0.23	0.14	0.09	0.17	0.06	0.10	0.09	0.07	0.07	0.18	0.06
Myanmar	Yangon	Mean	0.53	1.02	0.26	0.52	0.08	0.04	0.07	0.09	0.50	0.30	0.54	0.29	0.36
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.77	1.16	0.40	1.35	0.13	0.04	0.07	0.09	0.86	0.35	0.97	0.56	1.35
		Min-2w	0.29	0.87	0.11	0.08	0.04	0.03	0.07	0.09	0.13	0.24	0.11	0.03	0.03
Philippines	Manila Observatory	Mean	0.67	1.22	1.96	0.76	1.21	2.16	0.85	1.14	1.70	1.31	1.45	0.51	1.27
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	1.15	1.63	2.92	1.54	2.25	3.13	1.25	1.53	2.13	2.09	3.05	0.66	3.13
		Min-irreg	<0.01	0.99	0.93	0.35	0.28	0.87	0.45	0.51	1.21	0.53	0.39	0.42	<0.01
	Los Baños	Mean	0.64	0.76	0.68	0.68	1.07	1.41	<0.01	0.53	1.39	1.25	0.67	1.63	0.94
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	1.14	1.64	0.86	1.73	2.67	2.40	<0.01	0.58	2.04	1.78	0.89	3.31	3.31
		Min-irreg	0.23	0.26	0.52	0.14	0.20	0.13	<0.01	0.47	1.13	0.72	0.37	0.46	<0.01
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	0.61	0.70	0.90	0.45	0.29	0.48	1.20	1.10	0.64	0.67	0.36	0.53	0.66
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.28	1.41	1.63	0.74	0.53	0.88	1.81	1.53	1.13	1.00	0.56	0.88	1.81
		Min-w	0.19	0.28	0.12	0.13	0.08	0.10	0.64	0.62	0.28	0.47	0.17	0.19	0.08
	Irkutsk	Mean	2.58	3.06	2.68	1.15	1.00	0.94	1.24	1.42	1.36	0.97	2.30	4.02	1.86
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.38	5.79	4.25	1.98	1.53	1.14	2.32	2.54	2.11	1.54	4.81	5.56	5.79
		Min-w	1.71	0.85	0.97	0.39	0.49	0.66	0.25	0.83	0.63	0.07	1.22	2.23	0.07
	Primorskaya	Mean	0.95	0.04	0.10	0.10	0.05	0.13	0.02	0.04	0.01	0.10	0.14	0.08	0.15
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	1.21	0.06	0.20	0.17	0.07	0.18	0.02	0.06	0.02	0.13	0.14	0.15	1.21
		Min-15d	0.70	0.01	<0.01	0.03	0.04	0.09	0.01	0.02	<0.01	0.07	0.14	0.01	<0.01

Table 4.13.1 Particulate matter component: SO₄²⁻ - Measured by FP (continued)

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	3.70	3.38	3.09	2.85	1.32	2.17	3.23	4.70	3.66	5.69	7.68	4.23	3.81
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	5.50	5.39	4.70	5.71	2.00	3.89	3.75	5.74	7.07	8.85	10.88	9.59	10.88
		Min-w	1.22	1.02	1.57	1.78	0.60	1.19	2.09	3.73	1.72	2.22	5.10	2.34	0.60
	Hoa Binh	Mean	0.52	1.08	4.14	2.06	1.98	1.01	0.85	0.98	1.25	1.07	1.58	1.27	1.47
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.05	2.12	7.41	2.59	4.77	1.19	1.09	1.42	1.77	1.61	2.92	1.44	7.41
		Min-w	0.25	0.47	1.22	1.26	0.84	0.77	0.71	0.61	0.71	0.50	0.90	1.14	0.25
	Can Tho	Mean	6.41	6.74	7.54	6.34	6.83	7.04	7.48	6.81	7.15	6.06	6.44	6.57	6.77
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	6.90	8.17	9.03	7.00	8.10	8.15	8.15	7.22	7.78	7.36	6.69	7.00	9.03
		Min-w	5.87	5.02	6.88	5.65	6.13	6.45	6.03	6.17	6.45	5.00	5.81	5.52	5.00
	Ho Chi Minh	Mean	9.27	8.91	7.71	6.39	9.46	8.34	8.55	9.96	8.86	7.89	8.71	7.39	8.50
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	10.24	10.93	10.54	7.64	11.13	9.01	12.32	12.30	10.14	9.52	9.44	10.16	12.32
		Min-w	8.41	7.36	4.27	5.69	8.04	7.28	6.31	6.05	7.60	5.87	7.82	6.11	4.27
	Yen Bai	Mean	3.48	3.94	7.30	4.53	3.62	2.39	2.27	2.51	3.01	3.34	5.47	4.64	3.83
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	5.02	4.56	9.05	5.88	5.38	2.78	2.39	2.94	3.96	4.04	7.89	8.12	9.05
		Min-w	2.37	2.69	4.95	3.58	2.90	2.06	2.17	2.09	2.38	2.35	2.08	1.78	1.78

Table 4.13.2 Particulate matter component: SO₄²⁻ - Measured by FP using PM_{2.5} cyclone

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	3.80	0.80	1.89	1.94	1.48	3.35	1.07	4.96	4.06	2.85	2.36	2.17	2.53
		%	10	10	13	17	13	17	16	10	17	16	10	3	14
		Max-d	6.98	1.06	3.77	3.70	2.05	7.76	1.63	8.16	8.85	5.14	3.14	2.17	8.85
		Min-d	1.47	0.44	1.02	1.12	0.64	1.21	0.64	2.98	0.31	0.61	1.33	2.17	0.31
	Jeju	Mean	2.99	4.34	2.65	2.69	2.97	3.02	2.04	3.43	2.36	2.65	2.11	1.64	2.97
		%	13	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	4.57	9.07	3.52	3.86	6.53	5.45	3.28	4.53	4.06	6.01	4.13	1.99	9.07
		Min-d	1.72	1.04	1.68	2.06	1.17	1.82	1.52	1.17	1.30	0.53	1.15	1.26	1.04
	Imsil	Mean	***	***	***	1.29	1.69	2.31	1.59	3.16	1.19	0.77	0.59	0.51	1.90
		%	***	***	***	3	16	17	16	16	17	16	13	13	10
		Max-d	***	***	***	1.29	4.40	2.89	3.24	4.34	2.21	1.84	0.80	0.71	4.40
		Min-d	***	***	***	1.29	0.81	1.32	0.60	0.60	0.47	0.23	0.30	0.24	0.33

Terms and abbreviations are given in Table 4.2.

Table 4.14.1 Particulate matter component: NO₃⁻ - Measured by FPUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.29	0.87	0.40	1.30	0.83	0.84	0.43	0.37	0.42	0.59	0.85	0.44	0.67
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.30	1.20	0.50	1.56	1.16	0.95	0.50	0.38	0.44	0.59	1.13	0.56	1.56
		Min-2w	0.28	0.55	0.29	1.12	0.51	0.73	0.36	0.35	0.40	0.59	0.57	0.31	0.28
	Ochiishi	Mean	0.23	0.98	0.65	0.60	1.24	0.89	0.72	0.53	0.84	0.05	0.53	0.36	0.68
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	0.41	1.21	0.66	1.03	1.28	0.91	0.75	0.78	1.03	0.05	0.99	0.36	1.28
		Min-2w	0.05	0.74	0.64	0.17	1.19	0.88	0.69	0.29	0.59	0.05	0.07	0.36	0.05
	Sado-seki	Mean	0.63	0.82	1.26	1.72	0.76	0.79	1.16	1.22	0.67	0.87	0.72	0.54	0.95
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.64	0.87	1.99	2.25	1.14	0.80	1.35	1.43	0.96	1.16	1.17	0.65	2.25
		Min-2w	0.62	0.77	0.52	1.45	0.39	0.78	0.97	1.01	0.43	0.57	0.27	0.44	0.27
	Happo	Mean	0.08	0.11	0.98	1.25	0.21	0.28	0.05	0.03	0.02	0.05	0.06	0.05	0.32
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.10	0.12	1.63	2.01	0.21	0.29	0.05	0.04	0.02	0.05	0.06	0.06	2.01
		Min-2w	0.07	0.10	0.32	0.24	0.21	0.28	0.04	0.01	0.01	0.05	0.06	0.04	0.01
	Ijira	Mean	0.24	0.12	0.80	1.05	0.61	0.32	0.07	0.17	0.21	0.36	0.26	0.28	0.40
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.32	0.22	1.06	1.76	0.63	0.46	0.08	0.23	0.34	0.41	0.27	0.32	1.76
		Min-2w	0.16	0.03	0.55	0.44	0.59	0.18	0.07	0.12	0.14	0.31	0.25	0.25	0.03
	Okii	Mean	1.98	1.12	2.63	2.04	1.40	1.23	1.16	1.11	0.74	0.92	1.31	2.10	1.43
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	2.62	1.58	3.11	2.04	1.47	1.40	1.49	1.18	0.84	1.10	1.68	3.16	3.16
		Min-2w	1.34	0.67	2.16	2.04	1.31	1.06	0.83	1.04	0.64	0.75	0.94	1.03	0.64
	Yusuhara	Mean	1.15	0.60	1.28	0.45	0.39	0.08	0.05	0.05	0.18	0.34	0.46	1.26	0.51
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	1.53	0.98	1.33	0.70	0.53	0.14	0.08	0.07	0.26	0.45	0.71	1.31	1.53
		Min-2w	0.77	0.22	1.24	0.20	0.24	0.02	0.03	0.02	0.09	0.23	0.20	1.21	0.02
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	0.50	0.49	0.79	0.70	0.41	0.15	0.20	0.22	0.09	0.20	0.48	0.65	0.40
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.50	0.49	0.90	0.98	0.58	0.17	0.24	0.33	0.11	0.26	0.62	0.67	0.98
		Min-2w	0.50	0.49	0.67	0.55	0.25	0.12	0.16	0.10	0.06	0.15	0.35	0.63	0.06
	Tokyo	Mean	2.30	2.42	2.26	3.65	2.82	2.26	1.82	1.78	2.86	2.48	1.83	1.65	2.40
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.54	2.63	3.28	4.44	2.84	2.72	1.88	2.08	3.13	2.71	2.45	1.66	4.44
		Min-2w	2.07	2.22	1.25	2.67	2.80	1.80	1.77	1.47	2.58	2.10	1.21	1.64	1.21
	Niigata-maki	Mean	0.90	0.78	1.36	***	***	***	***	***	***	***	***	***	1.01
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	1.01	0.80	2.08	***	***	***	***	***	***	***	***	***	2.08
		Min-2w	0.79	0.76	0.64	***	***	***	***	***	***	***	***	***	0.64
	Tsushima	Mean	2.93	1.59	3.02	1.86	1.46	0.33	0.35	1.06	0.90	1.13	1.72	2.65	1.57
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	3.73	2.42	3.02	1.98	1.66	0.47	0.52	1.18	0.98	1.54	1.82	3.01	3.73
		Min-2w	2.13	0.75	3.01	1.73	1.27	0.19	0.18	0.94	0.83	0.87	1.63	2.30	0.18

Table 4.14.1 Particulate matter component: NO₃⁻ - Measured by FP (continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.97	1.24	1.37	1.02	0.80	1.16	1.73	1.45	1.54	1.40	1.06	1.10	1.24
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	1.37	1.57	2.66	1.47	1.06	1.40	2.39	1.76	1.82	1.85	1.51	1.42	2.66
		Min-w	0.05	0.78	0.68	0.48	0.48	0.88	1.06	0.81	1.15	1.08	0.62	0.90	0.05
	Tanah Rata	Mean	0.32	0.24	0.37	0.12	0.06	0.13	0.22	0.13	0.14	0.13	0.10	0.11	0.17
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	0.52	0.34	0.47	0.16	0.16	0.32	0.28	0.32	0.27	0.35	0.16	0.18	0.52
		Min-w	0.17	0.17	0.15	0.08	0.02	0.04	0.17	0.02	0.01	<0.01	0.04	0.05	<0.01
	Danum Valley	Mean	0.20	0.45	0.48	0.30	0.06	0.02	0.07	0.03	0.04	0.07	0.02	0.05	0.13
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.31	0.45	0.64	0.57	0.08	0.03	0.11	0.06	0.08	0.13	0.02	0.11	0.64
		Min-2w	0.10	0.45	0.32	0.04	0.03	0.01	0.03	<0.01	<0.01	<0.01	0.01	0.01	<0.01
Mongolia	Khan-Uul	Mean	0.44	0.33	1.99	0.09	1.59	1.05	0.38	1.64	0.13	0.32	0.68	2.20	0.91
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.88	0.60	4.12	0.10	4.99	1.56	1.13	5.60	0.48	0.72	1.44	5.38	5.60
		Min-w	0.18	0.08	0.71	0.09	0.29	0.78	0.10	0.20	<0.01	0.01	0.11	0.35	<0.01
	Terej	Mean	0.35	0.06	0.08	0.07	0.07	0.04	0.31	0.08	0.03	0.03	0.06	0.12	0.10
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.61	0.08	0.10	0.13	0.08	0.06	0.48	0.09	0.04	0.06	0.08	0.15	0.61
		Min-2w	0.09	0.04	0.06	0.05	0.07	<0.01	0.13	0.07	0.02	<0.01	0.04	0.08	<0.01
Myanmar	Yangon	Mean	0.84	0.34	0.02	0.15	0.06	0.06	<0.01	0.02	0.26	0.14	0.38	0.09	0.19
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.16	0.68	0.03	0.30	0.08	0.08	<0.01	0.03	0.49	0.23	0.68	0.13	1.16
		Min-2w	0.51	<0.01	<0.01	<0.01	0.05	0.05	<0.01	<0.01	0.04	0.09	0.08	0.06	<0.01
Philippines	Manila Observatory	Mean	1.06	1.26	1.62	0.49	0.66	0.82	0.59	0.53	0.76	0.95	0.85	0.81	0.87
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	1.45	1.55	2.37	0.73	1.07	1.95	0.87	0.90	1.00	1.42	1.08	1.13	2.37
		Min-irreg	0.17	0.98	0.80	0.37	0.20	0.34	0.36	0.23	0.48	0.27	0.50	0.52	0.17
	Los Baños	Mean	0.65	0.51	<0.01	0.20	0.39	0.16	<0.01	0.08	2.12	0.89	1.98	<0.01	0.64
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.82	1.31	<0.01	0.82	0.91	0.79	<0.01	0.10	3.45	1.26	5.83	<0.01	5.83
		Min-irreg	0.43	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	0.18	0.52	0.44	<0.01	<0.01
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	0.06	0.19	0.16	0.13	0.07	0.05	0.07	0.07	0.12	0.13	0.04	0.07	0.10
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.15	0.43	0.29	0.19	0.09	0.09	0.09	0.10	0.35	0.32	0.06	0.17	0.43
		Min-w	0.03	0.04	0.02	0.03	0.02	0.02	0.04	0.04	0.05	0.05	0.01	0.02	0.01
	Irkutsk	Mean	0.59	1.48	0.95	0.35	0.19	0.18	0.13	0.20	0.34	0.42	0.97	1.38	0.59
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.31	3.01	1.49	0.71	0.34	0.23	0.20	0.41	0.49	0.87	1.34	1.51	3.01
		Min-w	0.06	0.39	0.43	0.14	0.05	0.11	0.04	0.10	0.11	<0.01	0.52	1.26	<0.01
	Primorskaya	Mean	0.56	0.03	0.04	0.05	0.03	0.03	<0.01	<0.01	<0.01	0.26	0.57	0.33	0.16
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.60	0.05	0.08	0.08	0.05	0.03	<0.01	<0.01	<0.01	0.49	0.60	0.63	0.63
		Min-15d	0.52	<0.01	<0.01	0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.03	0.55	0.02	<0.01

Table 4.14.1 Particulate matter component: NO₃⁻ - Measured by FP (continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	3.30	4.16	3.11	2.38	0.97	1.98	3.18	4.67	4.03	6.08	9.92	6.68	4.19
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.65	7.52	5.01	4.96	1.55	3.75	3.86	6.61	8.69	9.58	13.77	15.93	15.93
		Min-w	1.45	1.12	1.02	1.47	0.34	0.75	2.78	2.35	1.10	2.67	6.76	3.29	0.34
	Hoa Binh	Mean	0.71	0.89	3.04	1.56	1.42	0.77	0.72	0.94	0.78	0.71	1.07	0.91	1.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.02	1.91	6.27	2.07	3.12	0.90	0.94	1.40	1.18	1.10	1.21	1.06	6.27
		Min-w	0.53	0.32	0.90	1.03	0.77	0.70	0.57	0.60	0.27	0.42	0.81	0.69	0.27
	Can Tho	Mean	2.40	2.22	2.31	2.17	2.23	2.28	2.46	2.55	2.20	2.37	2.22	2.56	2.33
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.56	2.68	2.56	2.40	2.40	2.56	2.68	3.31	2.30	2.60	2.34	3.13	3.31
		Min-w	2.32	1.94	2.08	2.02	2.12	2.08	2.34	2.16	2.08	2.20	2.08	2.20	1.94
	Ho Chi Minh	Mean	4.92	6.09	5.55	7.26	5.41	4.38	5.23	6.61	5.86	5.86	5.23	7.04	5.80
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	6.71	8.71	6.61	9.13	7.06	4.92	5.63	9.05	7.02	8.21	6.31	9.05	9.13
		Min-w	3.77	4.52	5.12	5.44	4.25	4.03	4.25	4.62	5.38	4.52	4.52	5.73	3.77
	Yen Bai	Mean	2.59	3.36	5.39	2.79	2.09	1.88	1.64	1.51	1.88	2.35	4.57	4.56	2.84
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.92	4.93	8.71	3.30	2.77	2.29	1.95	1.68	2.07	3.64	6.80	7.71	8.71
		Min-w	1.45	1.81	3.02	2.52	1.67	1.43	1.23	1.39	1.72	1.43	1.58	1.39	1.23

Table 4.14.2 Particulate matter component: NO₃⁻ - Measured by FP using PM_{2.5} cycloneUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	8.97	0.50	1.71	0.91	0.18	0.11	0.20	0.11	0.07	0.13	0.48	0.57	1.13
		%	10	10	13	17	13	17	16	10	17	16	10	3	14
		Max-d	21.92	0.79	4.64	2.46	0.30	0.16	0.26	0.26	0.16	0.20	0.87	0.57	21.92
		Min-d	0.68	0.34	0.56	0.11	0.07	0.06	0.13	0.04	0.03	<0.01	0.16	0.57	0.03
	Jeju	Mean	7.53	5.49	2.11	1.77	0.43	0.22	0.14	0.03	0.10	0.30	2.05	4.42	1.99
		%	13	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	16.14	8.78	4.74	3.36	0.78	0.71	0.25	0.05	0.17	0.52	3.77	9.93	16.14
		Min-d	1.20	0.39	0.39	0.65	0.06	0.04	0.04	0.01	0.01	0.11	0.39	1.68	0.01
	Imsil	Mean	***	***	***	0.14	0.10	0.12	0.11	0.08	0.17	0.13	0.36	1.06	0.12
		%	***	***	***	3	16	17	16	16	17	16	13	13	10
		Max-d	***	***	***	0.14	0.14	0.29	0.20	0.19	0.44	0.16	0.54	1.70	0.44
		Min-d	***	***	***	0.14	0.05	0.05	0.04	0.04	0.05	0.08	0.12	0.36	0.04

Terms and abbreviations are given in Table 4.2.

Table 4.15.1 Particulate matter component: Cl⁻ - Measured by FPUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	1.25	3.89	2.03	3.36	3.29	1.52	0.51	1.06	3.70	3.25	4.25	1.50	2.47
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	1.27	3.95	2.21	5.53	4.11	1.65	0.73	1.36	3.99	3.25	4.48	1.61	5.53
		Min-2w	1.23	3.82	1.85	2.20	2.48	1.39	0.30	0.75	3.40	3.25	4.02	1.38	0.30
	Ochiishi	Mean	3.25	3.48	10.39	2.84	5.08	2.36	1.13	4.04	5.84	9.04	4.71	3.15	4.53
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	5.06	5.15	16.20	4.72	5.13	3.37	1.18	6.21	8.78	9.04	6.04	3.15	16.20
		Min-2w	1.45	1.81	4.57	0.97	5.04	1.34	1.08	1.87	3.84	9.04	3.38	3.15	0.97
	Sado-seki	Mean	5.78	5.16	6.51	2.54	1.29	0.69	1.97	1.92	1.57	3.62	4.54	8.55	3.55
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	6.36	6.04	7.60	3.53	1.64	1.23	2.18	2.01	2.84	4.28	6.02	9.72	9.72
		Min-2w	5.20	4.29	5.42	1.70	0.94	0.14	1.75	1.82	0.88	2.96	3.07	7.38	0.14
	Happo	Mean	0.02	0.02	0.12	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.03	0.02	0.20	0.10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.20
		Min-2w	<0.01	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Ijira	Mean	0.13	0.05	0.26	0.10	0.04	0.01	<0.01	<0.01	0.06	0.08	0.11	0.16	0.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.16	0.10	0.28	0.14	0.04	0.02	<0.01	<0.01	0.10	0.09	0.17	0.17	0.28
		Min-2w	0.10	<0.01	0.24	0.03	0.03	<0.01	<0.01	<0.01	0.02	0.06	0.06	0.14	<0.01
	Okii	Mean	8.59	5.35	8.28	3.32	2.80	0.68	3.04	1.13	2.11	3.80	6.96	11.58	4.74
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	9.36	5.68	9.48	3.32	5.23	1.12	3.32	1.13	2.58	4.25	10.30	13.69	13.69
		Min-2w	7.81	5.03	7.08	3.32	1.30	0.25	2.76	1.12	1.64	3.25	3.61	9.48	0.25
	Yusuhara	Mean	0.20	0.05	0.20	0.06	<0.01	0.01	<0.01	<0.01	0.24	0.19	0.18	0.24	0.12
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.28	0.09	0.30	0.09	<0.01	0.03	0.01	0.01	0.38	0.23	0.33	0.26	0.38
		Min-2w	0.13	0.01	0.09	0.04	<0.01	<0.01	<0.01	<0.01	0.03	0.15	0.03	0.23	<0.01
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	4.00	6.23	4.96	4.19	3.34	1.62	1.22	2.46	3.33	5.14	4.02	3.21	3.61
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	4.00	6.23	5.51	4.76	4.00	1.76	1.62	2.97	4.74	5.72	5.09	3.80	6.23
		Min-2w	4.00	6.23	4.40	3.68	2.68	1.49	0.82	1.95	1.91	4.53	2.95	2.63	0.82
	Tokyo	Mean	0.43	0.85	0.47	0.91	0.56	0.15	0.08	0.25	0.73	0.79	0.42	0.32	0.52
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.43	1.40	0.60	1.08	0.80	0.20	0.13	0.41	1.01	1.05	0.65	0.33	1.40
		Min-2w	0.43	0.30	0.34	0.74	0.32	0.11	0.03	0.08	0.44	0.66	0.18	0.32	0.03
	Niigata-maki	Mean	3.1	1.8	3.6	***	***	***	***	***	***	***	***	***	2.83
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	3.8	2.3	3.9	***	***	***	***	***	***	***	***	***	3.89
		Min-2w	2.5	1.2	3.3	***	***	***	***	***	***	***	***	***	1.19
	Tsushima	Mean	0.8	0.8	1.2	0.50	0.39	0.04	0.20	0.31	0.52	1.52	1.07	0.60	0.69
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	0.9	1.1	1.3	0.81	0.54	0.06	0.21	0.32	0.82	1.68	1.16	0.64	1.68
		Min-2w	0.7	0.4	1.0	0.19	0.23	0.02	0.18	0.31	0.21	1.30	0.97	0.56	0.02

Table 4.15 Particulate matter component: Cl^- - Measured by FP (continued)Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.26	0.22	0.08	0.03	0.07	0.07	0.15	0.07	0.11	0.16	0.11	0.08	0.12
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	0.67	0.65	0.19	0.05	0.12	0.11	0.20	0.08	0.15	0.44	0.27	0.13	0.67
		Min-w	0.02	0.05	0.03	0.02	0.02	0.04	0.10	0.06	0.04	0.04	0.05	0.04	0.02
	Tanah Rata	Mean	0.24	0.16	0.10	0.02	<0.01	0.02	0.02	0.01	0.02	0.03	0.05	0.03	0.06
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	0.40	0.30	0.33	0.04	0.02	0.04	0.02	0.02	0.05	0.10	0.13	0.05	0.40
		Min-w	0.05	0.01	0.02	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
	Danum Valley	Mean	0.47	0.74	0.29	0.16	0.02	<0.01	0.03	<0.01	<0.01	<0.01	0.01	0.04	0.13
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.82	0.74	0.44	0.30	0.02	<0.01	0.03	0.02	<0.01	0.03	0.02	0.11	0.82
		Min-2w	0.05	0.74	0.14	0.02	0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mongolia	Khan-Uul	Mean	0.48	0.43	1.24	0.93	0.89	1.11	1.11	0.95	0.48	0.29	0.50	1.00	0.77
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.55	0.50	2.66	1.19	1.03	1.95	2.00	1.32	1.08	0.53	1.07	2.00	2.66
		Min-w	0.40	0.38	0.40	0.77	0.71	0.78	0.71	0.70	0.17	0.18	0.20	0.35	0.17
	Terej	Mean	0.02	0.04	0.04	0.06	0.06	0.06	0.06	0.06	0.06	0.08	0.12	0.08	0.06
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.03	0.05	0.04	0.10	0.07	0.07	0.07	0.07	0.08	0.08	0.15	0.08	0.15
		Min-2w	0.01	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.05	0.07	0.09	0.07	0.01
Myanmar	Yangon	Mean	0.40	0.31	0.09	0.19	0.07	0.11	<0.01	0.29	0.28	0.13	0.09	0.07	0.17
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.40	0.46	0.17	0.38	0.11	0.21	0.01	0.55	0.52	0.19	0.12	0.09	0.55
		Min-2w	0.39	0.16	<0.01	<0.01	0.02	0.02	<0.01	0.02	0.04	0.09	0.07	0.04	<0.01
Philippines	Manila Observatory	Mean	0.85	1.33	1.09	0.37	0.23	0.11	0.33	0.10	0.17	0.51	0.52	0.40	0.50
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	1.38	2.08	1.97	0.63	0.47	0.20	0.77	0.23	0.40	1.53	1.19	0.46	2.08
		Min-irreg	0.14	0.89	0.45	0.18	0.10	0.04	0.07	0.02	0.03	0.03	0.15	0.30	0.02
	Los Baños	Mean	3.30	2.62	0.70	0.94	0.53	0.18	<0.01	0.01	0.08	0.67	0.41	0.41	0.98
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	4.82	3.38	0.91	1.04	0.99	0.33	<0.01	0.03	0.16	1.34	1.33	0.49	4.82
		Min-irreg	1.27	1.07	0.44	0.77	0.29	0.04	<0.01	<0.01	0.04	<0.01	<0.01	0.29	<0.01
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	0.02	<0.01	0.03	<0.01	0.01	<0.01	0.03	0.02	0.02	0.03	<0.01	<0.01	0.02
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.03	<0.01	0.03	0.02	0.02	0.01	0.06	0.02	0.04	0.08	0.02	0.01	0.08
		Min-w	0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01
	Irkutsk	Mean	0.36	0.26	0.84	0.11	0.04	0.05	0.03	0.11	0.05	0.12	0.49	0.20	0.24
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.78	0.40	1.05	0.24	0.06	0.10	0.04	0.31	0.07	0.26	1.18	0.26	1.18
		Min-w	0.08	0.13	0.45	0.05	0.02	0.02	0.02	0.03	0.03	0.04	0.24	0.14	0.02
	Primorskaya	Mean	0.03	0.01	0.01	<0.01	0.02	0.02	<0.01	<0.01	<0.01	0.16	0.35	0.17	0.07
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.05	0.02	0.01	0.01	0.02	0.03	<0.01	<0.01	<0.01	0.32	0.37	0.33	0.37
		Min-15d	0.02	0.01	0.01	<0.01	0.02	0.01	<0.01	<0.01	<0.01	0.01	0.34	0.01	<0.01

Table 4.15.1 Particulate matter component: Cl^- - Measured by FP (continued)Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	1.53	1.27	1.09	0.82	0.63	1.22	0.96	0.93	1.04	1.92	1.79	1.73	1.24
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.97	2.04	1.66	1.10	1.17	2.58	1.22	1.22	1.70	3.63	2.29	2.39	3.63
		Min-w	0.89	0.65	0.72	0.39	0.33	0.53	0.62	0.38	0.73	0.53	1.23	1.23	0.33
	Hoa Binh	Mean	0.69	0.74	1.04	0.67	0.84	0.55	0.63	0.88	1.60	1.11	1.29	0.97	0.91
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.36	1.48	1.50	0.93	1.15	0.62	0.67	1.10	3.57	1.69	1.87	1.12	3.57
		Min-w	0.33	0.38	0.66	0.37	0.54	0.44	0.56	0.62	0.92	0.72	0.83	0.77	0.33
	Can Tho	Mean	2.83	2.22	2.15	2.26	2.35	2.37	2.13	2.42	2.63	2.65	2.36	2.49	2.41
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.94	2.60	2.24	2.36	2.74	2.76	2.26	2.70	3.00	3.06	2.62	3.06	3.06
		Min-w	2.70	1.51	2.02	2.12	2.04	2.12	1.90	2.12	2.12	2.22	1.90	1.85	1.51
	Ho Chi Minh	Mean	3.50	3.15	3.78	3.62	2.84	3.83	3.87	3.40	3.51	3.79	3.97	3.04	3.51
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.77	5.30	4.33	4.31	3.85	5.99	5.34	4.40	4.33	5.30	5.30	3.89	5.99
		Min-w	2.78	2.34	3.23	2.90	2.34	1.98	2.68	2.28	2.70	2.46	2.24	2.46	1.98
Yen Bai	Mean	1.00	1.21	1.68	2.35	1.58	1.16	1.06	1.03	1.21	1.93	1.16	1.04	1.37	
	%	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Max-w	1.36	2.81	2.18	2.91	2.25	1.24	1.41	1.18	1.96	3.24	1.66	1.60	3.24	
	Min-w	0.74	0.66	1.17	1.69	0.84	1.02	0.65	0.84	0.51	1.32	0.85	0.72	0.51	

Table 4.15.2 Particulate matter component: Cl^- - Measured by FP using $\text{PM}_{2.5}$ cycloneUnit : $\mu\text{g}/\text{m}^3$

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	0.09	0.06	0.06	0.03	0.03	0.04	0.22	<0.01	0.88	0.22	0.11	0.07	0.12
		%	10	10	13	13	6	3	16	3	3	10	7	3	9
		Max-d	0.23	0.06	0.17	0.03	0.04	0.04	0.74	<0.01	0.88	0.52	0.20	0.07	0.88
		Min-d	0.02	0.05	<0.01	0.02	0.03	0.04	0.01	<0.01	0.88	0.06	0.03	0.07	<0.01
	Jeju	Mean	0.18	0.22	0.11	0.03	0.06	<0.01	<0.01	0.07	<0.01	0.03	0.30	0.19	0.10
		%	13	17	13	13	10	7	10	3	3	10	17	19	10
		Max-d	0.32	0.66	0.29	0.08	0.13	0.01	<0.01	0.07	<0.01	0.10	1.41	0.49	0.66
		Min-d	0.06	0.02	0.03	<0.01	0.02	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	0.03	<0.01
	Imsil	Mean	***	***	***	***	***	0.03	0.15	0.01	0.29	0.12	<0.01	0.05	0.15
		%	***	***	***	***	***	3	3	3	7	6	3	10	2
		Max-d	***	***	***	***	***	0.03	0.15	0.01	0.57	0.23	<0.01	0.05	0.57
		Min-d	***	***	***	***	***	0.03	0.15	0.01	<0.01	<0.01	<0.01	0.04	<0.01

Terms and abbreviations are given in Table 4.2.

Table 4.16.1 Particulate matter component: NH₄⁺ - Measured by FPUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.19	0.52	0.35	0.38	0.22	0.34	0.14	0.12	0.11	0.19	0.37	0.32	0.28
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.22	0.74	0.36	0.47	0.25	0.41	0.16	0.14	0.11	0.19	0.48	0.39	0.74
		Min-2w	0.16	0.30	0.35	0.25	0.19	0.28	0.12	0.10	0.10	0.19	0.25	0.25	0.10
	Ochiishi	Mean	0.14	0.52	0.37	0.17	0.22	0.26	0.24	0.10	0.09	0.04	0.26	0.27	0.22
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	0.21	0.61	0.39	0.25	0.27	0.29	0.28	0.11	0.10	0.04	0.45	0.27	0.61
		Min-2w	0.07	0.43	0.34	0.08	0.16	0.24	0.19	0.10	0.09	0.04	0.06	0.27	0.04
	Sado-seki	Mean	0.25	0.28	0.48	0.28	0.17	0.39	0.26	0.30	0.15	0.17	0.19	0.21	0.26
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.30	0.33	0.65	0.36	0.22	0.66	0.35	0.31	0.17	0.25	0.29	0.26	0.66
		Min-2w	0.20	0.23	0.31	0.19	0.11	0.12	0.16	0.29	0.11	0.10	0.09	0.15	0.09
	Happo	Mean	0.08	0.13	0.34	0.34	0.18	0.57	0.19	0.61	0.31	0.23	0.17	0.06	0.28
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.09	0.20	0.56	0.41	0.18	0.83	0.22	0.62	0.70	0.23	0.17	0.09	0.83
		Min-2w	0.07	0.06	0.13	0.23	0.18	0.30	0.15	0.59	0.10	0.23	0.17	0.03	0.03
	Ijira	Mean	0.23	0.18	0.52	0.41	0.38	0.48	0.38	0.59	0.35	0.23	0.34	0.24	0.36
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.29	0.32	0.68	0.46	0.40	0.49	0.45	0.63	0.47	0.25	0.46	0.25	0.68
		Min-2w	0.18	0.04	0.35	0.35	0.36	0.46	0.32	0.55	0.13	0.21	0.23	0.23	0.04
	Okii	Mean	0.55	0.43	0.69	0.37	0.40	0.62	0.27	0.52	0.20	0.23	0.36	0.53	0.42
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.64	0.63	0.78	0.37	0.44	0.90	0.39	0.54	0.26	0.33	0.36	0.80	0.90
		Min-2w	0.46	0.22	0.61	0.37	0.33	0.34	0.15	0.50	0.13	0.17	0.36	0.26	0.13
	Yusuhara	Mean	0.64	0.61	0.59	0.31	0.37	0.43	0.42	0.49	0.29	0.18	0.41	0.60	0.44
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.83	0.84	0.67	0.38	0.49	0.44	0.43	0.62	0.51	0.22	0.43	0.63	0.84
		Min-2w	0.46	0.38	0.51	0.24	0.25	0.42	0.40	0.37	0.05	0.14	0.39	0.57	0.05
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	0.15	0.11	0.26	0.13	0.08	0.09	0.12	0.11	0.03	0.05	0.10	0.18	0.11
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.15	0.11	0.30	0.19	0.09	0.11	0.13	0.14	0.04	0.05	0.14	0.24	0.30
		Min-2w	0.15	0.11	0.23	0.06	0.07	0.08	0.12	0.08	0.03	0.04	0.06	0.12	0.03
	Tokyo	Mean	0.68	0.71	0.73	0.64	0.54	0.61	0.92	0.70	0.43	0.39	0.47	0.48	0.60
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.76	0.85	1.03	0.70	0.56	0.66	1.05	0.73	0.54	0.44	0.61	0.50	1.05
		Min-2w	0.60	0.58	0.44	0.56	0.52	0.56	0.79	0.67	0.32	0.32	0.33	0.46	0.32
	Niigata-maki	Mean	0.4	0.4	0.52	***	***	***	***	***	***	***	***	***	0.42
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	0.5	0.4	0.68	***	***	***	***	***	***	***	***	***	0.68
		Min-2w	0.3	0.4	0.35	***	***	***	***	***	***	***	***	***	0.29
	Tsushima	Mean	1.1	0.8	1.15	0.18	0.46	0.82	0.19	0.71	0.57	0.24	0.48	0.86	0.62
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	1.4	1.3	1.36	0.26	0.48	1.19	0.23	0.79	0.59	0.30	0.52	0.98	1.43
		Min-2w	0.8	0.4	0.93	0.11	0.44	0.45	0.15	0.62	0.55	0.14	0.43	0.75	0.11

Table 4.16.1 Particulate matter component: NH₄⁺ - Measured by FP (continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.46	0.94	1.28	1.33	1.01	1.22	1.28	1.16	1.02	0.82	0.67	0.73	1.00
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	0.66	1.24	1.93	2.26	1.21	1.55	1.61	1.63	1.36	1.16	0.95	0.87	2.26
		Min-w	0.04	0.48	0.90	0.86	0.87	0.76	0.93	0.59	0.68	0.49	0.24	0.47	0.04
	Tanah Rata	Mean	0.24	0.43	0.66	0.77	0.72	0.55	0.54	0.48	0.37	0.27	0.24	0.27	0.46
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	0.32	0.58	1.01	1.04	1.25	0.74	0.85	0.65	0.49	0.51	0.40	0.45	1.25
		Min-w	0.15	0.30	0.39	0.34	0.28	0.34	0.27	0.26	0.17	0.12	0.11	0.08	0.08
	Danum Valley	Mean	0.08	0.10	0.09	0.20	0.14	0.12	0.15	0.23	0.26	0.26	0.35	0.10	0.17
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.08	0.10	0.10	0.25	0.15	0.14	0.18	0.31	0.28	0.39	0.51	0.14	0.51
		Min-2w	0.07	0.10	0.08	0.15	0.13	0.11	0.12	0.17	0.24	0.13	0.19	0.05	0.05
Mongolia	Khan-Uul	Mean	0.42	0.39	0.82	0.12	0.43	0.16	0.13	0.51	0.04	0.08	0.76	2.26	0.50
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.50	0.50	1.50	0.21	1.45	0.23	0.21	1.58	0.15	0.19	1.25	4.63	4.63
		Min-w	0.29	0.18	0.30	0.09	0.09	0.09	0.10	0.19	<0.01	0.01	0.22	0.59	<0.01
	Terelj	Mean	0.18	0.03	0.05	<0.01	0.01	<0.01	0.15	0.02	0.01	0.02	0.02	0.10	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.30	0.04	0.06	0.01	0.02	0.02	0.27	0.02	0.03	0.04	0.03	0.14	0.30
		Min-2w	0.06	0.02	0.04	<0.01	<0.01	<0.01	0.04	0.01	<0.01	<0.01	0.02	0.05	<0.01
Myanmar	Yangon	Mean	0.90	0.47	0.59	0.54	0.84	0.08	0.04	0.07	0.07	0.03	0.13	0.07	0.32
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.09	0.84	1.09	0.83	1.05	0.10	0.05	0.09	0.08	0.03	0.14	0.11	1.09
		Min-2w	0.71	0.11	0.08	0.15	0.62	0.05	0.03	0.06	0.06	0.02	0.12	0.03	0.02
Philippines	Manila Observatory	Mean	***	***	***	***	***	0.49	0.11	0.14	0.15	0.12	0.11	<0.01	0.15
		%	***	***	***	***	***	75	100	100	100	100	100	100	55
		Max-irreg	***	***	***	***	***	0.87	0.18	0.24	0.24	0.20	0.27	<0.01	0.87
		Min-irreg	***	***	***	***	***	0.19	0.03	0.07	0.09	0.02	<0.01	<0.01	<0.01
	Los Baños	Mean	***	***	***	***	***	0.79	<0.01	0.09	0.43	0.13	0.96	<0.01	0.44
		%	***	***	***	***	***	57	100	100	100	100	100	100	54
		Max-irreg	***	***	***	***	***	2.01	<0.01	0.11	0.69	0.23	2.91	<0.01	2.91
		Min-irreg	***	***	***	***	***	<0.01	<0.01	0.07	0.21	0.03	0.16	<0.01	<0.01
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	0.12	0.19	0.22	0.17	0.07	<0.01	0.20	0.27	0.07	0.09	0.12	0.16	0.14
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.31	0.37	0.46	0.36	0.26	0.02	0.46	0.45	0.24	0.28	0.21	0.38	0.46
		Min-w	<0.01	0.08	0.04	0.03	<0.01	<0.01	<0.01	0.10	0.02	<0.01	0.03	0.01	<0.01
	Irkutsk	Mean	0.69	0.97	0.56	0.19	0.45	0.25	0.33	0.34	0.28	0.47	1.15	2.32	0.63
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.11	2.06	1.12	0.37	1.12	0.40	0.72	0.76	0.49	0.62	2.42	2.84	2.84
		Min-w	0.03	0.26	0.11	0.03	0.04	0.13	0.03	0.17	0.09	0.28	0.53	1.90	0.03
	Primorskaya	Mean	0.42	0.05	0.03	0.02	0.03	0.01	<0.01	<0.01	<0.01	0.15	0.31	0.17	0.10
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.54	0.06	0.04	0.03	0.03	0.02	0.02	<0.01	<0.01	0.29	0.32	0.35	0.54
		Min-15d	0.29	0.04	0.02	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.31	<0.01	<0.01

Table 4.16.1 Particulate matter component: NH₄⁺ - Measured by FP (continued)

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	0.77	1.26	0.79	0.39	0.21	0.25	0.22	0.29	0.13	0.31	0.80	0.96	0.53
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.28	2.13	1.43	0.69	0.33	0.53	0.42	0.34	0.24	0.43	1.34	1.43	2.13
		Min-w	0.43	0.39	0.32	0.14	0.08	0.06	0.14	0.21	0.08	0.13	0.55	0.69	0.06
	Hoa Binh	Mean	0.18	0.33	1.93	0.56	0.61	0.24	0.18	0.17	0.11	0.09	0.36	0.29	0.41
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.20	0.59	3.61	0.75	1.11	0.32	0.27	0.29	0.14	0.20	0.55	0.33	3.61
		Min-w	0.17	0.13	0.55	0.24	0.31	0.15	0.12	0.08	0.06	0.04	0.16	0.24	0.04
	Can Tho	Mean	1.09	0.90	1.21	0.76	0.67	1.23	1.33	0.80	1.20	0.87	0.93	0.80	0.97
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.31	1.15	1.69	0.97	0.93	1.43	1.88	1.15	1.69	1.15	1.15	1.01	1.88
		Min-w	0.89	0.71	0.67	0.46	0.44	1.09	0.52	0.67	0.75	0.67	0.62	0.52	0.44
	Ho Chi Minh	Mean	1.27	1.11	1.08	0.82	0.97	0.67	0.93	1.09	0.90	1.10	0.76	0.90	0.97
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.63	1.83	2.00	1.19	1.43	0.97	1.09	2.08	1.13	1.27	1.33	1.15	2.08
		Min-w	1.05	0.65	0.60	0.20	0.77	0.26	0.75	0.50	0.50	0.91	0.40	0.75	0.20
	Yen Bai	Mean	1.00	1.33	3.55	2.08	1.13	0.63	0.42	0.58	0.67	0.61	1.58	1.72	1.25
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.52	1.71	3.99	2.71	1.61	0.82	0.54	0.73	0.83	1.54	2.95	3.09	3.99
		Min-w	0.46	0.64	3.00	1.78	0.67	0.36	0.31	0.46	0.32	0.15	0.34	0.51	0.15

Table 4.16.2 Particulate matter component: NH₄⁺ - Measured by FP using PM_{2.5} cyclone

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	3.63	0.34	1.05	0.84	0.57	1.24	0.28	1.51	1.41	0.97	0.78	0.73	1.11
		%	10	10	13	17	13	17	16	10	17	16	10	3	14
		Max-d	7.97	0.48	2.74	2.16	0.75	2.76	0.50	2.61	3.11	1.96	1.07	0.73	7.97
		Min-d	0.59	0.16	0.41	0.38	0.25	0.49	0.11	0.76	0.04	0.06	0.59	0.73	0.04
	Jeju	Mean	3.29	2.92	1.37	1.25	1.05	1.15	0.63	0.91	0.79	1.07	1.22	1.80	1.50
		%	13	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	6.46	4.78	2.49	1.82	2.43	2.30	1.10	1.36	1.40	2.51	2.05	3.80	6.46
		Min-d	1.06	0.44	0.56	0.88	0.38	0.60	0.38	<0.01	0.37	0.18	0.42	0.88	<0.01
	Imsil	Mean	***	***	***	0.43	0.69	0.93	0.56	1.08	0.29	0.30	0.26	0.49	0.68
		%	***	***	***	3	16	17	16	16	17	16	13	13	10
		Max-d	***	***	***	0.43	1.99	1.18	1.20	1.50	0.57	0.69	0.28	0.71	1.99
		Min-d	***	***	***	0.43	0.24	0.62	0.19	0.16	0.04	0.13	0.22	0.20	0.04

Terms and abbreviations are given in Table 4.2.

Table 4.17.1 Particulate matter component: Na⁺ - Measured by FPUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.84	2.28	1.34	2.13	2.16	1.26	0.84	0.89	2.38	2.09	2.70	1.22	1.68
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.88	2.33	1.49	3.19	2.64	1.38	0.97	1.13	2.62	2.09	2.73	1.23	3.19
		Min-2w	0.80	2.23	1.20	1.44	1.69	1.14	0.70	0.66	2.15	2.09	2.66	1.22	0.66
	Ochiishi	Mean	1.88	2.20	5.89	1.75	3.43	1.84	1.18	2.67	3.65	4.94	2.69	1.83	2.82
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	2.96	3.16	8.95	2.93	3.46	2.46	1.20	3.92	5.14	4.94	3.52	1.83	8.95
		Min-2w	0.81	1.24	2.82	0.58	3.40	1.21	1.17	1.41	2.56	4.94	1.86	1.83	0.58
	Sado-seki	Mean	3.42	3.20	3.94	1.87	1.09	0.86	1.94	1.79	1.22	2.45	2.85	4.88	2.39
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.78	3.73	4.65	2.26	1.15	1.24	1.95	1.83	2.02	2.92	3.50	5.49	5.49
		Min-2w	3.07	2.67	3.23	1.49	1.03	0.47	1.93	1.76	0.77	1.98	2.21	4.27	0.47
	Happo	Mean	0.04	0.04	0.16	0.16	0.07	0.07	0.03	0.06	0.03	0.10	0.13	0.05	0.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.05	0.06	0.27	0.24	0.07	0.10	0.06	0.06	0.05	0.10	0.13	0.06	0.27
		Min-2w	0.04	0.02	0.06	0.03	0.07	0.04	0.01	0.06	0.02	0.10	0.13	0.04	0.01
	Ijira	Mean	0.16	0.09	0.37	0.38	0.36	0.17	0.12	0.22	0.19	0.24	0.21	0.16	0.23
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.17	0.17	0.43	0.58	0.42	0.26	0.16	0.23	0.25	0.27	0.21	0.16	0.58
		Min-2w	0.15	0.02	0.31	0.25	0.30	0.08	0.08	0.20	0.14	0.21	0.20	0.16	0.02
	Okii	Mean	5.26	3.38	5.21	2.41	2.18	1.08	2.37	1.35	1.64	2.56	4.28	6.75	3.17
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	5.82	3.53	5.97	2.41	3.52	1.45	2.42	1.37	1.92	2.89	6.06	8.00	8.00
		Min-2w	4.71	3.23	4.45	2.41	1.35	0.71	2.32	1.32	1.35	2.15	2.49	5.50	0.71
	Yusuhara	Mean	0.32	0.20	0.35	0.25	0.30	0.16	0.25	0.24	0.34	0.39	0.35	0.40	0.30
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.38	0.21	0.38	0.27	0.32	0.22	0.30	0.27	0.41	0.49	0.42	0.41	0.49
		Min-2w	0.26	0.19	0.33	0.22	0.27	0.10	0.21	0.20	0.22	0.29	0.29	0.39	0.10
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	2.62	3.83	3.19	2.66	2.30	1.08	0.93	1.81	1.90	2.99	2.51	2.30	2.31
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	2.62	3.83	3.40	2.88	2.86	1.18	1.18	1.94	2.71	3.27	3.13	2.59	3.83
		Min-2w	2.62	3.83	2.99	2.48	1.74	0.98	0.68	1.69	1.09	2.64	1.88	2.02	0.68
	Tokyo	Mean	0.35	0.68	0.46	1.33	1.17	0.76	0.73	0.83	1.34	1.19	0.54	0.27	0.84
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.35	1.08	0.64	1.42	1.38	0.88	0.84	1.10	1.39	1.25	0.82	0.27	1.42
		Min-2w	0.34	0.28	0.29	1.21	0.97	0.64	0.62	0.56	1.28	1.05	0.27	0.26	0.26
	Niigata-maki	Mean	2.0	1.2	2.3	***	***	***	***	***	***	***	***	***	1.80
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	2.3	1.5	2.5	***	***	***	***	***	***	***	***	***	2.51
		Min-2w	1.7	0.8	2.0	***	***	***	***	***	***	***	***	***	0.83
	Tsushima	Mean	0.9	0.7	0.8	0.94	0.91	0.32	0.32	0.92	1.04	1.40	1.18	0.76	0.87
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	0.9	1.0	1.1	1.17	0.94	0.41	0.45	0.97	1.06	1.56	1.23	0.76	1.56
		Min-2w	0.9	0.5	0.6	0.71	0.88	0.23	0.19	0.86	1.02	1.29	1.13	0.76	0.19

Table 4.17.1 Particulate matter component: Na⁺ (continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.40	0.53	0.56	0.28	0.20	0.26	0.76	0.44	0.42	0.33	0.21	0.15	0.38
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-irreg	0.93	0.97	1.11	0.67	0.32	0.27	1.25	0.61	0.59	0.60	0.44	0.23	1.25
		Min-irreg	0.01	0.24	0.26	0.08	0.05	0.25	0.26	0.14	0.23	0.17	0.09	0.11	0.01
	Tanah Rata	Mean	0.31	0.40	0.43	0.16	0.08	0.08	0.22	0.11	0.18	0.11	0.08	0.06	0.19
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-irreg	0.49	0.50	0.58	0.35	0.12	0.14	0.43	0.19	0.27	0.26	0.15	0.09	0.58
		Min-irreg	0.17	0.29	0.27	0.06	0.03	0.03	0.11	0.03	0.02	0.01	0.02	0.02	0.01
	Danum Valley	Mean	0.58	0.98	0.78	0.49	0.17	0.04	0.10	0.12	0.19	0.06	0.12	0.15	0.29
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.91	0.98	0.98	0.69	0.17	0.05	0.13	0.16	0.24	0.08	0.19	0.28	0.98
		Min-2w	0.25	0.98	0.57	0.28	0.16	0.02	0.07	0.05	0.15	0.05	0.05	0.07	0.02
Mongolia	Khan-Uul	Mean	0.50	0.52	0.88	0.53	0.71	0.71	0.53	0.63	0.25	0.18	0.21	0.47	0.51
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.67	0.70	1.37	0.62	1.36	1.13	0.67	0.94	0.62	0.33	0.31	1.03	1.37
		Min-w	0.39	0.45	0.49	0.48	0.39	0.53	0.47	0.44	0.08	0.11	0.10	0.08	0.08
	Terej	Mean	0.05	0.03	0.04	0.06	0.04	0.06	0.08	0.05	0.05	0.05	0.07	0.04	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.06	0.04	0.04	0.09	0.04	0.07	0.10	0.05	0.06	0.06	0.11	0.06	0.11
		Min-2w	0.04	0.03	0.03	0.04	0.04	0.05	0.05	0.05	0.04	0.05	0.04	0.03	0.03
Myanmar	Yangon	Mean	0.04	0.06	0.15	0.30	0.11	0.03	0.06	0.24	0.35	0.16	0.03	0.07	0.14
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.04	0.06	0.19	0.66	0.17	0.04	0.09	0.43	0.64	0.21	0.03	0.09	0.66
		Min-2w	0.04	0.06	0.11	0.11	0.05	0.02	0.02	0.06	0.06	0.13	0.02	0.06	0.02
Philippines	Manila Observatory	Mean	0.72	0.87	1.06	0.33	0.57	0.18	0.26	0.18	0.26	0.04	0.47	0.26	0.43
		%	100	100	77	100	78	100	100	100	100	100	100	100	96
		Max-w	1.21	1.41	1.55	0.48	1.70	0.22	0.64	0.26	0.38	0.18	1.01	0.32	1.70
		Min-w	0.12	0.22	0.50	0.16	0.17	0.14	0.07	0.05	0.20	<0.01	<0.01	0.15	<0.01
	Los Baños	Mean	1.90	1.69	0.49	0.49	0.56	0.19	<0.01	0.10	0.18	0.29	0.12	0.24	0.62
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.52	2.62	0.70	0.72	1.07	0.34	<0.01	0.10	0.30	0.57	0.24	0.42	2.62
		Min-w	0.94	0.57	0.26	0.35	0.28	<0.01	<0.01	0.10	<0.01	<0.01	<0.01	0.07	<0.01
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	0.05	0.04	0.04	0.06	0.02	0.02	0.07	0.04	0.06	0.15	<0.01	0.02	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.06	0.06	0.10	0.10	0.03	0.04	0.17	0.06	0.22	0.25	0.01	0.03	0.25
		Min-w	0.03	0.02	0.01	0.02	<0.01	<0.01	0.02	0.03	0.01	<0.01	<0.01	<0.01	<0.01
	Irkutsk	Mean	0.31	0.32	0.72	0.11	0.08	0.33	0.07	0.10	0.09	0.44	0.23	0.13	0.26
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.47	0.53	1.35	0.23	0.11	1.25	0.10	0.16	0.14	0.94	0.47	0.21	1.35
		Min-w	0.15	0.16	0.24	0.04	0.06	0.06	0.05	0.06	0.04	0.03	0.13	0.08	0.03
	Primorskaya	Mean	0.04	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.02	0.05	0.02	0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.06	<0.01	<0.01	0.01	0.01	0.02	<0.01	<0.01	<0.01	0.03	0.05	0.03	0.06
		Min-15d	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01

Table 4.17.1 Particulate matter component: Na⁺ - Measured by FP (continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	0.42	0.37	0.27	0.23	0.16	0.21	0.31	0.21	0.17	0.37	0.39	0.23	0.28
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.76	0.71	0.36	0.43	0.25	0.30	0.38	0.40	0.34	0.57	0.63	0.37	0.76
		Min-w	0.13	0.11	0.15	0.14	0.08	0.08	0.24	0.11	0.04	0.19	0.22	0.11	0.04
	Hoa Binh	Mean	0.28	0.43	0.61	0.43	0.41	0.26	0.24	0.46	0.93	0.57	0.51	0.35	0.46
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.32	0.83	0.89	0.52	0.57	0.29	0.36	0.62	2.34	0.94	0.86	0.44	2.34
		Min-w	0.20	0.26	0.33	0.25	0.32	0.23	0.18	0.28	0.29	0.36	0.26	0.25	0.18
	Can Tho	Mean	0.12	0.24	0.13	0.13	0.21	0.25	0.21	0.19	0.20	0.17	0.21	0.23	0.19
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.20	0.30	0.20	0.22	0.32	0.44	0.44	0.36	0.24	0.26	0.36	0.30	0.44
		Min-w	0.02	0.18	<0.01	0.06	<0.01	0.04	0.04	<0.01	0.16	0.04	0.04	0.16	<0.01
	Ho Chi Minh	Mean	0.98	0.59	1.01	0.62	1.01	0.87	0.86	0.69	1.09	0.78	0.85	0.81	0.84
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.27	0.79	1.41	0.79	1.31	1.43	0.95	0.95	1.29	1.17	0.95	1.03	1.43
		Min-w	0.56	0.42	0.65	0.54	0.75	0.56	0.77	0.56	0.95	0.44	0.75	0.62	0.42
	Yen Bai	Mean	0.31	0.29	0.62	0.42	0.21	0.37	0.31	0.23	0.21	0.36	0.19	0.09	0.30
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.37	0.47	0.76	0.61	0.33	0.39	0.37	0.34	0.26	0.64	0.29	0.14	0.76
		Min-w	0.24	0.22	0.47	0.23	0.14	0.33	0.26	0.12	0.19	0.22	0.10	0.06	0.06

Table 4.17.2 Particulate matter component: Na⁺ - Measured by FP using PM_{2.5} cycloneUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	0.17	0.11	0.20	0.16	0.18	0.09	0.30	0.17	0.18	0.23	0.29	0.17	0.18
		%	10	10	13	17	13	17	16	10	17	16	10	3	14
		Max-d	0.22	0.16	0.33	0.24	0.21	0.15	0.56	0.35	0.55	0.44	0.59	0.17	0.56
		Min-d	0.14	0.09	0.08	0.03	0.10	0.06	0.15	0.07	0.07	0.10	0.07	0.17	0.03
	Jeju	Mean	0.11	0.15	0.13	0.26	0.19	0.05	0.15	0.11	0.07	0.08	0.05	0.08	0.14
		%	13	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	0.15	0.34	0.27	0.66	0.38	0.09	0.30	0.26	0.11	0.16	0.08	0.12	0.66
		Min-d	0.08	0.08	0.08	0.11	0.04	0.02	0.03	0.04	0.02	0.04	0.02	0.05	0.02
	Imsil	Mean	***	***	***	0.02	0.06	0.04	0.09	0.07	0.14	0.08	0.03	0.03	0.08
		%	***	***	***	3	16	17	16	16	17	16	10	13	10
		Max-d	***	***	***	0.02	0.11	0.06	0.23	0.12	0.54	0.20	0.05	0.05	0.54
		Min-d	***	***	***	0.02	<0.01	0.02	0.01	0.03	0.01	0.02	0.02	0.01	<0.01

Terms and abbreviations are given in Table 4.2.

Table 4.18.1 Particulate matter component: K⁺ - Measured by FPUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.03	0.25	0.13	0.14	0.12	0.11	0.11	0.09	0.13	0.12	0.19	0.09	0.13
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.03	0.33	0.13	0.20	0.15	0.11	0.12	0.09	0.15	0.12	0.23	0.10	0.33
		Min-2w	0.03	0.16	0.12	0.11	0.09	0.10	0.10	0.08	0.11	0.12	0.14	0.08	0.03
	Ochiishi	Mean	0.07	0.19	0.23	0.07	0.13	0.06	0.06	0.09	0.13	0.17	0.13	0.08	0.12
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	0.11	0.30	0.35	0.12	0.13	0.08	0.06	0.13	0.18	0.17	0.19	0.08	0.35
		Min-2w	0.03	0.07	0.11	0.02	0.13	0.05	0.06	0.05	0.10	0.17	0.07	0.08	0.02
	Sado-seki	Mean	0.14	0.17	0.19	0.14	0.06	0.06	0.11	0.08	0.07	0.13	0.15	0.19	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.16	0.21	0.24	0.16	0.07	0.07	0.13	0.09	0.09	0.16	0.16	0.22	0.24
		Min-2w	0.12	0.13	0.14	0.12	0.06	0.05	0.08	0.07	0.05	0.10	0.15	0.16	0.05
	Happo	Mean	<0.01	0.02	0.03	0.05	0.03	0.04	0.01	0.02	0.01	0.02	0.03	<0.01	0.02
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.01	0.02	0.05	0.09	0.03	0.05	0.01	0.02	0.03	0.02	0.03	<0.01	0.09
		Min-2w	<0.01	0.0	<0.01	0.0	0.0	0.0	0.0	0.0	<0.01	0.0	0.0	<0.01	<0.01
	Ijira	Mean	0.04	0.02	0.08	0.10	0.09	0.10	0.10	0.07	0.09	0.08	0.06	0.04	0.07
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.04	0.03	0.10	0.11	0.09	0.13	0.10	0.07	0.11	0.09	0.07	0.04	0.13
		Min-2w	0.03	0.01	0.05	0.09	0.09	0.07	0.10	0.06	0.08	0.07	0.04	0.04	0.01
	Okii	Mean	0.21	0.21	0.26	0.15	0.11	0.08	0.10	0.06	0.08	0.13	0.22	0.28	0.16
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.24	0.24	0.30	0.15	0.16	0.10	0.11	0.07	0.10	0.14	0.25	0.33	0.33
		Min-2w	0.19	0.17	0.22	0.15	0.08	0.06	0.10	0.06	0.07	0.10	0.19	0.22	0.06
	Yusuhara	Mean	0.05	0.08	0.06	0.04	0.05	0.03	0.02	0.03	0.03	0.04	0.04	0.05	0.04
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.06	0.10	0.07	0.05	0.05	0.03	0.02	0.03	0.04	0.04	0.05	0.06	0.10
		Min-2w	0.03	0.06	0.05	0.04	0.04	0.03	0.02	0.03	0.02	0.04	0.04	0.05	0.02
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	0.11	0.17	0.12	0.13	0.10	0.05	0.04	0.09	0.09	0.12	0.11	0.10	0.10
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.11	0.17	0.12	0.14	0.13	0.06	0.05	0.10	0.11	0.13	0.14	0.10	0.17
		Min-2w	0.11	0.17	0.12	0.11	0.07	0.03	0.03	0.07	0.07	0.10	0.09	0.09	0.03
	Tokyo	Mean	0.10	0.09	0.07	0.17	0.11	0.11	0.17	0.11	0.12	0.13	0.11	0.08	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.10	0.11	0.10	0.22	0.11	0.11	0.19	0.12	0.12	0.14	0.16	0.08	0.22
		Min-2w	0.09	0.07	0.04	0.11	0.11	0.10	0.16	0.11	0.11	0.12	0.07	0.07	0.04
	Niigata-maki	Mean	0.1	0.1	0.1	***	***	***	***	***	***	***	***	***	0.10
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	0.1	0.1	0.2	***	***	***	***	***	***	***	***	***	0.16
		Min-2w	0.1	0.1	0.1	***	***	***	***	***	***	***	***	***	0.05
	Tsushima	Mean	0.1	0.1	0.1	0.09	0.08	0.07	0.04	0.06	0.10	0.08	0.10	0.08	0.09
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	0.1	0.2	0.1	0.10	0.08	0.08	0.07	0.06	0.11	0.09	0.12	0.09	0.18
		Min-2w	0.1	0.1	0.1	0.08	0.07	0.05	0.01	0.05	0.08	0.06	0.08	0.08	0.01

Table 4.18.1 Particulate matter component: K⁺ - Measured by FP (continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.21	0.39	0.29	0.48	0.23	0.31	0.37	0.24	0.27	0.25	0.20	0.21	0.28
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	0.28	0.61	0.41	1.05	0.32	0.45	0.48	0.33	0.31	0.40	0.39	0.28	1.05
		Min-w	0.08	0.17	0.15	0.12	0.17	0.09	0.25	0.13	0.23	0.15	0.09	0.14	0.08
	Tanah Rata	Mean	0.08	0.15	0.16	0.17	0.14	0.10	0.21	0.13	0.09	0.06	0.09	0.05	0.12
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	0.15	0.19	0.24	0.28	0.18	0.14	0.28	0.18	0.12	0.08	0.27	0.06	0.28
		Min-w	0.03	0.11	0.09	0.10	0.11	0.05	0.14	0.05	0.08	0.03	0.02	0.04	0.02
	Danum Valley	Mean	0.13	0.21	0.23	0.17	0.13	0.13	0.13	0.14	0.19	0.10	0.08	0.10	0.14
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.17	0.21	0.26	0.18	0.15	0.17	0.16	0.21	0.19	0.10	0.10	0.12	0.26
		Min-2w	0.10	0.21	0.20	0.16	0.12	0.10	0.11	0.10	0.19	0.10	0.07	0.08	0.07
Mongolia	Khan-Uul	Mean	0.17	0.19	0.28	0.14	0.28	0.16	0.12	0.17	0.05	0.08	0.18	0.08	0.16
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.33	0.30	0.52	0.20	0.80	0.30	0.14	0.27	0.08	0.13	0.30	0.13	0.80
		Min-w	0.09	0.09	0.09	0.09	0.12	0.09	0.09	0.11	0.02	0.05	0.08	0.02	0.02
	Terej	Mean	0.01	<0.01	<0.01	0.03	<0.01	0.02	0.03	0.02	0.02	0.02	0.04	0.02	0.02
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.02	0.01	<0.01	0.06	0.01	0.02	0.04	0.03	0.02	0.02	0.07	0.03	0.07
		Min-2w	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	<0.01	0.02	0.02	<0.01	<0.01	<0.01
Myanmar	Yangon	Mean	0.41	0.39	0.01	0.23	0.04	0.04	0.14	0.20	0.43	0.84	0.45	0.03	0.29
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.60	0.66	0.02	0.51	0.08	0.07	0.21	0.33	0.71	1.10	0.63	0.06	1.10
		Min-2w	0.21	0.13	<0.01	0.05	0.01	0.02	0.06	0.08	0.16	0.41	0.26	0.01	<0.01
Philippines	Manila Observatory	Mean	0.13	0.41	0.29	0.11	0.09	0.13	0.05	0.08	0.13	0.05	0.13	0.13	0.14
		%	100	100	77	100	78	100	100	100	100	100	100	100	96
		Max-irreg	0.19	0.88	0.38	0.20	0.11	0.20	0.11	0.09	0.16	0.19	0.20	0.14	0.88
		Min-irreg	<0.01	0.21	0.14	0.06	0.04	0.06	0.03	0.04	0.11	<0.01	<0.01	0.13	<0.01
	Los Baños	Mean	0.31	0.27	0.20	0.17	0.16	0.10	<0.01	0.03	0.09	1.66	0.13	0.07	0.23
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	1.10	0.32	0.33	0.23	0.23	0.20	<0.01	0.05	0.13	3.25	0.38	0.20	3.25
		Min-irreg	0.08	0.23	0.09	0.12	0.08	<0.01	<0.01	0.01	0.06	0.07	<0.01	<0.01	<0.01
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	0.03	0.03	0.02	0.03	<0.01	0.02	0.43	<0.01	<0.01	0.03	0.02	0.02	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.05	0.04	0.04	0.06	0.02	0.10	1.58	0.01	0.01	0.04	0.03	0.07	1.58
		Min-w	0.02	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01
	Irkutsk	Mean	0.48	0.15	0.08	0.03	0.04	0.05	0.06	0.11	0.05	0.06	0.12	0.33	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.11	0.21	0.12	0.05	0.08	0.06	0.07	0.15	0.08	0.10	0.17	0.58	1.11
		Min-w	0.12	0.08	0.05	0.01	0.01	0.04	0.02	0.07	0.01	0.04	0.07	0.14	0.01
	Primorskaya	Mean	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.01	0.11
		Min-15d	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01

Table 4.18.1 Particulate matter component: K⁺ - Measured by FP (continued)

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	0.21	0.20	0.14	0.16	0.12	0.27	0.32	0.46	0.33	0.81	0.68	0.47	0.35
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.31	0.26	0.22	0.31	0.26	0.59	0.51	0.59	0.75	1.15	0.94	0.82	1.15
		Min-w	0.06	0.12	0.06	0.09	0.06	0.12	0.16	0.39	0.09	0.36	0.50	0.25	0.06
	Hoa Binh	Mean	0.12	0.13	0.60	0.62	0.44	0.12	0.07	0.10	0.09	0.13	0.14	0.18	0.23
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.13	0.21	0.99	1.22	1.63	0.18	0.10	0.16	0.15	0.20	0.33	0.48	1.63
		Min-w	0.09	0.07	0.13	0.31	0.10	0.08	0.04	0.06	0.05	0.06	0.08	0.06	0.04
	Can Tho	Mean	0.28	0.34	0.23	0.31	0.27	0.31	0.35	0.26	0.37	0.31	0.30	0.33	0.30
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.44	0.48	0.34	0.42	0.34	0.44	0.50	0.34	0.48	0.42	0.40	0.44	0.50
		Min-w	0.22	0.20	0.18	0.18	0.24	0.22	0.22	0.20	0.28	0.24	0.22	0.24	0.18
	Ho Chi Minh	Mean	0.70	0.67	0.61	0.61	0.57	0.73	0.58	0.54	0.63	0.52	0.68	0.57	0.61
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.81	0.79	0.65	0.71	0.63	0.97	0.69	0.71	0.73	0.60	0.85	0.67	0.97
		Min-w	0.63	0.56	0.54	0.56	0.46	0.46	0.44	0.40	0.52	0.40	0.50	0.44	0.40
	Yen Bai	Mean	0.37	1.00	2.22	1.10	0.69	0.59	0.39	0.38	0.43	0.49	0.50	0.49	0.71
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.60	3.48	4.16	1.28	0.82	0.65	0.41	0.48	0.52	0.69	0.71	0.81	4.16
		Min-w	0.22	0.23	1.11	0.83	0.54	0.51	0.33	0.31	0.31	0.20	0.27	0.21	0.20

Table 4.18.2 Particulate matter component: K⁺ - Measured by FP using PM_{2.5} cyclone

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	0.21	<0.01	0.02	0.03	0.03	0.01	<0.01	0.02	0.01	0.03	0.08	0.02	0.04
		%	10	7	13	13	13	10	16	10	13	16	10	3	12
		Max-d	0.58	<0.01	0.05	0.05	0.05	0.01	0.01	0.02	0.03	0.11	0.13	0.02	0.58
		Min-d	0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.02	<0.01
	Jeju	Mean	0.23	0.80	0.16	0.12	0.03	0.08	0.02	0.10	0.08	0.20	0.38	0.21	0.19
		%	13	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	0.40	2.18	0.25	0.20	0.07	0.11	0.06	0.28	0.15	0.51	0.62	0.32	2.18
		Min-d	0.08	0.06	0.08	0.07	0.02	0.04	<0.01	0.02	0.05	0.03	0.27	0.13	<0.01
	Imsil	Mean	***	***	***	0.01	0.04	0.02	0.02	0.02	0.17	0.02	0.05	0.02	0.04
		%	***	***	***	3	10	13	13	10	7	16	13	13	6
		Max-d	***	***	***	0.01	0.04	0.04	0.04	0.02	0.34	0.03	0.11	0.02	0.34
		Min-d	***	***	***	0.01	0.04	<0.01	<0.01	0.01	<0.01	0.01	0.02	0.01	<0.01

Terms and abbreviations are given in Table 4.2.

Table 4.19.1 Particulate matter component: Mg²⁺ - Measured by FPUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.09	0.30	0.17	0.27	0.27	0.16	0.10	0.11	0.29	0.25	0.32	0.15	0.21
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.10	0.31	0.18	0.39	0.33	0.17	0.12	0.14	0.32	0.25	0.33	0.15	0.39
		Min-2w	0.09	0.29	0.15	0.18	0.21	0.14	0.09	0.08	0.26	0.25	0.32	0.15	0.08
	Ochiishi	Mean	0.21	0.27	0.72	0.20	0.40	0.21	0.13	0.31	0.42	0.59	0.32	0.21	0.33
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	0.34	0.40	1.12	0.34	0.41	0.28	0.14	0.46	0.60	0.59	0.42	0.21	1.12
		Min-2w	0.08	0.14	0.33	0.06	0.40	0.14	0.13	0.16	0.30	0.59	0.22	0.21	0.06
	Sado-seki	Mean	0.41	0.39	0.49	0.25	0.13	0.11	0.23	0.21	0.14	0.29	0.35	0.58	0.29
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.45	0.47	0.57	0.29	0.14	0.15	0.23	0.22	0.24	0.35	0.42	0.67	0.67
		Min-2w	0.37	0.32	0.41	0.20	0.12	0.06	0.23	0.21	0.08	0.23	0.28	0.49	0.06
	Happo	Mean	<0.01	<0.01	0.04	0.06	0.02	0.02	<0.01	0.01	<0.01	0.01	0.02	<0.01	0.02
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.01	<0.01	0.07	0.09	0.02	0.03	<0.01	0.02	0.01	0.01	0.02	<0.01	0.09
		Min-2w	<0.01	<0.01	0.02	0.02	0.02	0.02	<0.01	0.01	<0.01	0.01	0.02	<0.01	<0.01
	Ijira	Mean	0.01	<0.01	0.06	0.07	0.05	0.03	0.02	0.03	0.03	0.03	0.02	0.01	0.03
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.01	0.02	0.07	0.12	0.06	0.04	0.02	0.03	0.03	0.03	0.03	0.02	0.12
		Min-2w	0.01	<0.01	0.05	0.04	0.04	0.02	0.01	0.02	0.02	0.02	0.02	0.01	<0.01
	Okii	Mean	0.62	0.41	0.64	0.31	0.26	0.13	0.27	0.15	0.19	0.30	0.51	0.81	0.38
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.69	0.42	0.74	0.31	0.41	0.18	0.28	0.16	0.22	0.34	0.73	0.96	0.96
		Min-2w	0.56	0.39	0.54	0.31	0.16	0.09	0.27	0.15	0.15	0.25	0.29	0.66	0.09
	Yusuhara	Mean	0.04	0.03	0.07	0.04	0.04	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.04
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.05	0.04	0.07	0.06	0.04	0.03	0.03	0.03	0.04	0.05	0.05	0.05	0.07
		Min-2w	0.03	0.03	0.06	0.03	0.04	0.02	0.02	0.02	0.02	0.03	0.03	0.05	0.02
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	0.32	0.47	0.44	0.33	0.26	0.12	0.11	0.21	0.22	0.35	0.30	0.26	0.28
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.32	0.47	0.47	0.36	0.34	0.14	0.14	0.24	0.32	0.38	0.37	0.30	0.47
		Min-2w	0.32	0.47	0.40	0.30	0.19	0.11	0.08	0.19	0.13	0.32	0.22	0.22	0.08
	Tokyo	Mean	0.06	0.09	0.08	0.20	0.16	0.12	0.12	0.13	0.18	0.16	0.08	0.05	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.06	0.14	0.11	0.24	0.19	0.13	0.12	0.16	0.19	0.17	0.12	0.05	0.24
		Min-2w	0.06	0.05	0.05	0.17	0.13	0.11	0.11	0.10	0.17	0.14	0.04	0.04	0.04
	Niigata-maki	Mean	0.2	0.2	0.3	***	***	***	***	***	***	***	***	***	0.23
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	0.3	0.2	0.3	***	***	***	***	***	***	***	***	***	0.34
		Min-2w	0.2	0.1	0.3	***	***	***	***	***	***	***	***	***	0.11
	Tsushima	Mean	0.1	0.1	0.1	0.13	0.11	0.05	0.03	0.10	0.09	0.15	0.14	0.09	0.10
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	0.1	0.1	0.2	0.13	0.12	0.05	0.05	0.10	0.12	0.18	0.14	0.10	0.18
		Min-2w	0.1	0.1	0.1	0.13	0.11	0.05	0.01	0.09	0.05	0.13	0.14	0.09	0.01

Table 4.19.1 Particulate matter component: Mg²⁺ - Measured by FP(continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.03	0.05	0.06	0.05	<0.01	0.05	0.07	0.02	0.03	0.03	<0.01	0.03	0.04
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	0.07	0.10	0.11	0.14	0.01	0.14	0.22	0.05	0.09	0.13	0.04	0.12	0.22
		Min-w	0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Tanah Rata	Mean	0.02	0.03	0.04	0.02	0.02	0.01	0.05	0.01	0.02	<0.01	<0.01	<0.01	0.02
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	0.03	0.04	0.07	0.02	0.03	0.02	0.06	0.03	0.05	0.02	0.02	0.01	0.07
		Min-w	<0.01	0.02	0.02	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Danum Valley	Mean	0.05	0.09	0.07	0.03	0.01	0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.02
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.08	0.09	0.09	0.04	0.01	0.02	<0.01	0.03	0.03	0.02	<0.01	<0.01	0.09
		Min-2w	0.02	0.09	0.06	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mongolia	Khan-Uul	Mean	0.12	0.11	0.17	0.12	0.17	0.16	0.14	0.14	0.05	0.04	0.07	0.08	0.11
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.16	0.19	0.21	0.20	0.20	0.18	0.15	0.17	0.09	0.09	0.10	0.14	0.21
		Min-w	0.09	0.08	0.09	0.09	0.13	0.15	0.13	0.13	0.02	0.02	0.02	0.02	0.02
	Terej	Mean	<0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.01	<0.01	<0.01	0.02	<0.01	0.01	0.01	<0.01	0.01	<0.01	0.01	0.01	0.02
		Min-2w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Myanmar	Yangon	Mean	0.12	0.02	<0.01	0.03	<0.01	0.08	0.02	0.07	0.11	0.03	0.12	0.04	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.23	0.02	<0.01	0.05	<0.01	0.09	0.02	0.07	0.20	0.05	0.16	0.04	0.23
		Min-2w	0.02	<0.01	<0.01	<0.01	<0.01	0.08	0.02	0.06	0.01	<0.01	0.09	0.04	<0.01
Philippines	Manila Observatory	Mean	0.19	0.16	0.17	0.06	0.05	0.04	0.06	0.04	0.06	0.02	0.07	0.06	0.08
		%	100	100	77	100	78	100	100	100	100	100	100	100	96
		Max-irreg	0.25	0.20	0.25	0.07	0.06	0.06	0.11	0.07	0.09	0.07	0.11	0.07	0.25
		Min-irreg	0.13	0.12	0.08	0.03	0.04	0.03	0.03	0.02	0.04	<0.01	<0.01	0.06	<0.01
	Los Baños	Mean	0.49	0.20	0.13	0.13	0.07	0.03	0.02	0.05	0.06	0.13	<0.01	0.11	0.14
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.63	0.29	0.16	0.16	0.15	0.06	0.02	0.06	0.12	0.24	<0.01	0.25	0.63
		Min-irreg	0.36	0.11	0.05	0.11	<0.01	<0.01	0.02	0.03	<0.01	0.01	<0.01	0.02	<0.01
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	0.01	0.01	<0.01	0.02	0.01	<0.01	0.01	0.02	0.01	0.01	<0.01	<0.01	0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.02	0.03	0.02	0.03	0.03	<0.01	0.02	0.03	0.02	0.02	<0.01	<0.01	0.03
		Min-w	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Irkutsk	Mean	0.02	0.04	0.06	0.04	0.11	0.04	0.02	0.02	0.03	0.05	0.10	0.09	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.04	0.08	0.09	0.07	0.19	0.15	0.03	0.04	0.05	0.08	0.14	0.12	0.19
		Min-w	<0.01	0.01	0.02	0.02	0.04	<0.01	<0.01	<0.01	0.01	0.03	0.07	0.03	<0.01
	Primorskaya	Mean	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01
		Min-15d	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Table 4.19.1 Particulate matter component: Mg²⁺ - Measured by FP (continued)

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	0.13	0.12	0.08	0.07	0.04	0.09	0.12	0.11	0.08	0.14	0.17	0.12	0.11
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.28	0.30	0.12	0.11	0.07	0.14	0.14	0.18	0.17	0.20	0.21	0.21	0.30
		Min-w	0.03	0.02	0.03	0.05	0.01	0.06	0.09	0.09	0.03	0.06	0.12	0.07	0.01
	Hoa Binh	Mean	0.03	0.08	0.05	0.08	0.05	0.03	0.05	0.06	0.09	0.05	0.07	0.07	0.06
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.06	0.17	0.11	0.10	0.09	0.06	0.09	0.09	0.11	0.09	0.10	0.11	0.17
		Min-w	0.01	0.03	<0.01	0.06	<0.01	0.01	0.03	0.04	0.07	0.02	0.04	0.05	<0.01
	Can Tho	Mean	0.38	0.38	0.43	0.46	0.40	0.43	0.36	0.39	0.46	0.37	0.38	0.42	0.40
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.42	0.54	0.46	0.54	0.54	0.52	0.42	0.46	0.54	0.42	0.42	0.52	0.54
		Min-w	0.36	0.30	0.40	0.42	0.34	0.34	0.32	0.32	0.40	0.34	0.30	0.36	0.30
	Ho Chi Minh	Mean	0.42	0.48	0.40	0.43	0.41	0.47	0.44	0.38	0.39	0.47	0.47	0.45	0.43
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.52	0.58	0.56	0.48	0.52	0.67	0.65	0.48	0.50	0.56	0.69	0.56	0.69
		Min-w	0.28	0.36	0.22	0.34	0.28	0.34	0.32	0.26	0.32	0.36	0.32	0.38	0.22
	Yen Bai	Mean	0.06	0.07	0.06	0.07	0.05	0.04	0.04	0.04	0.07	0.05	0.06	0.04	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.08	0.13	0.09	0.10	0.08	0.05	0.06	0.05	0.08	0.05	0.09	0.05	0.13
		Min-w	0.05	0.03	0.03	0.04	0.03	0.02	0.02	0.03	0.06	0.04	0.04	0.04	0.02

Table 4.19.2 Particulate matter component: Mg²⁺ - Measured by FP using PM_{2.5} cyclone

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	0.04	<0.01	0.01	0.02	<0.01	<0.01	0.03	0.01	0.02	0.02	0.03	0.01	0.02
		%	10	10	13	13	3	13	16	10	13	16	10	3	11
		Max-d	0.11	0.01	0.03	0.04	<0.01	<0.01	0.05	0.03	0.04	0.03	0.05	0.01	0.11
		Min-d	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01
	Jeju	Mean	0.01	0.10	0.01	0.03	0.02	<0.01	0.01	0.02	<0.01	<0.01	0.01	0.02	0.02
		%	13	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	0.01	0.29	0.02	0.06	0.03	0.01	0.03	0.04	<0.01	0.02	0.02	0.03	0.29
		Min-d	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Imsil	Mean	***	***	***	<0.01	***	<0.01	0.01	<0.01	0.07	<0.01	***	<0.01	0.01
		%	***	***	***	3	***	7	10	6	3	16	***	3	4
		Max-d	***	***	***	<0.01	***	<0.01	0.02	<0.01	0.07	0.02	***	<0.01	0.07
		Min-d	***	***	***	<0.01	***	<0.01	<0.01	<0.01	0.07	<0.01	***	<0.01	<0.01

Terms and abbreviations are given in Table 4.2.

Table 4.20.1 Particulate matter component: Ca²⁺ - Measured by FPUnit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	0.05	0.16	0.14	0.25	0.13	0.08	0.05	0.06	0.14	0.12	0.15	0.10	0.13
		%	100	100	100	100	100	100	100	100	100	31	100	100	92
		Max-2w	0.06	0.17	0.18	0.35	0.18	0.09	0.06	0.07	0.15	0.12	0.16	0.12	0.35
		Min-2w	0.04	0.16	0.10	0.16	0.09	0.07	0.05	0.04	0.13	0.12	0.15	0.07	0.04
	Ochiishi	Mean	0.08	0.14	0.30	0.14	0.15	0.07	0.06	0.10	0.14	0.20	0.12	0.09	0.13
		%	100	100	100	100	100	100	100	100	100	48	100	50	92
		Max-2w	0.12	0.20	0.46	0.24	0.16	0.09	0.07	0.15	0.19	0.20	0.17	0.09	0.46
		Min-2w	0.03	0.07	0.14	0.04	0.15	0.05	0.06	0.05	0.11	0.20	0.08	0.09	0.03
	Sado-seki	Mean	0.16	0.18	0.36	0.62	0.11	0.13	0.11	0.09	0.06	0.15	0.16	0.22	0.21
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.17	0.22	0.41	0.95	0.11	0.15	0.11	0.09	0.09	0.19	0.18	0.25	0.95
		Min-2w	0.14	0.14	0.30	0.44	0.11	0.11	0.11	0.09	0.04	0.11	0.14	0.19	0.04
	Happo	Mean	0.01	0.04	0.30	0.51	0.10	0.16	0.02	0.02	0.01	0.02	0.03	0.02	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.01	0.05	0.48	0.87	0.10	0.21	0.02	0.03	0.02	0.02	0.03	0.02	0.87
		Min-2w	0.01	0.03	0.11	0.17	0.10	0.11	0.02	0.02	<0.01	0.02	0.03	0.02	<0.01
	Ijira	Mean	0.05	0.03	0.17	0.33	0.09	0.10	0.05	0.10	0.05	0.05	0.06	0.05	0.10
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.06	0.04	0.19	0.64	0.10	0.10	0.05	0.13	0.09	0.05	0.06	0.06	0.64
		Min-2w	0.04	0.01	0.16	0.12	0.08	0.10	0.04	0.07	0.02	0.04	0.06	0.04	0.01
	Okii	Mean	0.26	0.19	0.54	0.51	0.19	0.14	0.10	0.08	0.07	0.12	0.21	0.35	0.21
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.30	0.23	0.56	0.51	0.27	0.17	0.11	0.08	0.08	0.14	0.30	0.44	0.56
		Min-2w	0.21	0.16	0.52	0.51	0.13	0.11	0.09	0.07	0.06	0.09	0.12	0.26	0.06
	Yusuhara	Mean	0.07	0.05	0.22	0.18	0.11	0.03	0.02	0.03	0.03	0.03	0.05	0.08	0.07
		%	100	100	100	67	100	100	100	100	100	100	100	100	96
		Max-2w	0.09	0.06	0.26	0.32	0.11	0.04	0.03	0.04	0.04	0.03	0.06	0.09	0.32
		Min-2w	0.04	0.03	0.17	0.05	0.10	0.03	0.02	0.03	0.02	0.03	0.04	0.06	0.02
	Hedo	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Ogasawara	Mean	0.16	0.20	0.31	0.27	0.16	0.07	0.05	0.10	0.09	0.14	0.13	0.13	0.15
		%	100	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.16	0.20	0.32	0.45	0.22	0.08	0.06	0.11	0.13	0.15	0.16	0.14	0.45
		Min-2w	0.16	0.20	0.31	0.16	0.10	0.06	0.03	0.08	0.04	0.12	0.09	0.11	0.03
	Tokyo	Mean	0.36	0.36	0.39	0.62	0.31	0.34	0.39	0.32	0.31	0.29	0.30	0.37	0.37
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.40	0.39	0.50	0.99	0.32	0.37	0.39	0.36	0.32	0.32	0.35	0.39	0.99
		Min-2w	0.33	0.33	0.27	0.36	0.30	0.32	0.39	0.28	0.29	0.28	0.24	0.35	0.24
	Niigata-maki	Mean	0.1	0.1	0.3	***	***	***	***	***	***	***	***	***	0.16
		%	100	100	80	***	***	***	***	***	***	***	***	***	22
		Max-2w	0.1	0.1	0.4	***	***	***	***	***	***	***	***	***	0.35
		Min-2w	0.1	0.1	0.3	***	***	***	***	***	***	***	***	***	0.05
	Tsushima	Mean	0.1	0.1	0.4	0.41	0.19	0.11	0.02	0.07	0.06	0.08	0.15	0.14	0.15
		%	100	100	100	100	100	100	100	100	46	100	100	100	95
		Max-2w	0.2	0.1	0.5	0.63	0.25	0.13	0.03	0.08	0.08	0.11	0.18	0.17	0.63
		Min-2w	0.1	0.1	0.3	0.18	0.14	0.08	<0.01	0.07	0.05	0.06	0.12	0.11	<0.01

Table 4.20.1 Particulate matter component: Ca²⁺ - Measured by FP (continued)Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.15	0.11	0.20	0.19	0.08	0.17	0.18	0.06	0.09	0.06	0.03	0.05	0.12
		%	100	100	100	100	80	100	100	100	100	100	100	100	98
		Max-w	0.25	0.18	0.34	0.32	0.11	0.34	0.41	0.14	0.16	0.19	0.09	0.15	0.41
		Min-w	0.01	0.02	0.09	0.10	0.05	0.08	0.07	0.03	0.05	<0.01	0.01	0.01	<0.01
	Tanah Rata	Mean	0.03	0.07	0.12	0.09	0.05	0.07	0.21	0.03	0.05	0.02	<0.01	0.01	0.06
		%	100	100	100	75	100	100	75	60	100	100	100	100	92
		Max-w	0.07	0.12	0.23	0.17	0.08	0.09	0.27	0.06	0.09	0.06	0.02	0.03	0.27
		Min-w	<0.01	0.04	0.06	0.02	0.03	0.05	0.13	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Danum Valley	Mean	0.02	0.04	0.04	0.02	0.01	0.01	<0.01	0.01	0.02	0.02	<0.01	<0.01	0.02
		%	100	50	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.03	0.04	0.06	0.02	0.01	0.02	0.01	0.04	0.03	0.05	<0.01	<0.01	0.06
		Min-2w	<0.01	0.04	0.03	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mongolia	Khan-Uul	Mean	1.28	1.33	2.64	1.44	1.49	1.51	1.22	1.44	0.68	0.72	1.61	0.93	1.35
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.66	2.09	6.35	1.85	2.02	1.62	1.29	1.94	1.21	1.91	2.38	1.86	6.35
		Min-w	0.96	0.88	1.17	1.25	1.12	1.40	1.08	1.08	0.23	0.13	0.33	0.16	0.13
	Terej	Mean	0.08	0.04	0.06	0.10	0.10	0.10	0.06	0.07	0.07	0.06	0.09	0.08	0.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.09	0.06	0.06	0.14	0.10	0.11	0.07	0.09	0.08	0.07	0.12	0.10	0.14
		Min-2w	0.06	0.03	0.06	0.06	0.09	0.09	0.06	0.06	0.06	0.04	0.06	0.06	0.03
Myanmar	Yangon	Mean	0.19	0.20	0.18	0.17	0.09	0.18	0.09	0.11	0.54	0.11	0.08	0.21	0.18
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.29	0.30	0.31	0.21	0.12	0.22	0.17	0.17	0.99	0.12	0.11	0.21	0.99
		Min-2w	0.09	0.10	0.06	0.10	0.07	0.14	<0.01	0.04	0.09	0.08	0.05	0.20	<0.01
Philippines	Manila Observatory	Mean	0.76	0.99	1.14	0.48	0.37	0.43	0.33	0.32	0.49	0.15	0.46	0.73	0.54
		%	100	100	77	100	78	100	100	100	100	100	100	100	96
		Max-irreg	1.02	1.09	1.52	0.79	0.42	0.61	0.36	0.52	0.67	0.59	0.81	0.99	1.52
		Min-irreg	0.31	0.86	0.45	0.27	0.29	0.27	0.29	0.21	0.35	<0.01	<0.01	0.52	<0.01
	Los Baños	Mean	0.36	0.26	0.44	0.48	0.28	0.03	<0.01	0.11	0.15	0.33	<0.01	0.50	0.26
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.49	0.42	0.60	0.61	0.40	0.14	<0.01	0.16	0.34	0.66	<0.01	1.12	1.12
		Min-irreg	0.12	0.15	0.15	0.30	0.06	<0.01	<0.01	0.06	<0.01	<0.01	<0.01	<0.01	<0.01
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Listvyanka	Mean	0.11	0.13	0.09	0.27	0.14	0.06	0.15	0.26	0.16	0.07	0.04	0.04	0.13
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.24	0.24	0.23	0.33	0.28	0.09	0.24	0.45	0.27	0.10	0.06	0.06	0.45
		Min-w	0.04	0.08	0.02	0.18	0.04	0.04	0.08	0.15	0.10	0.03	0.03	0.02	0.02
	Irkutsk	Mean	0.46	0.44	0.44	0.45	0.60	0.43	0.38	0.42	0.47	0.29	0.55	0.63	0.46
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.91	0.82	0.66	0.68	0.80	0.66	0.55	0.72	0.68	0.43	0.78	0.78	0.91
		Min-w	0.17	0.13	0.25	0.22	0.41	0.29	0.18	0.22	0.20	0.20	0.28	0.50	0.13
	Primorskaya	Mean	0.10	0.04	0.04	0.04	0.02	0.02	<0.01	<0.01	<0.01	0.02	0.05	0.03	0.03
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-15d	0.10	0.05	0.06	0.05	0.03	0.04	<0.01	<0.01	<0.01	0.03	0.05	0.05	0.10
		Min-15d	0.10	0.03	0.02	0.02	0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01

Table 4.20.1 Particulate matter component: Ca²⁺ - Measured by FP (continued)

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-10d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	1.87	1.43	1.54	1.53	0.70	1.48	2.00	3.04	2.73	4.08	5.49	3.19	2.42
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.44	2.21	2.78	3.01	1.21	2.95	2.37	3.97	5.40	7.00	8.29	8.02	8.29
		Min-w	0.54	0.53	0.77	0.74	0.28	0.64	1.63	1.84	1.19	1.50	3.60	1.37	0.28
	Hoa Binh	Mean	0.26	0.15	0.07	0.20	0.41	0.33	0.36	0.43	0.46	0.45	0.64	0.49	0.35
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.57	0.45	0.10	0.28	0.80	0.40	0.47	0.70	0.56	0.61	0.89	0.58	0.89
		Min-w	0.01	<0.01	0.04	0.08	0.23	0.26	0.26	0.28	0.30	0.28	0.33	0.33	<0.01
	Can Tho	Mean	1.96	1.85	1.92	1.86	1.96	1.97	1.84	2.02	1.79	1.77	2.13	1.85	1.91
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.02	2.00	2.02	1.96	2.20	2.16	2.04	2.12	1.98	1.94	2.52	1.96	2.52
		Min-w	1.88	1.61	1.85	1.69	1.61	1.83	1.65	1.96	1.47	1.47	1.94	1.63	1.47
	Ho Chi Minh	Mean	3.52	3.94	2.96	3.55	3.48	3.08	3.96	4.89	4.03	3.95	4.08	3.60	3.78
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.17	4.90	3.39	4.13	4.66	4.13	5.83	5.83	5.02	5.02	4.23	5.02	5.83
		Min-w	2.58	2.94	2.64	2.84	2.84	2.14	2.80	4.38	2.94	2.30	3.85	2.84	2.14
	Yen Bai	Mean	1.14	1.08	0.10	0.75	1.20	0.85	1.04	0.98	1.34	1.99	1.92	1.54	1.17
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.56	1.42	0.15	1.32	1.50	1.06	1.40	1.08	1.55	2.56	2.82	2.11	2.82
		Min-w	0.53	0.65	0.06	0.20	0.78	0.66	0.58	0.90	1.23	1.63	1.26	0.92	0.06

Table 4.20.2 Particulate matter component: Ca²⁺ - Measured by FP using PM_{2.5} cyclone

Unit : µg/m³

Country	Site		2024												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Ganghwa	Mean	0.07	<0.01	0.03	0.05	0.02	0.01	0.04	0.02	0.01	0.01	0.03	0.01	0.03
		%	10	7	13	13	10	17	16	10	17	16	10	3	13
		Max-d	0.16	<0.01	0.05	0.10	0.02	0.01	0.09	0.02	0.02	0.02	0.04	0.01	0.16
		Min-d	<0.01	<0.01	0.01	0.03	0.01	<0.01	0.01	<0.01	<0.01	0.01	0.02	0.01	<0.01
	Jeju	Mean	0.02	0.06	0.06	0.05	<0.01	0.02	0.02	0.04	<0.01	0.02	0.06	0.05	0.03
		%	13	17	13	13	16	17	16	13	10	16	17	19	14
		Max-d	0.05	0.12	0.11	0.07	0.02	0.02	0.02	0.08	<0.01	0.06	0.10	0.10	0.12
		Min-d	<0.01	<0.01	0.02	0.03	<0.01	0.01	0.01	0.02	<0.01	<0.01	0.03	0.02	<0.01
	Imsil	Mean	***	***	***	0.04	0.02	0.01	0.01	0.01	0.16	0.02	***	<0.01	0.03
		%	***	***	***	3	16	17	16	16	7	16	***	3	9
		Max-d	***	***	***	0.04	0.04	0.03	0.02	0.02	0.31	0.05	***	<0.01	0.31
		Min-d	***	***	***	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	***	<0.01	<0.01

Terms and abbreviations are given in Table 4.2.

Table 4.21 Annual SO₂ concentration from 2010 to 2024

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	1.8	1.5	1.3	1.1	0.8	0.5	0.6	1.3	***	***	***	***	***	***	***
China	Jinyunshan	AT	12.9	9.3	9.8	8.6	7.5	5.3	3.3	3.6	2.6	2.9	2.8	2.7	2.7	3.0	3.2
	Hongwen	AT	4.9	5.8	7.2	5.6	6.3	2.4	3.3	3.6	3.3	2.0	1.8	1.5	1.3	1.0	1.0
		FP	8.4	6.7	***	***	***	***	2.9	2.9							
	Xiang Zhou	AT	5.9	5.6													
	Haibin-Park	AT			3.2	3.9	3.9	3.1	3.8	2.9	2.6	1.6	1.4	2.2	2.7	2.2	2.1
	Wuzhishan	AT										0.2	0.3	0.3	0.2	0.2	0.2
	Lijiang	AT										0.1	0.1	0.2	0.2	0.1	0.1
Indonesia	Jakarta	FP					6.0	5.4	2.5	1.7	2.7	1.8	3.2	4.2	4.0	***	***
		PS ^{*1}	6.3	5.0	6	5.3	4.5	5.2	5.6	4.4	6.2	6.5	5.4	7	7.2	***	***
	Serpong	FP	0.8	1.4	0.9	0.8	0.7	1.5	0.7	0.8	1.0	0.4	0.9	0.8	0.2	***	***
	Kototabang	PS ^{*1}	11.7	2.2	***	1.8	3.5	6.7	2.0	1.3	1.3	1.1	1.5	2	1.1	***	***
	Bandung	FP					4.1	1.3	1.9	1.7	4.3	4.2	2.7	4.5	4.9	***	***
		PS	4.2	4.0	4.0	4.0	4.3	3.2	4.8	4.1	3.0	2.8	2.1	2.9	3.8	***	***
Japan	Rishiri	AT	0.3	0.2	0.2	0.2	0.2	0.1	0.2	<0.1	0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1
		FP	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	<0.1
	Ochiishi	AT	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	<0.1
		FP	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
	Tappi	AT	***	0.4	0.4	0.5	0.5	0.3	0.3	0.3	0.3						
		FP	0.5	0.4	0.5	0.4	0.5	0.3	0.3	0.3	0.3						
	Sado-seki	AT	0.3	0.4	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	<0.1	<0.1	0.1	0.1
		FP	0.4	0.5	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	***	0.2	0.2	0.2
	Happo	AT	0.8	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	<0.1	0.1	<0.1
		FP	0.2	0.3	0.5	0.5	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3
	Ijira	AT	0.1	0.2	0.2	0.2	0.2	0.2	0.1	<0.1	0.2	0.1	0.2	0.1	***	***	***
		FP	0.4	0.3	0.5	0.8	0.6	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	<0.1
	Oki	AT	0.6	0.6	0.5	0.6	0.5	0.4	0.3	0.4	0.4	0.3	0.2	0.1	0.1	0.2	***
		FP	0.5	0.6	0.7	0.6	0.5	0.4	0.5	0.7	0.4	0.4	0.2	0.2	0.2	0.2	0.1
	Banryu	AT	0.6	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.2						
		FP	0.8	0.8	0.8	0.7	0.7	0.5	0.7	0.6	0.7						
	Yusuhara	AT	1.6	0.9	0.9	0.9	1.0	0.6	0.6	0.6	0.6	0.9	0.6	0.3	0.4	0.5	***
		FP	0.7	0.7	0.7	0.8	0.9	0.5	0.5	0.5	0.4	0.6	0.4	0.3	0.3	0.3	0.3
	Hedo	AT	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	<0.1	0.1
		FP	0.2	0.2	0.3	0.4	0.3	0.4	0.2	0.2	0.3	0.4	0.4	0.3	0.2	<0.1	***
	Ogasawara	AT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.2	***
		FP	<0.1	0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.4	0.3	<0.1
	Tokyo	FP	1.8	1.6	1.4	1.6	1.5	1.3	1.3	1.4	1.3	1.2	0.7	0.7	0.7	0.7	0.6
	Niigata-maki	AT										0.2	0.1	<0.1	<0.1	0.2	<0.1
		FP											0.3	0.3	0.2	0.2	0.1
	Tsushima	FP											0.5	0.4	0.4	0.3	0.3
Lao PDR	Vientiane	FP						0.4	0.4	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	1.4	2.0	1.8	1.3	1.6	1.2	1.2	1.1	1.3	***	0.6	0.4	0.4	0.6	0.5
	Tanah Rata	FP	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1	<0.1	<0.1	<0.1
	Danum Valley	FP	<0.1	<0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1	<0.1	<0.1	<0.1
Mongolia	Ulaanbaatar	AT															
		FP	9.1	6.1	***	***	***	***	7.5	4.8	3.4	5.0	5.8				
	Bayanzurkh	AT					8.9	9.8	10.0	11.5	7.3	6.9	12.2	15.3	19.4	10.2	10.3
	Khan-Uul	FP											4.1	5.4	***	1.0	2.2
Terej		FP	0.6	0.7	***	***	***	***	0.6	0.2	0.1	0.3	0.2	0.4	***	0.5	0.4
		FP															
Myanmar	Yangon	FP		1.6	2.9	1.3	1.2	0.5	0.4	0.5	0.7	0.8	0.8	0.7	0.2	0.2	0.2
Philippines	Manila Observatory	AT														28.3	***
		FP	2.2	***	***	***	***	***	***	***	***	0.4	2.4	2.0	1.3	0.5	0.5
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	7.4	0.7	0.7
	Sta.Rosa	AT													11.2	***	11.1
	Mt. Sto. Tomas	FP	1.1	***	0.2	0.1	0.1	0.1	0.2	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	AT	2.9	4.1	4.4	3.4	2.8	2.2	2.8	1.9	2.3	2.1	1.4	1.4	1.5	2.1	2.3
	Jeju	AT	2.5	2.5	0.9	0.6	0.5	0.5	0.5	0.5	0.8	1.0	0.7	0.7	0.5	0.5	0.5
	Imsil	AT	2.7	4.8	1.3	1.8	2.3	1.7	1.7	2.3	5.0	1.5	1.7	1.5	2.1	1.5	1.5
Russia	Mondy	FP	0.6	0.1	0.6	0.1	0.1	0.1	<0.1	0.2	0.2	0.3	<0.1	<0.1	<0.1	<0.1	
	Listvyanka	FP	4.5	2.8	5.2	2.6	1.1	2.8	4.1	2.9	2.2	2.2	1.9	4.4	2.7	4.6	3.6
	Irkutsk	FP	7.3	5.6	7.2	4.2	1.6	3.5	5.5	4.6	4.3	2.1	2.3	2.4	3.1	9.5	7.4
	Primorskaya	FP	1.7	1.2	1.2	0.7	0.4	0.7	0.8	0.4	0.1	0.2	0.3	0.2	0.5	0.6	0.2

Table 4.21 Annual SO₂ concentration from 2009 to 2024 (continued)

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Thailand	Bangkok	AT	1.6	1.6	1.5	1.9	1.4										
		FP	1.2	1.2	0.9	0.8	1.6	0.6	0.8	0.8	0.9	0.8	0.7	***	0.6	0.3	***
	Samutprakarn	AT	4.6	2.6	2.5	3.0	3.7	3.0	2.0	1.5	2.0	1.0	1.5	***	***	***	***
	Pathumthani	FP	1.2	0.6	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	AT	1.6	1.3	0.6	1.0	1.8	1.2	1.7	1.4	1.4	0.7	***	***	0.2	***	***
		FP	0.2	<0.1	0.2	<0.1	0.1	<0.1	0.4	0.1	0.3	0.2	***	***	***	***	***
	Mae Hia	FP	0.3	0.3	0.2	0.2	<0.1	<0.1	0.2	0.2	<0.1	0.1					
	Chang Phueak	AT	0.8	0.6	0.9	1.3	0.9	1.3	0.8	0.8	0.9	0.6	0.4	1.2	0.4	***	***
	Si Phum	AT					1.4	1.7	1.4	1.1	1.1	1.2	1.2	1.1	1.1	1.6	***
	Sakaerat	FP	0.2	0.2	0.3	0.2	0.4	0.4	0.4	0.2	0.7	0.6					
	Nai Mueang	AT	1.3	1.4	1.1	1.2	1.0	2.9	3.2	0.7	0.7	0.9	0.6	0.6	0.8	1.1	1.7
Vietnam	Hanoi	FP	1.4	1.9	2.2	2.1	3.2	4.5	1.8	1.0	0.5	0.4	0.7	0.9	0.9	0.4	0.7
	Hoa Binh	FP	0.7	1.2	1.2	1.1	2.8	3.6	1.3	0.6	0.5	0.3	0.8	1.0	0.7	0.8	0.9
	Can Tho	FP					1.2	1.0	0.3	0.2	0.6	0.5	0.6	0.5	0.5	0.6	0.6
	Ho Chi Minh	FP					1.6	1.5	0.5	0.4	0.6	0.6	0.6	0.6	0.5	0.5	0.6
	Yen Bai	FP						4.2	1.5	0.8	0.8	0.5	0.4	0.8	0.6	0.6	0.7

*1: Some annual averages are integers only, depending on their submitted unit and significant digits.

Terms and abbreviations are given in Table 4.2.

Table 4.22 Annual HNO₃ concentration from 2010 to 2024

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	0.3	0.3	0.3	0.5	0.4	0.5	0.4	0.5	***	***	***	***	***	***	***
China	Hongwen	FP	1.0	2.1	***	***	***	***	1.2	1.1							
Indonesia	Jakarta	FP					3.1	1.4	1.0	1.0	1.4	0.9	1.1	1.3	1.0	***	***
	Serpong	FP	0.3	0.8	0.9	0.6	0.9	1.1	0.8	0.8	1.5	1.1	0.9	0.8	0.7	***	***
	Bandung	FP					0.7	0.5	0.5	0.4	0.8	0.9	0.4	0.5	0.4	***	***
Japan	Rishiri	FP	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ochiishi	FP	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Tappi	FP	0.2	0.2	0.2	0.1	0.2	<0.1	<0.1	0.1	0.1						
	Sado-seki	FP	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.1	<0.1	***	0.1	0.1	<0.1
	Happo	FP	<0.1	<0.1	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
	Ijira	FP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1
	Okii	FP	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Banryu	FP	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.2						
	Yusuhara	FP	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
	Hedo	FP	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***
	Ogasawara	FP	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Tokyo	FP	0.8	0.6	0.6	0.8	0.8	0.7	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.5
	Niigata-maki	FP											0.1	0.1	0.1	0.1	<0.1
	Tsushima	FP											0.4	0.3	0.2	0.2	0.1
Lao PDR	Vientiane	FP						0.3	0.2	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.7	0.7	0.5	0.7	0.8	0.7	0.4	0.5	0.9	***	0.4	0.5	0.5	0.6	0.5
	Tanah Rata	FP	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1	<0.1	<0.1	<0.1
	Danum Valley	FP	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1	<0.1	<0.1	<0.1
Mongolia	Ulaanbaatar	FP	0.3	0.2	***	***	***	***	0.1	<0.1	<0.1	0.1	<0.1				
	Khan-Uul												0.1	<0.1	***	0.2	0.1
	Terelj	FP	<0.1	0.1	***	***	***	***	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1
Myanmar	Yangon	FP		0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.6	<0.1	0.1	0.1
Philippines	Manila Observatory	FP	0.2	***	***	***	***	***	***	***	***	0.1	0.3	0.4	0.7	0.4	0.2
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	0.6	0.3	0.3
	Mt. Sto. Tomas	FP	0.4	***	0.2	<0.1	0.1	<0.1	<0.1	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP	0.4	***	***	0.4	0.5	0.3	0.4	0.1	0.1	<0.1	0.3	0.4	0.4	0.4	0.3
	Jeju	FP	0.5	***	***	0.4	0.8	0.5	0.6	0.3	0.4	<0.1	0.4	0.4	0.5	0.2	0.3
	Imsil	FP	0.3	***	***	0.6	0.6	0.4	0.7	0.6	0.4	<0.1	0.2	0.3	0.3	0.3	0.2
Russia	Mondy	FP	2.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
	Listvyanka	FP	0.4	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Irkutsk	FP	1.9	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
	Primorskaya	FP	0.7	<0.1	0.1	0.3	0.2	0.2	0.3	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Thailand	Bangkok	FP	0.6	0.5	0.6	0.4	0.9	0.7	0.4	0.3	0.8	0.5	0.5	***	0.3	0.6	***
	Pathumthani	FP	0.9	0.3	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	<0.1	<0.1	0.3	0.1	0.2	0.3	1.7	0.2	0.4	0.5	***	***	***	***	***
	Mae Hia	FP	1.9	0.1	0.2	0.2	<0.1	<0.1	0.2	0.2	0.1	0.2					
	Sakaerat	FP	0.2	<0.1	0.2	<0.1	0.3	0.3	0.4	0.2	0.3	0.3					
Vietnam	Hanoi	FP	0.8	0.9	1.0	0.7	0.5	0.7	0.9	1.6	0.4	0.4	0.6	0.8	0.8	0.4	0.6
	Hoa Binh	FP	0.3	0.3	0.4	0.3	0.4	0.5	0.7	0.9	0.4	0.3	0.6	0.5	0.6	0.7	0.7
	Can Tho	FP					0.5	0.4	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1
	Ho Chi Minh	FP					0.6	0.6	0.2	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.5
	Yen Bai	FP						0.7	0.6	1.3	0.5	0.4	0.6	1.1	0.6	0.6	0.6

Terms and abbreviations are given in Table 4.2.

Table 4.23 Annual HCl concentration from 2010 to 2024

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	0.5	0.4	0.7	1.3	1.1	1.3	1.2	1.6	***	***	***	***	***	***	***
China	Hongwen	FP	14.5	13.3	***	***	***	***	1.8	1.5							
Indonesia	Jakarta	FP					3.2	1.9	0.9	1.1	1.5	0.8	0.9	1.5	1.8	***	***
	Serpong	FP	0.8	0.7	0.8	0.7	0.8	1.0	0.7	0.9	1.3	1.3	1.0	1.1	1.1	***	***
	Bandung	FP					0.8	0.5	1.1	0.9	0.9	0.9	0.7	0.8	1.1	***	***
Japan	Rishiri	FP	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.8	0.4	0.3	0.3	0.3	0.4
	Ochiishi	FP	0.4	0.6	0.6	0.5	0.4	0.8	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	Tappi	FP	1.5	0.7	0.6	0.6	0.7	0.5	0.5	0.5	0.4						
	Sado-seki	FP	0.7	0.8	0.9	0.8	0.9	1.2	0.7	0.8	1.0	0.5	0.5	***	0.6	0.5	0.5
	Happo	FP	<0.1	<0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
	Ijira	FP	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2
	Okii	FP	0.8	1.0	0.9	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.4	0.6	0.5	0.4
	Banryu	FP	0.7	0.8	0.7	0.8	0.7	0.7	0.6	0.7	0.6						
	Yusuhara	FP	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2
	Hedo	FP	0.5	0.4	0.6	1.0	1.1	1.1	1.0	0.9	0.9	0.9	0.8	0.5	0.6	0.4	***
	Ogasawara	FP	0.4	0.4	0.4	0.6	0.6	0.5	0.4	0.4	0.3	0.4	0.7	0.3	0.3	0.3	0.3
	Tokyo	FP	0.7	0.8	0.7	0.8	0.7	0.8	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.7
	Niigata-maki	FP											0.5	0.4	0.5	0.5	0.3
	Tsushima	FP											0.6	0.5	0.5	0.4	0.5
Lao PDR	Vientiane	FP						0.3	0.2	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.5	0.8	1.2	1.3	1.1	0.7	2.8	0.3	1.5	***	1.2	1.2	1.0	0.8	0.7
	Tanah Rata	FP	<0.1	0.2	0.4	0.3	0.3	0.4	0.7	0.2	<0.1	***	0.3	0.3	0.2	0.2	0.2
	Danum Valley	FP	0.3	0.2	0.5	1.0	0.4	0.3	0.3	0.1	0.2	***	0.2	0.6	0.2	0.2	0.2
Mongolia	Ulaanbaatar	FP	1.7	1.1	***	***	***	***	11.3	1.7	0.8	0.4	0.7				
	Khan-Uul	FP											4.1	0.6	***	2.9	1.9
	Terelj	FP	0.5	0.5	***	***	***	***	4.3	0.5	0.3	0.1	0.4	0.3	***	0.3	0.2
Myanmar	Yangon	FP		1.5	1.5	0.6	0.7	0.7	0.2	0.4	0.5	0.6	0.8	0.7	0.3	0.3	0.5
Philippines	Manila Observatory	FP	0.8	***	***	***	***	***	***	***	***	0.6	0.4	1.0	1.2	0.9	0.4
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	1.8	1.4	1.9
	Mt. Sto. Tomas	FP	1.2	***	0.2	0.2	0.2	0.7	<0.1	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP	0.2	***	***	0.3	0.2	0.1	<0.1	<0.1	<0.1	0.7	0.1	0.1	0.1	0.1	0.2
	Jeju	FP	0.2	***	***	0.2	0.2	0.2	0.2	0.2	0.2	1.1	0.1	0.2	<0.1	0.1	0.1
	Imsil	FP	0.1	***	***	0.2	0.2	0.2	0.2	0.2	0.2	1.2	<0.1	<0.1	<0.1	0.1	<0.1
Russia	Mondy	FP	0.5	0.4	0.7	0.7	0.8	1.9	1.6	2.7	2.6	1.0	0.2	0.1	0.2	<0.1	
	Listvyanka	FP	0.6	1.8	9.8	2.1	2.6	7.4	9.0	6.0	5.3	7.0	1.0	0.6	0.4	0.2	0.4
	Irkutsk	FP	0.5	1.4	2.6	1.7	1.4	7.0	3.2	4.7	5.3	1.8	0.3	0.4	0.3	0.3	0.3
	Primorskaya	FP	0.7	1.1	1.0	0.5	0.4	0.4	0.8	0.6	0.2	0.1	0.6	0.2	0.4	0.3	0.2
Thailand	Bangkok	FP	0.7	0.7	0.7	0.6	1.2	0.7	1.5	0.7	1.0	0.9	1.2	***	0.4	0.5	***
	Pathumthani	FP	0.7	0.5	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	<0.1	0.2	0.2	0.2	0.3	0.2	1.4	0.3	0.3	0.5	***	***	***	***	***
	Mae Hia	FP	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.4					
	Sakaerat	FP	0.2	0.2	0.2	0.2	0.4	0.5	0.4	0.2	0.2	0.3					
Vietnam	Hanoi	FP	2.0	2.0	2.1	1.6	3.0	2.0	3.3	2.0	1.1	1.1	1.4	3.2	2.2	1.0	1.6
	Hoa Binh	FP	1.5	1.6	1.7	1.6	3.2	1.8	2.4	1.6	1.2	1.3	2.3	2.1	2.0	2.2	2.7
	Can Tho	FP					1.7	1.4	1.2	0.9	1.8	1.7	1.8	1.6	1.7	1.7	1.8
	Ho Chi Minh	FP					1.6	1.1	1.5	1.3	1.6	3.3	1.5	1.4	1.3	1.3	1.8
	Yen Bai	FP						2.4	2.4	2.3	1.8	1.4	1.9	2.3	2.0	1.7	1.8

Terms and abbreviations are given in Table 4.2.

Table 4.24 Annual NH₃ concentration from 2010 to 2024

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	14.3	11.5	9.9	9.4	6.9	7.3	6.8	7.5	***	***	***	***	***	***	***
China	Hongwen	FP	12.2	9.5	***	***	***	***	10.7	9.3							
Indonesia	Jakarta	FP					38.3	13.7	10.5	4.1	15.2	2.4	9.2	10.8	12.6	***	***
	Serpong	FP	5.4	11.0	16.1	11.7	11.8	18.3	11.1	5.8	8.3	5.2	9.8	6.1	8.1	***	***
	Bandung	FP					8.4	9.4	6.6	8.6	8.7	10.5	10.1	10.3	10.1	***	***
		PS									9.8	11.9	20.7	15.5	15.6	***	***
Japan	Rishiri	FP	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	1.1	0.5	0.5	0.6	0.9	0.9
	Ochiishi	FP	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.4
	Tappi	FP	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4						
	Sado-seki	FP	0.6	0.6	0.6	0.6	0.7	0.8	0.6	0.7	1.0	0.7	0.6	***	1.2	1.1	1.0
	Happo	FP	0.3	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.5	0.5
	Ijira	FP	1.1	1.0	1.0	1.3	0.9	1.0	0.8	0.9	1.1	1.0	0.8	0.9	0.8	0.8	0.8
	Okii	FP	0.8	0.7	0.5	0.6	0.6	0.7	0.9	0.6	0.9	0.9	0.8	0.9	0.8	0.8	0.7
	Banryu	FP	1.0	0.9	0.8	0.7	0.7	0.7	1.0	0.7	1.2						
	Yusuhara	FP	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5
	Hedo	FP	1.2	0.9	1.3	1.1	1.1	1.3	1.2	1.3	1.1	1.4	1.2	1.1	0.9	0.8	***
	Ogasawara	FP	0.5	0.7	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.7	0.6	0.4	0.5	0.5
	Tokyo	FP	4.9	4.4	3.9	4.6	4.6	4.2	4.2	4.2	3.8	3.8	3.7	3.6	3.9	4.0	3.7
	Niigata-maki	FP											1.1	1.4	1.5	1.4	0.7
	Tsushima	FP											0.9	1.0	1.0	1.0	1.1
Lao PDR	Vientiane	FP						2.6	2.7	***	***	***	***	***	<0.1	***	***
Malaysia	Petaling Jaya	FP	6.7	6.7	6.5	8.6	10.0	9.2	11.2	7.6	10.4	***	7.4	6.2	6.8	7.9	7.2
	Tanah Rata	FP	0.9	1.2	0.9	1.2	2.2	3.0	2.3	1.8	<0.1	***	1.7	1.4	1.2	1.5	1.5
	Danum Valley	FP	1.5	0.9	0.7	3.8	1.2	1.4	1.4	1.1	1.0	***	1.7	2.4	1.5	1.7	1.3
Mongolia	Ulaanbaatar	FP	14.8	8.7	***	***	***	***	***	9.7	7.3	7.0	4.8				
	Khan-Uul	FP											6.7	6.3	***	***	8.2
	Terelj	FP	1.4	1.5	***	***	***	***	***	1.7	2.1	1.3	1.2	1.5	***	***	1.2
Myanmar	Yangon	FP		15.5	10.2	6.2	8.9	7.6	7.1	5.8	2.0	2.1	1.0	2.7	4.1	0.6	1.0
Philippines	Manila Observatory	FP	7.5	***	***	***	***	***	***	***	***	13.1	9.6	7.8	10.4	13.4	8.6
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	8.5	6.1	3.5
	Mt. Sto. Tomas	FP	2.5	***	1.0	1.1	2.2	1.9	1.9	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP	4.6	***	***	7.4	3.7	4.3	0.8	0.4	0.5	3.8	3.6	3.8	3.0	3.2	3.2
	Jeju	FP	7.0	***	***	3.2	6.9	7.5	4.0	7.0	7.1	7.2	3.1	3.3	3.5	3.2	3.6
	Imsil	FP	6.5	***	***	3.0	6.3	5.6	4.3	8.4	9.4	10.8	3.4	4.0	7.6	5.8	4.8
Russia	Mondy	FP	0.4	0.4	0.7	0.6	0.4	0.8	1.5	1.0	1.2	1.4	1.1	0.7	1.3	0.1	
	Listvyanka	FP	2.8	0.8	0.6	1.3	2.4	2.8	3.9	2.9	1.7	2.9	3.3	4.3	3.1	1.3	2.0
	Irkutsk	FP	2.2	1.7	1.4	1.5	4.8	2.8	3.0	2.3	3.1	2.8	3.2	2.0	2.5	2.8	4.4
	Primorskaya	FP	2.2	4.2	1.3	1.1	1.3	1.4	2.5	0.8	1.4	6.4	1.4	1.1	1.0	2.4	1.2
Thailand	Bangkok	FP	7.9	8.8	8.3	8.7	14.6	9.2	9.7	6.4	12.2	6.8	7.5	***	1.7	4.4	***
	Pathumthani	FP	7.8	5.2	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	1.6	1.5	2.4	3.4	4.8	3.0	7.9	4.2	3.8	3.1	***	***	***	***	***
	Mae Hia	FP	9.0	5.3	4.4	3.5	1.5	0.9	5.0	4.6	4.6	4.8					
	Sakaerat	FP	2.0	1.8	3.3	2.9	3.5	3.9	4.6	3.5	4.6	5.8					
Vietnam	Hanoi	FP	5.7	6.4	4.8	1.4	1.6	2.6	4.3	3.9	2.4	2.1	2.8	3.8	4.2	2.0	2.6
	Hoa Binh	FP	2.1	2.4	2.6		1.4	1.2	1.3	1.8	1.4	1.4	1.3	1.2	1.5	1.5	2.1
	Can Tho	FP					2.6	2.5	3.3	3.4	4.9	5.4	4.9	4.3	5.0	5.2	4.5
	Ho Chi Minh	FP					3.0	2.8	4.3	5.6	4.6	4.1	4.6	4.1	3.9	3.1	2.7
	Yen Bai	FP						2.9	2.8	3.5	3.2	3.4	2.5	3.1	3.6	3.0	2.9

Terms and abbreviations are given in Table 4.2.

Table 4.25 Annual NO concentration from 2010 to 2024

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	AT(CLD)										4.1	3.0	1.6	3.9	2.1	1.1
China	Jinyunshan	AT(DOAS)	2.0	1.6	2.1	1.6	1.7	1.5	3.3	8.7	7.6	6.0	8.1	2.8	2.6	2.0	1.7
Japan	Rishiri	AT(CLD)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ochiishi	AT(CLD)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***
	Tappi	AT(CLD)	***	0.2	0.1	0.1	<0.1	<0.1	0.2	0.1	<0.1						
	Sado-seki	AT(CLD)	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Happo	AT(CLD)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***	***
	Ijira	AT(CLD)	0.3	0.2	0.1	0.2	0.2	0.5	0.3	0.1	0.3	0.5	0.3	0.4	0.1	0.2	0.2
	Okii	AT(CLD)	0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***
	Banryu	AT(CLD)	0.2	<0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1						
	Yusuhara	AT(CLD)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***	***
	Hedo	AT(CLD)	<0.1	0.2	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***
	Ogasawara	AT(CLD)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***
	Niigata-maki	AT(CLD)										0.1	0.1	0.2	0.1	0.2	<0.1
Lao PDR	Vientiane	AT(CLD)					8.4	10.9	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(CLD)															
	Bayanzurkh	AT(CLD)					21.8	27.8	22.7	19.4	12.7	15.2	15.4	18.3	17.1	16.6	55.3
Philippines	Manila Observatory	AT(CLD)						17.6	13.9	***	***	***	***	***	***	***	***
Thailand	Bangkok	AT(CLD)	8.8	10.3	9.5	8.5	6.5	6.2	5.0	6.6	6.0	4.4	3.4	2.9	***	***	***
	Samutprakarn	AT(CLD)	13.3	15.1	17.1	12.6	11.6	9.5	8.5	7.3	7.1	7.0	2.7	***	***	***	***
	Khanchanaburi	AT(CLD)	0.3	1.1	0.5	3.3	7.0	1.0	0.1	0.5	2.9	1.0	0.3	***	11.9	***	***
	ChangPhueak	AT(CLD)	3.0	2.0	4.3	1.9	2.3	3.5	2.8	2.4	2.0	1.6	1.4	1.2	1.1	***	***
	Si Phum	AT(CLD)				6.9	7.0	11.8	13.5	9.1	7.7	7.9	10.8	***	***	***	***
	Nai Mueang	AT(CLD)	15.3	16.5	15.6	15.4	11.7	11.3	13.6	13.0	10.3	11.4	8.4	6.3	7.6	7.2	***

Terms and abbreviations are given in Table 4.2.

Table 4.26 Annual NO₂ concentration from 2010 to 2024

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	AT(CLD)										10.0	7.7	2.5	7.2	3.4	3.6
China	Hongwen	AT(DOAS)	21.1	20.2	20.0	19.5	18.6	14.8	16.1	14.7	13.5	11.2	8.7	10.0	9.6	8.6	6.5
	Xiang Zhou	AT(DOAS)	17.0	18.6													
	Haibin-Park	AT(DOAS)			13.8	17.6	18.7	15.6	16.9	15.9	15.5	13.3	11.2	12.1	9.3	9.2	9.6
	Wuzhishan	AT(CLD)										0.9	0.9	1.1	0.9	0.8	0.9
	Lijiang	AT(CLD)										0.6	1.2	1.4	1.4	0.8	0.8
Indonesia	Jakarta	PS ^{*1}	31.2	***	16	26.5	25.9	25.7	26.5	28.4	22.8	21.4	16.0	17	18.9	***	***
	Kototabang	PS ^{*1}	0.5	***	***	2.5	0.7	1.2	1.0	1.2	1.0	0.9	0.9	1	0.6	***	***
	Bandung	PS	31.5	39.0	42.8	41.0	40.6	54.4	74.6	36.0	30.3	35.9	31.2	17.3	21.2	***	***
Japan	Banryu	AT(CLD)	2.6	2.5	1.9	1.7	1.8	1.6	1.8	2.0	1.7						
Lao PDR	Vientiane	AT(CLD)					10.0	11.4	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(CLD)															
	Bayanzurkh	AT(CLD)					26.9	30.3	35.9	42.9	34.3	33.5	21.9	23.4	25.2	21.9	20.5
Philippines	Manila Observatory	AT(CLD)						15.5	12.9	***	***	***	***	***	***	7.8	***
	Sta. Rosa	AT(CLD)													48.7	***	48.3
Republic of Korea	Ganghwa	AT(CLD)	6.4	5.4	5.0	5.7	5.9	7.4	6.8	5.7	4.9	5.4	4.6	6.0	5.6	6.2	5.0
	Jeju	AT(CLD)	4.1	4.4	3.0	3.4	3.3	3.7	3.1	2.7	3.6	4.6	4.3	3.7	3.2	3.1	2.7
	Imsil	AT(CLD)	5.1	5.0	4.6	5.1	4.0	4.4	4.6	4.0	4.1	4.2	4.0	5.2	5.2	4.6	4.1
Thailand	Bangkok	AT(CLD)	21.2	24.5	24.7	25.3	20.3	14.4	16.1	17.6	19.1	17.5	15.1	14.0	***	***	***
	Samutprakarn	AT(CLD)	15.5	21.5	17.1	15.1	12.4	10.5	13.4	15.6	17.4	17.7	15.4	***	***	***	***
	ChangPhueak	AT(CLD)	9.5	9.6	11.2	12.3	11.2	10.2	9.3	8.4	5.8	9.1	8.3	11.9	4.3	***	***
	Si Phum	AT(CLD)				16.1	14.9	18.1	18.9	14.5	19.0	15.3	24.4	***	***	***	***
	Nai Mueang	AT(CLD)	17.9	17.6	18.7	19.4	15.6	15.0	17.7	22.7	19.0	16.2	16.8	14.4	15.0	15.0	***

*1: Some annual averages are integers only, depending on their submitted unit and significant digits.

Terms and abbreviations are given in Table 4.2.

Table 4.27 Annual NO_x concentration from 2010 to 2024

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	AT(CLD)										14.0	10.7	3.8	11.1	5.4	4.7
China	Jinyunshan (NOx*)	AT(CLD)	11.4	10.0	8.4	9.1	8.9	9.6	13.5	18.5	17.9	14.1	16.0	12.9	11.5	9.8	8.8
Japan	Rishiri (NOx*)	AT(CLD)	0.8	0.6	0.7	0.6	0.7	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.4
	Ochiishi (NOx*)	AT(CLD)	1.0	1.1	1.0	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	0.8	0.9	***
	Tappi (NOx*)	AT(CLD)	***	1.1	1.2	1.4	1.5	1.4	1.4	1.3	1.2						
	Sado-seki (NOx*)	AT(CLD)	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.4	0.5	0.7	0.7
	Happo (NOx*)	AT(CLD)	1.2	1.1	1.1	0.9	1.1	0.9	0.7	0.7	0.8	0.6	0.6	0.6	***	***	***
	Ijira (NOx*)	AT(CLD)	2.3	2.0	2.2	1.7	1.7	2.4	1.6	1.4	1.9	1.8	1.0	1.5	1.3	1.5	1.0
	Oki (NOx*)	AT(CLD)	1.3	1.3	1.0	1.1	1.3	1.1	1.0	1.0	1.1	1.0	0.7	0.5	0.6	***	***
	Banryu	AT(CLD)	2.8	2.5	2.0	1.9	2.0	1.8	1.9	2.1	1.8						
	Yusuhara (NOx*)	AT(CLD)	1.8	1.3	1.4	1.4	1.2	1.3	1.3	1.5	1.2	1.4	1.0	1.0	***	***	***
	Hedo (NOx*)	AT(CLD)	0.7	0.7	0.5	0.9	0.7	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.9	***
	Ogasawara (NOx*)	AT(CLD)	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.7	0.2	0.3	0.1	***
	Niigata-miki (NOx*)	AT(CLD)											2.1	1.8	2.0	1.7	1.8
Lao PDR	Vientiane	AT(CLD)					18.4	22.4	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(CLD)															
	Bayanzurkh	AT(CLD)					48.7	58.2	58.6	62.3	47.0	48.7	37.3	41.8	42.3	38.5	75.9
Philippines	Manila Observatory	AT(CLD)						33.2	26.9	***	***	***	***	***	***	***	***
Thailand	Bangkok	AT(CLD)	30.2	35.0	34.5	34.0	27.0	20.6	21.2	24.2	25.1	22.0	18.5	16.9	***	***	***
	Samutprakarn	AT(CLD)	28.7	36.7	34.1	27.7	24.0	20.0	21.8	22.8	24.5	24.6	18.1	***	***	***	***
	Khanchanaburi (NOx*)	AT(CLD)	3.1	4.1	2.0	4.7	11.6	3.0	2.7	1.4	6.1	3.0	3.0	***	15.8	***	***
	Chang Phueak	AT(CLD)	12.5	11.6	15.5	14.2	13.5	13.7	12.1	10.7	7.9	10.7	9.5	13.0	5.2	***	***
	Si Phum	AT(CLD)				23.0	21.9	29.8	32.3	23.5	26.6	23.1	35.2	***	***	***	***
	Nai Mueang	AT(CLD)	33.2	34.0	34.2	34.6	27.3	26.2	31.3	35.7	29.3	27.5	25.0	20.6	22.5	22.1	***

Terms and abbreviations are given in Table 4.2.

Table 4.28.1 Annual O₃ concentration from 2010 to 2024

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	AT(UVP)										18	19	24	17	19	24
Indonesia	Bandung	AT(UVP) PS						26	10	11	15	8	***	***	***	***	***
											10	11	9	7	9	***	***
Japan	Rishiri	AT(UVP)	40	37	34	37	39	40	39	37	36	32	34	35	35	35	35
	Ochiishi	AT(UVP)	38	35	39	39	42	40	38	42	40	33	35	34	33	34	34
	Tappi	AT(UVP)	***	38	41	40	39	38	41	45	45						
	Sado-seki	AT(UVP)	53	49	46	46	47	45	45	45	44	44	40	36	38	42	42
	Happo	AT(UVP)	48	53	49	49	48	48	47	47	50	51	45	47	45	46	42
	Ijira	AT(UVP)	19	20	24	26	28	26	25	28	28	24	17	25	22	29	***
	Oki	AT(UVP)	45	46	46	48	47	47	46	47	46	45	43	43	43	43	44
	Banryu	AT(UVP)	35	33	33	33	33	33	33	35	32						
	Yusuhara	AT(UVP)	36	33	34	39	40	40	37	41	39	39	39	38	37	44	***
	Hedo	AT(UVP)	38	33	35	38	40	39	36	36	29	37	30	29	27	38	***
	Ogasawara	AT(UVP)	38	29	32	37	33	35	29	36	30	45	41	29	28	42	25
	Niigata-maki	AT(UVP)										38	35	36	35	35	37
	Tsushima	AT(UVP)										47	43	45	44	41	***
Mongolia	Ulaanbaatar	AT(UVP)															
	Bayanzurkh	AT(UVP)					12	13	12	9	11	12	12	11	11	10	8
Philippines	Manila Observatory	AT(UVP)						7	10	***	***	***	***	***	***	***	***
	Sta. Rosa	AT(UVP)													42	***	98
Republic of Korea	Ganghwa	AT(UVP)	43	39	44	46	50	47	45	43	41	46	42	43	44	34	40
	Jeju	AT(UVP)	42	35	39	41	45	46	39	47	42	46	42	45	45	45	43
	Imsil	AT(UVP)	30	30	33	31	31	36	36	29	28	36	29	31	31	32	32
Russia	Mondy	AT(UVP)	44	40	38	38	35	40	43	27	***	***	***	***	***	***	***
		PS									42	50	***	***	27	***	***
	Listvyanka	PS					39	39	35	25	36	45	***	***	31	***	***
	Irkutsk	PS							30	14	22	24	20	***	18	***	***
Thailand	Bangkok	AT(UVP)	17	19	17	21	19	43	21	22	22	26	29	29	27	31	***
	Samutprakarn	AT(UVP)	15	17	19	20	22	23	16	17	20	21	29	26	27	***	***
	Khanchanaburi	AT(UVP)	23	12	16	13	22	20	19	18	25	26	23	***	36	***	***
	ChangPhueak	AT(UVP)	24	25	21	21	20	22	25	22	29	31	26	31	32	***	***
	Si Phum	AT(UVP)				22	19	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	AT(UVP)	17	***	19	22	22	21	22	26	22	25	26	26	25	24	21

Table 4.28.2 Annual O₃ concentration based on the daily maximum 8-hour moving average in China from 2022 to 2024.

unit: ppb																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
China	Jinyunshan														31	48	49
	Hongwen														42	42	38
	Haibin-Park														41	48	46

Terms and abbreviations are given in Table 4.2.

Table 4.29 Annual PM₁₀ concentration from 2010 to 2024

unit: µg/m ³																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
China	Jinyunshan	AT(β-ray)	51	45	43	64	57	48	56	50	48	39	35	38	33	38	32
	Hongwen	AT(TEOM)	63	61	59	58	54	43	42	43	41	37	33	35	32	37	34
	Xiang Zhou	AT(TEOM)	48	49													
	Haibin-Park	AT(TEOM)			44	54	46	50	41	42	40	37	31	34	29	33	33
	Wuzhishan	AT(Hybrid)										14	11	12	11	12	13
	Lijiang	AT(Hybrid)										8	7	9	9	8	8
Japan	Rishiri	TEOM/AT(β-ray)	18	15	13	12	26	19	16	17	17	22	18	19	20	21	21
	Ochiishi	AT(β-ray)	22	23	20	16	26	22	18	16	15	15	13	16	15	16	13
	Tappi	AT(β-ray)	28	18	17	18	20	20	18	16	16						
	Sado-seki	TEOM/AT(β-ray)	21	21	19	20	23	24	20	21	22	24	20	21	***	18	20
	Happo	AT(β-ray)	12	12	11	11	12	10	10	7	9	6	7	9	9	6	11
	Ijira	AT(β-ray)	18	19	16	18	17	17	16	18	17	15	13	13	12	14	14
	Oki	AT(β-ray)	29	25	23	27	31	32	29	28	29	30	29	36	***	30	28
	Banryu	AT(β-ray)	28	24	22	25	25	24	22	24	22						
	Yusuhara	AT(β-ray)	18	16	15	17	15	16	14	14	15	13	13	14	12	13	9
	Hedo	AT(β-ray)	31	28	27	26	27	31	28	29	31	29	29	29	26	25	30
	Ogasawara	AT(β-ray)	12	10	11	12	11	18	19	19	20	20	19	16	16	19	18
	Niigata-maki	AT(β-ray)												21	23	22	24
	Tsushima	AT(β-ray)										23	19	22	17	21	18
Lao PDR	Vientiane	AT(β-ray)					72	72	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(β-ray)															
	Bayanzurkh	AT(β-ray)					211	106	97	102	121	126	92	84	87	81	76
Philippines	Manila Observatory	AT(β-ray)						33	29	***	***	***	***	***	***	***	***
	North Caloocan	AT(β-ray)													51	56	***
	Sta. Rosa	AT(β-ray)													32	21	69
Republic of Korea	Ganghwa	AT(β-ray)	51	44	45	48	49	52	51	49	42	43	36	32	29	39	35
	Jeju	AT(β-ray)	47	42	37	45	47	45	42	37	39	39	30	30	30	33	27
	Imsil	AT(β-ray)	40	38	36	39	44	43	42	39	37	49	34	38	31	30	22
Thailand	Bangkok	AT(β-ray)	38	38	37	41	37	32	35	36	36	34	32	32	31	34	32
	Samutprakarn	AT(β-ray)	38	54	39	44	41	35	38	38	42	40	34	35	35	61	***
	Khanchanaburi	AT(β-ray)	46	23	10	28	90	23	34	17	35	33	121	***	41	***	***
	ChangPhueak	AT(β-ray)	45	33	42	41	45	43	48	43	50	56	52	46	37	***	***
	Si Phum	AT(β-ray)				47	47	49	52	45	41	50	46	38	33	75	***
	Nai Mueang	AT(β-ray)	44	***	54	59	51	45	55	54	53	49	50	44	41	43	***

Terms and abbreviations are given in Table 4.2.

Table 4.30 Annual PM_{2.5} concentration from 2010 to 2024

unit: µg/m ³																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	AT(β-ray)								13	19	28	20	18	17	19	20
China	Jinyunshan	AT(β-ray)													29	22	20
	Hongwen	AT(β-ray)													16	19	19
	Haibin-Park	AT(β-ray)													19	18	19
Indonesia	Jakarta	AT(β-ray)							***	39	46	38	34	***	***	***	***
Japan	Rishiri	AT(β-ray)	9	8	8	7	8	8	7	8	7	8	7	6	6	7	7
	Ochiishi	AT(β-ray)	12	10	9	7	7	9	8	7	6	7	5	6	6	6	5
	Tappi	AT(β-ray)						10	9	8	9						
	Sadoscki	AT(β-ray)					11	10	10	10	9	9	7	4	***	7	8
	Happo	AT(β-ray)						7	6	6	6	5	5	5	5	3	7
	Ijira	AT(β-ray)						11	9	11	8	8	6	6	6	6	6
	Oki	AT(β-ray)	12	14	13	15	13	13	12	11	12	10	9	11	***	8	7
	Banryu	AT(β-ray)						13	12	13	11						
	Yusuhara	AT(β-ray)						11	10	10	10	10	9	9	8	9	7
	Hedo	AT(β-ray)						10	10	11	11	10	10	9	8	9	8
	Ogasawara	AT(β-ray)						7	6	6	6	6	6	6	5	6	5
	Niigata-maki	AT(β-ray)											7	6	7	7	6
	Tsushima	AT(β-ray)										12	10	10	9	10	9
Lao PDR	Vientiane	AT(β-ray)									31	32	31	***	***	***	37
Mongolia	Ulaanbaatar	AT(β-ray)						72	53	48	43	39					
	Bayanzurkh	AT(β-ray)					50	53	58	52	45	35	29	49	25	23	23
Myanmar	Yangon	AT(β-ray)									24	24	22	28	26	27	25
	Mandalay	AT(β-ray)						47	33	37	16	41	77	***	***	***	***
Philippines	Manila Observatory	AT(β-ray)						22	20	18	17	16	12	13	***	***	***
	North Caloocan	AT(β-ray)													20	26	***
	Sta. Rosa	AT(β-ray)													21	17	53
	Mt. Sto. Tomas	AT(β-ray)												3	3	5	8
Republic of Korea	Ganghwa	AT(β-ray)							28	25	22	23	19	19	18	22	18
	Jeju	AT(β-ray)							21	16	16	20	15	12	13	13	14
	Imsil	AT(β-ray)										19	16	18	18	19	15
Thailand	Bangkok	AT(β-ray)						18	23	25	21	21	19	18	16	18	16
	Samutprakarn	AT(β-ray)							28	24	23	22	19	20	23	26	23
	Khanchanaburi	AT(β-ray)						24	***	7	27	7	104	***	15	25	33
	ChangPhueak	AT(β-ray)							24	30	29	36	33	29	23	34	30
	Si Phum	AT(β-ray)				35	33	33	32	23	30	31	28	24	19	33	28
	Nai Mueang	AT(β-ray)										24	27	25	24	27	27
Vietnam	Hoa Binh	AT(β-ray)						40	49	37	37	34	30	29	***	13	25

Terms and abbreviations are given in Table 4.2.

Table 4.31 Annual SO₄²⁻ in PM concentration from 2010 to 2024

unit: µg/m ³			unit: µg/m ³														
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	2.85	2.95	2.63	2.91	2.11	2.20	1.54	2.11	***	***	***	***	***	***	***
China	Hongwen	FP	14.10	17.60	***	***	***	***	10.92	9.08							
Indonesia	Jakarta	FP					11.44	6.76	3.53	4.23	6.68	5.52	4.07	6.42	5.47	***	***
	Serpong	FP	0.50	0.65	4.03	3.54	3.69	5.16	3.41	4.43	6.42	6.05	4.99	5.49	3.78	***	***
	Bandung	FP					6.93	2.69	2.73	2.28	7.52	8.08	5.03	7.14	8.12	***	***
Japan	Rishiri	FP	2.74	2.71	2.32	2.72	2.21	2.52	2.05	2.13	2.05	3.82	2.13	1.81	1.92	2.02	1.63
	Ochiishi	FP	2.31	2.13	1.95	2.19	2.52	2.05	1.98	2.38	2.03	2.05	1.67	2.14	2.09	1.96	1.61
	Tappi	FP	4.12	3.99	3.76	3.83	5.38	4.30	3.08	3.02	2.56						
	Sado-seki	FP	3.20	3.50	3.53	3.71	3.54	4.03	2.88	2.82	3.73	2.50	2.08	***	2.01	2.28	1.91
	Happo	FP	0.86	1.02	2.36	2.50	2.49	2.16	1.80	1.57	1.56	1.24	1.54	1.06	1.02	1.27	1.14
	Ijira	FP	3.25	3.55	2.52	2.88	3.84	2.84	2.91	2.50	2.45	2.51	1.64	1.60	1.78	1.60	1.49
	Oki	FP	4.43	4.76	4.90	5.56	5.25	4.69	4.84	4.31	4.12	3.68	3.47	2.79	3.12	2.87	2.48
	Banryu	FP	4.37	4.55	5.05	5.56	4.99	4.60	4.24	3.52	3.59						
	Yusuhara	FP	4.46	4.03	4.44	5.28	4.72	3.75	3.29	3.16	2.94	2.88	2.53	2.15	2.37	2.11	1.76
	Hedo	FP	3.53	2.48	4.28	5.43	5.39	5.12	4.57	4.37	4.37	3.84	3.79	2.86	2.88	2.16	***
	Ogasawara	FP	2.17	2.46	2.41	3.10	2.58	2.69	1.93	1.94	1.67	1.86	3.01	2.00	1.67	1.68	1.35
	Tokyo	FP	4.28	4.06	3.14	4.38	4.11	3.79	3.16	3.08	3.28	3.11	2.53	2.18	2.26	2.32	1.92
	Niigata-maki	FP											1.93	1.62	1.69	2.10	1.70
	Tsushima	FP											3.19	2.78	2.58	2.66	2.25
Lao PDR	Vientiane	FP						4.75	3.77	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	2.94	4.22	3.24	3.17	4.81	4.19	2.96	2.77	4.72	***	2.65	2.40	2.61	3.20	2.97
	Tanah Rata	FP	0.95	1.18	1.52	1.48	2.59	3.29	2.01	1.28	0.15	***	1.42	1.09	1.13	1.90	1.68
	Danum Valley	FP	1.73	0.86	0.38	0.78	1.11	1.80	1.10	0.75	1.05	***	0.77	0.72	0.73	0.91	1.03
Mongolia	Ulaanbaatar	FP	4.70	4.11	***	***	***	***	2.10	2.23	1.25	1.15	1.07				
	Khan-Uul	FP											0.84	1.27	***	0.13	1.69
	Terelj	FP	0.61	1.06	***	***	***	***	1.70	0.11	0.07	0.15	0.11	0.27	***	0.17	0.18
Myanmar	Yangon	FP		3.77	3.59	1.40	1.56	0.90	0.54	1.70	1.52	1.51	2.40	0.88	0.33	0.35	0.36
Philippines	Manila Observatory	FP	1.43	***	***	***	***	***	***	***	***	2.33	3.18	3.88	3.12	3.16	1.27
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	3.80	4.10	0.94
	Mt. Sto. Tomas	FP	1.40	***	0.15	0.17	0.38	0.27	0.30	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP with PM _{2.5} cyclone	6.19	***	***	7.43	7.17	6.12	6.11	4.20	3.37	3.37	4.23	3.58	3.46	3.40	2.53
	Jeju	FP with PM _{2.5} cyclone	3.82	***	***	4.37	7.81	5.62	4.75	2.01	3.45	4.35	3.41	2.31	2.34	2.19	2.97
	Imsil	FP with PM _{2.5} cyclone	5.03	***	***	5.61	5.86	4.66	5.07	3.55	3.30	3.77	2.65	2.13	3.06	2.29	1.90
Russia	Mondy	FP	0.14	0.19	0.22	0.22	0.05	0.29	0.45	0.58	0.35	0.21	0.09	0.06	0.04	0.02	
	Listvyanka	FP	0.89	1.00	1.09	0.67	1.00	0.86	0.88	0.85	0.78	0.53	0.31	0.38	0.44	0.56	0.66
	Irkutsk	FP	2.29	2.28	3.07	1.71	2.14	2.18	2.03	1.85	2.28	1.15	1.00	1.01	1.50	2.06	1.86
	Primorskaya	FP	4.04	3.60	3.27	3.66	3.62	3.24	2.23	1.08	0.52	0.38	0.59	0.66	0.47	1.07	0.15
Thailand	Bangkok	FP	3.63	3.31	2.26	2.80	4.38	2.64	4.10	1.47	3.77	3.10	2.12	***	0.67	2.07	***
	Pathumthani	FP	3.78	1.64	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.29	2.08	2.34	1.40	3.19	1.97	15.58	1.82	3.27	3.71	***	***	***	***	***
	Mae Hia	FP	1.29	1.34	1.12	0.39	0.10	0.08	0.86	0.87	0.83	1.17					
	Sakaerat	FP	2.12	2.74	2.44	2.89	3.31	2.70	2.79	2.35	3.26	2.17					
Vietnam	Hanoi	FP	15.63	14.40	7.82	11.54	8.47	10.83	8.84	7.96	4.50	5.19	6.95	8.30	#####	5.00	3.81
	Hoa Binh	FP	2.26	3.81	1.59	2.58	4.95	6.38	5.78	3.24	4.43	2.90	3.26	3.49	3.62	4.68	1.47
	Can Tho	FP					1.40	1.22	1.42	5.58	5.40	5.83	5.46	5.26	5.85	6.24	6.77
	Ho Chi Minh	FP					2.08	2.42	2.15	7.68	6.75	7.11	7.24	5.82	5.97	7.03	8.50
	Yen Bai	FP						8.68	6.49	6.61	7.14	5.30	5.67	7.73	6.18	5.12	3.83

Terms and abbreviations are given in Table 4.2.

Table 4.32 Annual NO₃⁻ in PM concentration from 2010 to 2024

unit: µg/m ³																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	1.32	1.27	1.20	1.18	1.22	2.03	1.37	1.58	***	***	***	***	***	***	***
China	Hongwen	FP	11.66	11.66	***	***	***	***	7.62	8.26							
Indonesia	Jakarta	FP					4.67	2.37	1.34	1.36	2.78	2.47	1.39	1.51	1.56	***	***
	Serpong	FP	0.21	0.57	1.09	0.53	0.86	1.12	0.82	1.05	1.54	1.22	0.83	0.75	0.65	***	***
	Bandung	FP					1.92	1.19	1.00	0.73	1.57	1.92	1.66	2.16	2.05	***	***
Japan	Rishiri	FP	0.77	0.66	0.63	0.60	0.51	0.75	0.63	0.70	0.74	1.49	0.74	0.66	0.68	0.93	0.67
	Ochiishi	FP	0.55	0.67	0.43	0.42	0.71	0.57	0.67	0.82	0.82	0.75	0.60	0.78	0.75	0.86	0.68
	Tappi	FP	1.24	1.27	0.98	1.04	1.45	1.29	1.23	1.27	1.18						
	Sado-seki	FP	0.82	1.13	0.90	0.92	1.06	1.23	1.02	1.10	1.42	0.91	0.92	***	0.95	1.17	0.95
	Happo	FP	0.11	0.14	0.31	0.36	0.58	0.34	0.39	0.36	0.42	0.20	0.27	0.34	0.29	0.43	0.32
	Ijira	FP	0.40	0.47	0.25	0.30	0.42	0.39	0.46	0.41	0.47	0.49	0.32	0.54	0.41	0.50	0.40
	Oki	FP	1.50	1.85	1.51	1.82	1.79	1.66	2.10	2.70	1.98	1.87	1.58	1.76	1.80	1.61	1.43
	Banryu	FP	1.53	1.68	1.51	1.65	1.45	1.47	1.67	2.13	1.72						
	Yusuhara	FP	0.66	0.61	0.41	0.66	0.55	0.50	0.54	0.56	0.57	0.56	0.56	0.89	0.73	0.76	0.51
	Hedo	FP	1.09	0.80	1.27	1.62	1.72	1.87	1.59	1.75	1.58	1.60	1.39	1.41	1.23	1.13	***
	Ogasawara	FP	0.53	0.53	0.53	0.60	0.48	0.71	0.52	0.55	0.48	0.56	0.53	0.65	0.43	0.47	0.40
	Tokyo	FP	3.80	3.76	2.73	3.13	3.13	3.55	3.19	2.99	3.34	3.10	2.65	2.86	2.69	2.82	2.40
	Niigata-maki	FP											0.78	0.95	0.82	1.15	1.01
	Tsushima	FP											1.57	2.39	2.23	2.06	1.57
Lao PDR	Vientiane	FP						0.47	0.40	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	1.25	1.14	1.23	1.65	1.53	1.70	1.46	1.29	1.77	***	1.37	1.21	1.30	1.15	1.24
	Tanah Rata	FP	0.12	0.13	0.18	0.34	0.40	0.54	0.26	0.13	0.01	***	0.16	0.18	0.15	0.19	0.17
	Danum Valley	FP	0.36	0.04	0.08	0.09	0.11	0.11	0.10	0.08	0.06	***	0.08	0.11	0.07	0.06	0.13
Mongolia	Ulaanbaatar	FP	1.25	1.81	***	***	***	***	0.10	0.18	0.18	0.16	0.09				
	Khan-Uul	FP											0.19	0.37	***	0.22	0.91
	Tereļj	FP	0.11	0.29	***	***	***	***	<0.01	0.01	0.01	0.01	0.02	0.04	***	0.05	0.10
Myanmar	Yangon	FP		0.31	0.92	0.54	0.33	0.44	0.48	1.65	0.82	0.60	0.91	0.58	0.20	0.20	0.19
Philippines	Manila Observatory	FP	0.85	***	***	***	***	***	***	***	***	1.35	1.66	1.64	1.67	1.14	0.87
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	1.13	2.20	0.64
	Mt. Sto. Tomas	FP	0.78	***	0.19	0.14	0.26	0.27	0.14	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP with PM _{2.5} cyclone	3.50	***	***	3.51	2.54	3.40	3.25	2.82	2.74	3.10	2.75	4.15	1.99	2.06	1.13
	Jeju	FP with PM _{2.5} cyclone	0.67	***	***	0.74	1.10	0.79	0.75	1.92	1.41	1.15	0.61	0.49	0.49	1.37	1.99
	Imsil	FP with PM _{2.5} cyclone	3.82	***	***	2.95	2.82	1.93	1.17	2.72	3.17	2.56	2.67	1.65	3.20	1.39	0.12
Russia	Mondy	FP	0.19	0.02	0.03	0.02	<0.01	0.03	0.01	0.04	0.03	0.03	0.01	<0.01	<0.01	<0.01	
	Listvyanka	FP	0.17	0.25	0.12	0.09	0.18	0.27	0.20	0.07	0.10	0.05	0.01	0.06	0.18	0.06	0.10
	Irkutsk	FP	0.91	0.88	0.92	0.49	0.80	0.66	0.67	0.63	0.75	0.25	0.25	0.25	0.64	0.76	0.59
	Primorskaya	FP	0.79	0.27	0.68	1.17	1.37	1.15	0.77	0.53	0.19	0.39	1.08	0.27	1.00	0.82	0.16
Thailand	Bangkok	FP	1.86	2.00	1.91	1.41	2.77	2.20	1.98	1.28	2.68	2.29	2.26	***	1.26	1.64	***
	Pathumthani	FP	1.93	0.92	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.06	0.04	0.10	0.11	0.17	0.20	0.83	0.24	0.20	0.19	***	***	***	***	***
	Mae Hia	FP	10.25	0.24	0.31	0.30	0.11	0.13	0.18	0.18	0.20	0.35					
	Sakaerat	FP	0.18	0.31	0.28	0.41	0.58	0.32	0.30	0.27	0.38	0.50					
Vietnam	Hanoi	FP	7.81	6.82	5.57	6.73	5.86	7.26	6.58	#####	4.19	4.50	5.91	6.52	8.66	3.66	4.19
	Hoa Binh	FP	0.61	1.14	0.92	1.11	1.88	2.95	3.21	3.28	2.95	2.22	2.85	2.61	2.89	3.42	1.12
	Can Tho	FP					0.67	0.55	0.66	2.19	2.16	2.15	2.15	1.97	2.16	2.29	2.33
	Ho Chi Minh	FP					1.09	1.07	2.06	5.67	5.80	5.84	5.75	5.03	5.12	4.97	5.80
	Yen Bai	FP						3.19	4.36	8.00	5.89	3.91	4.70	5.71	5.02	3.72	2.84

Terms and abbreviations are given in Table 4.2.

Table 4.33 Annual CI[†] in PM concentration from 2010 to 2024

unit: $\mu\text{g}/\text{m}^3$																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	0.20	0.24	0.24	0.40	0.26	0.54	0.56	0.32	***	***	***	***	***	***	***
China	Hongwen	FP	2.28	1.51	***	***	***	***	0.99	0.95							
Indonesia	Jakarta	FP					1.35	0.51	0.41	0.54	0.84	1.25	0.52	0.39	0.47	***	***
	Serpong	FP	0.25	0.10	0.16	0.20	0.18	0.28	0.29	0.23	0.25	0.23	0.28	0.34	0.16	***	***
	Bandung	FP					0.31	0.27	0.20	0.57	0.17	0.21	0.36	0.35	0.38	***	***
Japan	Rishiri	FP	2.79	2.31	1.94	2.00	2.95	3.57	2.21	2.66	2.93	4.54	2.66	2.67	3.27	2.64	2.47
	Ochiishi	FP	4.34	3.28	3.06	4.58	4.12	4.46	3.89	3.81	3.97	3.89	3.14	6.72	7.97	4.74	4.53
	Tappi	FP	6.01	5.93	8.15	5.91	#####	#####	5.79	5.70	5.54						
	Sado-seki	FP	3.78	3.06	3.02	3.43	3.00	4.39	3.77	3.52	5.80	4.30	3.74	***	3.31	3.83	3.55
	Happo	FP	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.03	0.03	0.01	0.03	0.03	0.02	0.08	0.02
	Ijira	FP	0.05	0.04	0.02	0.03	0.06	0.05	0.06	0.06	0.10	0.08	0.07	0.08	0.07	0.11	0.08
	Oki	FP	4.54	4.29	4.20	4.98	4.96	4.58	5.25	#####	5.07	4.09	5.26	5.68	6.24	4.49	4.74
	Banryu	FP	1.38	1.53	0.99	1.52	1.60	1.40	0.78	2.79	1.45						
	Yusuhara	FP	0.10	0.08	0.17	0.06	0.06	0.07	0.07	0.06	0.06	0.08	0.08	0.15	0.09	0.14	0.12
	Hedo	FP	4.62	3.09	6.02	7.27	7.61	5.86	7.53	7.16	7.69	6.57	7.17	7.36	7.20	5.11	***
	Ogasawara	FP	3.44	3.79	3.55	3.51	3.50	4.32	3.83	3.71	3.59	4.09	3.75	5.46	3.72	3.69	3.61
	Tokyo	FP	0.66	0.70	0.49	0.59	0.53	0.53	0.57	0.43	0.66	0.62	0.52	0.72	0.48	0.60	0.52
	Niigata-maki	FP											1.12	1.82	1.44	1.84	2.83
	Tsushima	FP											0.82	0.74	0.62	0.59	0.69
Lao PDR	Vientiane	FP						0.06	0.06	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.19	0.11	0.13	0.16	0.23	0.15	0.21	0.13	0.13	***	0.17	0.11	0.16	0.14	0.12
	Tanah Rata	FP	0.05	0.03	0.03	0.07	0.10	0.11	0.09	0.04	<0.01	***	0.06	0.04	0.03	0.05	0.06
	Danum Valley	FP	0.33	0.04	0.02	0.11	0.13	0.11	0.07	0.08	0.02	***	0.13	0.12	0.06	0.14	0.13
Mongolia	Ulaanbaatar	FP	1.06	1.18	***	***	***	***	0.08	0.20	0.14	0.20	0.08				
	Khan-Uul	FP											0.15	0.18	***	0.12	0.77
	Terelj	FP	0.18	0.23	***	***	***	***	0.02	0.03	0.02	0.02	<0.01	0.02	***	0.07	0.06
Myanmar	Yangon	FP		0.59	0.56	0.21	0.27	0.63	0.57	0.13	0.52	0.23	0.48	0.27	0.15	0.15	0.17
Philippines	Manila Observatory	FP	0.66	***	***	***	***	***	***	***	***	0.69	1.05	1.00	0.98	0.70	0.50
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	1.12	1.95	0.98
	Mt. Sto. Tomas	FP	0.32	***	0.05	0.04	0.10	0.08	0.04	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP with PM _{2.5} cyclone	0.44	***	***	0.47	0.13	0.13	0.10	0.28	0.11	0.09	0.08	0.15	0.08	0.17	0.12
	Jeju	FP with PM _{2.5} cyclone	0.46	***	***	1.12	0.72	0.37	0.60	0.54	0.62	0.23	0.19	0.08	0.12	0.14	0.10
	Imsil	FP with PM _{2.5} cyclone	0.61	***	***	0.48	0.25	0.38	0.31	0.39	0.41	0.20	0.14	0.08	0.22	0.13	0.15
Russia	Mondy	FP	0.33	0.04	0.24	0.14	0.04	0.05	0.01	0.03	0.02	0.07	0.02	<0.01	0.03	<0.01	
	Listvyanka	FP	0.11	0.04	0.26	0.06	0.09	0.12	0.06	0.05	0.04	0.03	0.03	0.06	0.09	0.02	0.02
	Irkutsk	FP	0.31	0.43	0.46	0.24	0.26	0.17	0.23	0.19	0.15	0.11	0.13	0.10	0.21	0.27	0.24
	Primorskaya	FP	0.20	0.09	0.29	0.28	0.14	0.15	0.10	0.12	0.03	0.09	0.49	0.41	0.40	0.20	0.07
Thailand	Bangkok	FP	0.28	0.32	0.26	0.16	0.31	0.19	0.34	0.09	0.27	0.28	0.22	***	0.3	0.22	***
	Pathumthani	FP	0.14	0.15	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.10	0.05	<0.01	0.05	0.04	0.08	0.26	0.22	0.03	0.10	***	***	***	***	***
	Mae Hia	FP	0.16	0.12	0.13	0.12	0.08	0.06	0.21	0.15	0.13	0.22					
	Sakaerat	FP	0.02	0.06	0.10	0.12	0.16	0.08	0.21	0.04	0.08	0.09					
Vietnam	Hanoi	FP	1.66	1.33	1.11	1.75	1.34	1.94	2.32	4.04	2.33	1.72	3.92	5.27	4.23	2.51	1.24
	Hoa Binh	FP	0.35	0.27	0.43	0.59	1.18	0.79	1.18	1.04	1.88	2.79	2.61	1.97	2.92	3.53	0.91
	Can Tho	FP					0.56	0.46	1.78	1.08	2.14	2.23	2.36	2.01	2.22	2.26	2.41
	Ho Chi Minh	FP					0.74	0.59	1.29	1.40	4.03	4.42	4.45	3.70	3.71	3.27	3.51
	Yen Bai	FP						1.01	1.25	3.58	3.52	2.78	2.92	3.20	3.49	3.18	1.37

Terms and abbreviations are given in Table 4.2.

Table 4.34 Annual NH₄⁺ in PM concentration from 2010 to 2024

unit: $\mu\text{g}/\text{m}^3$																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	0.61	0.50	0.34	0.57	0.52	0.54	0.54	0.38	***	***	***	***	***	***	***
China	Hongwen	FP	6.72	5.85	***	***	***	***	3.68	2.83							
Indonesia	Jakarta	FP					0.57	0.71	0.40	0.32	1.11	1.03	0.69	1.26	1.29	***	***
	Serpong	FP	0.14	0.32	0.78	0.38	0.47	0.67	0.55	0.50	1.07	0.88	1.01	0.87	0.82	***	***
	Bandung	FP					1.20	1.17	1.42	1.13	1.60	1.38	1.29	1.93	2.11	***	***
Japan	Rishiri	FP	0.47	0.47	0.41	0.45	0.35	0.46	0.40	0.42	0.43	0.73	0.42	0.33	0.33	0.38	0.28
	Ochiishi	FP	0.29	0.37	0.32	0.28	0.38	0.24	0.32	0.38	0.35	0.35	0.25	0.28	0.25	0.32	0.22
	Tappi	FP	0.68	0.64	0.53	0.58	0.69	0.46	0.48	0.49	0.42						
	Sado-seki	FP	0.50	0.56	0.54	0.62	0.61	0.69	0.48	0.44	0.56	0.39	0.27	***	0.27	0.33	0.26
	Happo	FP	0.22	0.26	0.64	0.63	0.80	0.59	0.53	0.47	0.43	0.33	0.36	0.28	0.28	0.32	0.28
	Ijira	FP	0.87	0.95	0.69	0.81	1.11	0.76	0.82	0.68	0.64	0.65	0.44	0.40	0.47	0.38	0.36
	Oki	FP	0.92	0.93	0.94	1.10	1.05	0.90	1.13	0.77	0.83	0.74	0.54	0.49	0.54	0.47	0.42
	Banryu	FP	1.02	1.06	1.24	1.40	1.22	1.11	1.17	0.93	0.90						
	Yusuhara	FP	1.00	0.96	1.06	1.25	1.10	0.91	0.86	0.89	0.72	0.74	0.60	0.52	0.65	0.52	0.44
	Hedo	FP	0.42	0.43	0.71	0.69	0.61	0.66	0.51	0.53	0.46	0.41	0.34	0.25	0.29	0.22	***
	Ogasawara	FP	0.17	0.22	0.22	0.31	0.23	0.25	0.19	0.22	0.16	0.17	0.25	0.16	0.12	0.15	0.11
	Tokyo	FP	1.71	1.57	1.10	1.44	1.42	1.40	1.18	1.16	1.11	1.02	0.85	0.72	0.71	0.75	0.60
	Niigata-maki	FP											0.34	0.31	0.33	0.39	0.42
	Tsushima	FP											0.75	0.80	0.87	0.80	0.62
Lao PDR	Vientiane	FP						1.22	1.12	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.80	1.12	0.75	0.94	1.37	1.18	0.92	0.74	1.28	***	0.80	0.70	0.76	1.00	1.00
	Tanah Rata	FP	0.25	0.49	0.46	0.39	0.63	1.11	0.46	0.32	<0.01	***	0.39	0.28	0.31	0.56	0.46
	Danum Valley	FP	0.12	0.13	0.08	0.13	0.12	0.25	0.10	0.09	0.14	***	0.13	0.10	0.11	0.20	0.17
Mongolia	Ulaanbaatar	FP	1.69	1.80	***	***	***	***	0.67	0.58	0.34	0.32	0.14				
	Khan-Uul	FP											0.10	0.61	***	***	0.50
	Terelj	FP	0.12	0.43	***	***	***	***	0.06	0.04	<0.01	0.05	0.01	0.14	***	***	0.05
Myanmar	Yangon	FP		0.34	0.38	0.30	0.50	0.45	0.37	0.80	0.33	0.40	0.59	1.05	0.18	0.29	0.32
Philippines	Manila Observatory	FP	0.14	***	***	***	***	***	***	***	***	0.59	0.09	0.51	0.53	0.41	0.15
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	0.61	0.73	0.44
	Mt. Sto. Tomas	FP	0.10	***	<0.01	0.01	0.10	0.05	<0.01	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP with PM _{2.5} cyclone	2.93	***	***	3.54	3.58	3.48	3.20	2.50	2.13	1.99	2.06	2.38	1.86	1.77	1.11
	Jeju	FP with PM _{2.5} cyclone	1.32	***	***	1.80	2.83	2.30	1.86	1.19	1.38	1.59	1.16	0.76	0.81	1.07	1.50
	Imsil	FP with PM _{2.5} cyclone	2.54	***	***	2.82	2.87	2.36	2.02	1.96	1.92	1.86	1.56	1.21	2.20	1.23	0.68
Russia	Mondy	FP	0.01	0.02	0.04	<0.01	0.02	0.03	0.09	0.12	0.05	0.03	0.01	<0.01	<0.01	<0.01	
	Listvyanka	FP	0.15	0.22	0.22	0.10	0.35	0.20	0.21	0.32	0.10	0.13	0.04	0.06	0.08	0.13	0.14
	Irkutsk	FP	0.49	0.62	0.80	0.40	0.55	0.70	0.93	0.57	0.73	0.35	0.28	0.24	0.39	0.55	0.63
	Primorskaya	FP	0.75	0.77	0.70	1.06	0.88	1.04	0.80	0.45	0.13	0.27	0.45	0.32	0.40	0.45	0.10
Thailand	Bangkok	FP	0.69	0.60	0.53	0.79	1.27	0.65	0.75	1.02	0.77	0.63	0.56	***	0.21	0.98	***
	Pathumthani	FP	0.84	0.26	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.18	0.46	0.07	0.30	0.67	0.60	2.73	0.58	0.57	0.50	***	***	***	***	***
	Mae Hia	FP	3.70	0.31	0.23	0.09	0.09	0.11	0.38	0.25	0.18	0.24					
	Sakaerat	FP	0.73	0.96	0.84	0.90	1.01	0.88	0.80	0.77	1.62	1.36					
Vietnam	Hanoi	FP	3.28	4.50	2.83	3.32	2.46	2.06	2.32	3.41	1.37	0.71	1.19	2.66	1.95	0.88	0.53
	Hoa Binh	FP	0.64	1.55	0.66	0.90	1.76	1.99	1.90	1.03	1.42	0.96	0.73	0.85	0.97	1.12	0.41
	Can Tho	FP					0.63	1.08	0.77	1.39	1.21	1.12	1.09	0.98	1.00	1.07	0.97
	Ho Chi Minh	FP					1.00	1.35	1.44	1.23	1.37	1.33	1.33	0.95	1.01	0.91	0.97
	Yen Bai	FP						2.00	2.62	3.17	2.58	1.35	1.15	1.96	1.53	1.24	1.25

Terms and abbreviations are given in Table 4.2.

Table 4.35 Annual Na⁺ in PM concentration from 2010 to 2024

unit: µg/m ³																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	0.53	0.63	0.57	0.67	0.59	0.81	0.64	0.63	***	***	***	***	***	***	***
China	Hongwen	FP	1.76	1.62	***	***	***	***	1.61	1.58							
Indonesia	Jakarta	FP					1.84	0.97	0.56	0.49	1.10	0.97	0.82	0.78	0.96	***	***
	Serpong	FP	0.09	0.16	0.45	0.37	0.40	0.69	0.36	0.32	0.70	0.54	0.52	0.61	0.31	***	***
	Bandung	FP					0.57	0.64	0.41	0.49	0.67	0.49	0.48	0.47	0.36	***	***
Japan	Rishiri	FP	2.14	1.84	1.58	1.64	2.13	2.44	1.65	1.88	2.08	3.43	1.90	1.87	2.11	1.96	1.68
	Ochiishi	FP	2.87	2.45	2.15	3.00	2.72	2.86	2.56	2.64	2.64	2.60	2.11	4.15	4.78	3.00	2.82
	Tappi	FP	4.24	3.97	5.12	4.05	9.88	7.92	3.81	3.77	3.58						
	Sado-seki	FP	2.67	2.43	2.38	2.56	2.34	3.17	2.68	2.57	3.91	2.81	2.57	***	2.38	2.58	2.39
	Happo	FP	0.03	0.05	0.09	0.09	0.09	0.09	0.09	0.08	0.10	0.06	0.09	0.11	0.07	0.12	0.08
	Ijira	FP	0.22	0.25	0.16	0.16	0.21	0.23	0.24	0.25	0.28	0.30	0.23	0.26	0.23	0.27	0.23
	Oki	FP	3.35	3.28	3.25	3.80	3.74	3.40	3.89	6.68	3.66	3.09	3.67	3.77	4.18	3.11	3.17
	Banryu	FP	1.41	1.59	1.29	1.62	1.60	1.46	1.07	2.23	1.46						
	Yusuhara	FP	0.41	0.42	0.39	0.45	0.34	0.30	0.30	0.28	0.32	0.30	0.32	0.38	0.33	0.35	0.30
	Hedo	FP	3.38	2.28	4.34	5.27	4.79	4.43	5.21	5.03	5.29	4.58	4.84	4.73	4.64	3.30	***
	Ogasawara	FP	2.38	2.61	2.45	2.65	2.54	3.06	2.54	2.50	2.40	2.74	2.75	3.45	2.44	2.44	2.31
	Tokyo	FP	0.91	0.89	0.71	0.87	0.77	0.87	0.86	0.76	0.98	0.94	0.76	0.93	0.84	0.90	0.84
	Niigata-maki	FP											1.07	1.37	1.20	1.45	1.80
	Tsushima	FP											1.02	1.00	0.87	0.82	0.87
Lao PDR	Vientiane	FP						0.28	0.25	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.26	0.32	0.27	0.42	0.47	0.53	0.36	0.30	0.44	***	0.47	0.32	0.33	0.37	0.38
	Tanah Rata	FP	0.10	0.12	0.12	0.16	0.21	0.24	0.20	0.08	<0.01	***	0.19	0.14	0.12	0.17	0.19
	Danum Valley	FP	0.72	0.17	0.05	0.16	0.32	0.35	0.25	0.18	0.19	***	0.32	0.17	0.14	0.21	0.29
Mongolia	Ulaanbaatar	FP	0.21	0.20	***	***	***	***	0.20	0.31	0.18	0.22	0.22				
	Khan-Uul	FP											0.13	0.12	***	***	0.51
	Terelj	FP	0.02	0.09	***	***	***	***	0.03	0.03	0.02	0.03	0.01	0.03	***	***	0.05
Myanmar	Yangon	FP		0.59	0.74	0.21	0.34	0.12	0.31	0.19	0.58	0.27	1.88	0.42	0.16	0.20	0.14
Philippines	Manila Observatory	FP	0.54	***	***	***	***	***	***	***	***	0.66	0.77	0.99	0.46	0.99	0.43
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	1.10	1.81	0.62
	Mt. Sto. Tomas	FP	0.52	***	0.07	0.10	0.31	0.58	0.24	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP with PM _{2.5} cyclone	0.40	***	***	0.51	0.30	0.26	0.25	0.23	0.20	0.26	0.24	0.14	0.14	0.13	0.18
	Jeju	FP with PM _{2.5} cyclone	0.45	***	***	0.64	0.57	0.28	0.39	0.38	0.39	0.30	0.31	0.25	0.30	0.19	0.14
	Imsil	FP with PM _{2.5} cyclone	0.40	***	***	0.24	0.20	0.21	0.24	0.26	0.26	0.21	0.15	0.07	0.08	0.08	0.08
Russia	Mondy	FP	0.36	<0.01	0.08	0.06	0.01	0.06	0.02	0.16	0.03	0.02	0.03	0.01	0.22	<0.01	
	Listvyanka	FP	0.08	0.04	0.24	0.05	0.06	0.06	0.13	0.24	0.05	0.02	0.06	0.05	0.05	0.04	0.05
	Irkutsk	FP	0.26	0.28	0.28	0.14	0.16	0.13	0.14	0.45	0.16	0.11	0.15	0.14	0.18	0.30	0.26
	Primorskaya	FP	0.26	0.11	0.22	0.27	0.79	0.18	0.14	0.10	0.05	0.03	0.12	0.04	0.08	0.08	0.01
Thailand	Bangkok	FP	0.54	0.54	0.43	0.47	1.03	0.53	0.71	0.15	0.49	0.51	0.54	***	0.14	0.40	***
	Pathumthani	FP	0.30	0.22	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.06	0.09	0.07	0.13	0.25	0.19	1.49	0.20	0.09	0.16	***	***	***	***	***
	Mae Hia	FP	0.17	0.10	0.16	0.11	0.07	0.08	0.29	0.25	0.21	0.33					
	Sakaerat	FP	0.16	0.17	0.18	0.13	0.27	0.43	0.33	0.18	0.37	0.52					
Vietnam	Hanoi	FP	1.03	0.67	0.70	0.75	0.58	1.23	1.58	1.44	0.66	0.48	0.80	1.78	1.11	0.58	0.28
	Hoa Binh	FP	0.28	0.23	0.31	0.44	0.26	0.78	1.21	0.54	0.49	0.84	0.65	0.47	0.84	0.89	0.46
	Can Tho	FP					0.24	0.31	0.24	0.48	0.24	0.13	0.22	0.19	0.18	0.22	0.19
	Ho Chi Minh	FP					0.26	0.37	0.38	1.08	1.05	1.36	1.18	0.84	0.88	0.88	0.84
	Yen Bai	FP						0.83	1.18	0.88	0.78	0.90	0.78	1.14	1.03	0.82	0.30

Terms and abbreviations are given in Table 4.2.

Table 4.36 Annual K⁺ in PM concentration from 2010 to 2024

unit: $\mu\text{g}/\text{m}^3$																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	0.63	0.59	0.46	0.73	0.67	0.75	0.50	0.56	***	***	***	***	***	***	***
China	Hongwen	FP	3.46	0.72	***	***	***	***	0.55	0.51							
Indonesia	Jakarta	FP					0.96	0.48	0.32	0.22	0.71	0.71	0.34	0.38	0.61	***	***
	Serpong	FP	0.14	0.37	0.45	0.37	0.40	0.45	0.39	0.28	0.71	0.61	0.48	0.55	0.40	***	***
	Bandung	FP					0.55	0.74	0.48	0.47	0.64	0.73	0.39	0.44	0.46	***	***
Japan	Rishiri	FP	0.15	0.14	0.10	0.10	0.15	0.16	0.12	0.13	0.15	0.31	0.15	0.12	0.13	0.14	0.13
	Ochiishi	FP	0.13	0.12	0.10	0.12	0.13	0.15	0.14	0.11	0.12	0.12	0.08	0.17	0.19	0.12	0.12
	Tappi	FP	0.28	0.23	0.24	0.19	0.38	0.31	0.19	0.19	0.18						
	Sado-seki	FP	0.17	0.17	0.14	0.15	0.16	0.18	0.14	0.14	0.19	0.13	0.12	***	0.11	0.15	0.12
	Happo	FP	0.01	0.02	0.04	0.04	0.05	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.03	0.02
	Ijira	FP	0.09	0.11	0.06	0.07	0.11	0.09	0.09	0.10	0.11	0.09	0.06	0.08	0.08	0.09	0.07
	Oki	FP	0.22	0.24	0.22	0.24	0.24	0.20	0.54	0.29	0.20	0.19	0.18	0.19	0.19	0.16	0.16
	Banryu	FP	0.16	0.19	0.16	0.18	0.17	0.15	0.27	0.17	0.12						
	Yusuhara	FP	0.12	0.15	0.09	0.12	0.13	0.09	0.08	0.07	0.06	0.08	0.05	0.06	0.06	0.05	0.04
	Hedo	FP	0.21	0.12	0.25	0.26	0.28	0.24	0.26	0.25	0.25	0.24	0.24	0.23	0.22	0.17	***
	Ogasawara	FP	0.13	0.13	0.12	0.13	0.12	0.18	0.11	0.12	0.10	0.12	0.13	0.15	0.11	0.11	0.10
	Tokyo	FP	0.18	0.17	0.12	0.16	0.16	0.16	0.13	0.13	0.14	0.14	0.12	0.12	0.11	0.13	0.12
	Niigata-maki	FP											0.08	0.09	0.08	0.11	0.10
	Tsushima	FP											0.10	0.11	0.09	0.10	0.09
Lao PDR	Vientiane	FP						0.36	0.36	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.27	0.34	0.27	0.37	0.45	0.41	0.24	0.28	0.42	***	0.35	0.33	0.33	0.34	0.28
	Tanah Rata	FP	0.08	0.12	0.11	0.13	0.18	0.22	0.12	0.08	<0.01	***	0.13	0.10	0.10	0.13	0.12
	Danum Valley	FP	0.29	0.16	0.06	0.14	0.20	0.21	0.17	0.15	0.16	***	0.14	0.12	0.11	0.14	0.14
Mongolia	Ulaanbaatar	FP	0.22	0.29	***	***	***	***	0.08	0.15	0.06	0.05	0.06				
	Khan-Uul	FP											0.06	0.04	***	***	0.16
	Terelj	FP	0.04	0.08	***	***	***	***	0.03	0.03	0.02	0.01	0.01	0.01	***	***	0.02
Myanmar	Yangon	FP		1.24	0.76	0.24	0.55	0.94	0.40	0.47	0.40	1.40	0.67	1.05	0.34	0.39	0.29
Philippines	Manila Observatory	FP	0.22	***	***	***	***	***	***	***	***	0.63	1.25	0.22	0.72	0.29	0.14
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	0.41	0.70	0.23
	Mt. Sto. Tomas	FP	0.15	***	0.01	0.01	0.07	0.06	0.10	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP with PM _{2.5} cyclone	0.20	***	***	0.29	0.29	0.21	0.20	0.17	0.09	0.17	0.14	0.17	0.13	0.12	0.04
	Jeju	FP with PM _{2.5} cyclone	0.12	***	***	0.15	0.25	0.11	0.15	0.10	0.07	0.09	0.06	0.03	0.03	0.03	0.19
	Imsil	FP with PM _{2.5} cyclone	0.25	***	***	0.16	0.16	0.13	0.15	0.15	0.13	0.14	0.08	0.04	0.08	0.06	0.04
Russia	Mondy	FP	0.04	0.02	0.08	0.08	0.01	0.03	0.03	0.08	0.04	0.05	0.04	0.04	0.03	<0.01	
	Listvyanka	FP	0.07	0.06	0.28	0.06	0.05	0.05	0.07	0.28	0.05	0.04	0.06	0.02	0.06	0.01	0.05
	Irkutsk	FP	0.13	0.25	0.32	0.15	0.16	0.09	0.15	0.53	0.16	0.11	0.28	0.14	0.23	0.17	0.12
	Primorskaya	FP	0.44	0.27	0.30	0.40	0.20	0.23	0.19	0.14	0.06	0.05	0.09	0.05	0.09	0.06	0.01
Thailand	Bangkok	FP	0.39	0.41	0.37	0.47	0.85	0.49	0.87	0.21	0.47	0.41	0.43	***	0.43	0.27	***
	Pathumthani	FP	0.47	0.24	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.06	0.13	0.06	0.19	0.43	0.27	1.78	6.90	0.35	0.44	***	***	***	***	***
	Mae Hia	FP	0.42	0.27	0.21	0.17	0.05	0.07	0.26	0.19	0.23	0.21					
	Sakaerat	FP	0.18	0.64	0.51	0.16	0.33	0.30	0.25	0.22	0.64	0.54					
Vietnam	Hanoi	FP	1.15	0.85	1.36	2.34	0.64	0.98	1.09	0.96	0.55	0.40	0.43	0.21	0.53	0.25	0.35
	Hoa Binh	FP	0.65	0.32	0.56	1.30	0.83	0.70	0.90	0.31	0.35	0.14	0.15	0.16	0.17	0.19	0.23
	Can Tho	FP					0.89	0.19	0.30	0.29	0.24	0.23	0.23	0.22	0.27	0.26	0.30
	Ho Chi Minh	FP					0.53	0.34	0.58	0.66	0.97	1.04	1.10	0.81	0.85	0.86	0.61
	Yen Bai	FP						1.11	0.94	0.91	0.85	0.27	0.31	0.44	0.31	0.19	0.71

Terms and abbreviations are given in Table 4.2.

Table 4.37 Annual Mg²⁺ in PM concentration from 2010 to 2024

unit: $\mu\text{g}/\text{m}^3$																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	0.12	0.14	0.11	0.14	0.13	0.17	0.12	0.16	***	***	***	***	***	***	***
China	Hongwen	FP	0.48	0.31	***	***	***	***	0.25	0.30							
Indonesia	Jakarta	FP					0.34	0.16	0.09	0.07	0.18	0.20	0.12	0.20	0.16	***	***
	Serpong	FP	0.02	0.05	0.09	0.08	0.09	0.07	0.06	0.05	0.11	0.15	0.09	0.14	0.07	***	***
	Bandung	FP					0.14	0.21	0.17	0.15	0.17	0.19	0.12	0.13	0.11	***	***
Japan	Rishiri	FP	0.26	0.22	0.19	0.19	0.25	0.29	0.19	0.23	0.26	0.43	0.23	0.24	0.26	0.24	0.21
	Ochiishi	FP	0.34	0.30	0.25	0.35	0.33	0.34	0.28	0.30	0.31	0.30	0.24	0.49	0.55	0.34	0.33
	Tappi	FP	0.48	0.46	0.60	0.49	1.11	0.90	0.43	0.44	0.42						
	Sado-seki	FP	0.32	0.30	0.29	0.31	0.29	0.38	0.32	0.32	0.48	0.33	0.30	***	0.29	0.32	0.29
	Happo	FP	<0.01	0.01	0.02	0.03	0.03	0.02	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.03	0.02
	Ijira	FP	0.04	0.04	0.02	0.02	0.04	0.03	0.03	0.03	0.04	0.04	0.03	0.04	0.03	0.04	0.03
	Oki	FP	0.44	0.36	0.39	0.46	0.44	0.40	0.47	0.79	0.44	0.38	0.44	0.45	0.50	0.37	0.38
	Banryu	FP	0.20	0.21	0.17	0.22	0.22	0.20	0.14	0.28	0.19						
	Yusuhara	FP	0.08	0.07	0.06	0.08	0.06	0.05	0.05	0.04	0.05	0.05	0.05	0.06	0.05	0.05	0.04
	Hedo	FP	0.44	0.29	0.53	0.63	0.67	0.55	0.65	0.65	0.69	0.63	0.63	0.60	0.57	0.41	***
	Ogasawara	FP	0.30	0.32	0.31	0.33	0.31	0.36	0.31	0.31	0.29	0.33	0.34	0.40	0.29	0.30	0.28
	Tokyo	FP	0.12	0.13	0.11	0.14	0.13	0.13	0.12	0.12	0.13	0.14	0.11	0.12	0.12	0.13	0.12
	Niigata-maki	FP											0.13	0.16	0.15	0.19	0.23
	Tsushima	FP											0.13	0.14	0.11	0.11	0.10
Lao PDR	Vientiane	FP						0.05	0.05	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.05	0.04	0.03	0.07	0.08	0.08	0.04	0.04	0.06	***	0.06	0.03	0.04	0.05	0.04
	Tanah Rata	FP	0.02	0.02	0.02	0.03	0.04	0.04	0.02	<0.01	<0.01	***	0.02	0.02	0.02	0.02	0.02
	Danum Valley	FP	0.10	0.02	<0.01	0.01	0.04	0.05	0.03	0.02	0.03	***	0.03	0.02	0.02	0.02	0.02
Mongolia	Ulaanbaatar	FP	0.18	0.38	***	***	***	***	0.04	0.05	0.04	0.02	<0.01				
	Khan-Uul	FP											<0.01	0.02	***	***	0.11
	Terelj	FP	0.04	0.05	***	***	***	***	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	***	***	<0.01
Myanmar	Yangon	FP		0.18	0.13	0.04	0.09	0.15	0.20	0.04	0.06	0.05	1.12	0.08	0.04	0.03	0.05
Philippines	Manila Observatory	FP	0.10	***	***	***	***	***	***	***	***	0.10	0.13	0.19	<0.01	0.08	0.08
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	0.05	0.09	0.14
	Mt. Sto. Tomas	FP	0.06	***	0.03	0.04	0.03	0.04	0.04	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP with PM _{2.5} cyclone	0.04	***	***	0.08	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.02	0.02	0.02
	Jeju	FP with PM _{2.5} cyclone	0.04	***	***	0.04	0.04	0.03	0.07	0.03	0.03	<0.01	0.01	0.02	0.03	0.02	0.02
	Imsil	FP with PM _{2.5} cyclone	0.05	***	***	0.03	0.03	0.03	0.08	0.03	0.02	<0.01	<0.01	<0.01	0.01	0.01	0.01
Russia	Mondy	FP	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	
	Listvyanka	FP	0.02	0.02	0.01	<0.01	<0.01	<0.01	0.04	0.02	0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01
	Irkutsk	FP	0.08	0.09	0.06	0.04	0.05	0.04	0.06	0.04	0.26	0.02	0.02	0.02	0.05	0.05	0.05
	Primorskaya	FP	0.08	0.07	0.06	0.08	0.20	0.05	0.07	0.01	<0.01	<0.01	0.02	<0.01	0.01	0.02	<0.01
Thailand	Bangkok	FP	0.14	0.09	0.07	0.11	0.20	0.13	0.12	0.07	0.13	0.10	0.07	***	0.03	0.15	***
	Pathumthani	FP	0.05	0.04	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	<0.01	0.03	0.03	0.03	0.06	0.05	0.41	0.03	0.05	0.12	***	***	***	***	***
	Mae Hia	FP	0.04	0.02	0.03	0.03	0.01	0.02	0.04	0.04	0.08	0.05					
	Sakaerat	FP	0.02	0.01	0.01	<0.01	0.02	0.03	0.22	0.05	0.29	0.36					
Vietnam	Hanoi	FP	0.48	0.35	0.41	0.46	0.41	0.57	0.50	0.38	0.26	0.17	0.24	0.16	0.36	0.18	0.11
	Hoa Binh	FP	0.11	0.08	0.14	0.28	0.19	0.21	0.25	0.14	0.22	0.07	0.08	0.09	0.08	0.12	0.06
	Can Tho	FP					0.15	0.20	0.22	0.40	0.37	0.42	0.42	0.37	0.36	0.42	0.40
	Ho Chi Minh	FP					0.23	0.46	0.72	0.44	0.68	0.58	0.68	0.88	0.69	0.54	0.43
	Yen Bai	FP						0.19	2.26	0.13	0.22	0.18	0.18	0.20	0.19	0.14	0.05

Terms and abbreviations are given in Table 4.2.

Table 4.38 Annual Ca²⁺ in PM concentration from 2010 to 2024

unit: µg/m ³																	
Country	Site	Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cambodia	Phnom Penh	FP	0.87	0.82	0.76	0.87	0.71	1.32	1.07	1.17	***	***	***	***	***	***	***
China	Hongwen	FP	9.44	1.59	***	***	***	***	1.56	1.80							
Indonesia	Jakarta	FP					3.18	1.14	0.83	0.59	1.13		0.61	0.66	0.66	***	***
	Serpong	FP	0.09	0.18	0.59	0.51	0.54	0.68	0.43	0.41	0.94	0.86	0.44	0.52	0.39	***	***
	Bandung	FP					1.32	1.61	1.28	1.09	1.51	1.53	0.89	1.38	1.72	***	***
Japan	Rishiri	FP	0.18	0.13	0.13	0.14	0.13	0.18	0.12	0.15	0.16	0.27	0.13	0.15	0.14	0.18	0.13
	Ochiishi	FP	0.14	0.14	0.10	0.17	0.24	0.14	0.12	0.15	0.15	0.13	0.10	0.19	0.20	0.16	0.13
	Tappi	FP	0.36	0.29	0.27	0.26	0.45	0.41	0.24	0.24	0.21						
	Sado-seki	FP	0.24	0.25	0.19	0.25	0.25	0.31	0.23	0.22	0.30	0.21	0.19	***	0.16	0.28	0.21
	Happo	FP	0.05	0.04	0.11	0.19	0.18	0.13	0.10	0.07	0.12	0.05	0.10	0.08	0.09	0.16	0.12
	Ijira	FP	0.15	0.17	0.08	0.09	0.13	0.11	0.12	0.11	0.13	0.12	0.07	0.12	0.09	0.14	0.10
	Oki	FP	0.47	0.38	0.25	0.30	0.30	0.28	0.35	0.45	0.32	0.27	0.27	0.32	0.29	0.33	0.21
	Banryu	FP	0.44	0.26	0.20	0.25	0.21	0.21	0.23	0.26	0.23						
	Yusuhara	FP	0.33	0.21	0.15	0.26	0.19	0.12	0.12	0.12	0.16	0.11	0.12	0.19	0.12	0.16	0.07
	Hedo	FP	0.48	0.18	0.32	0.42	0.41	0.40	0.38	0.38	0.43	0.38	0.38	0.35	0.30	0.30	***
	Ogasawara	FP	0.23	0.17	0.15	0.16	0.14	0.29	0.14	0.15	0.14	0.16	0.18	0.21	0.15	0.18	0.15
	Tokyo	FP	0.59	0.49	0.36	0.52	0.49	0.45	0.40	0.43	0.46	0.46	0.39	0.41	0.38	0.45	0.37
	Niigata-maki	FP											0.12	0.18	0.12	0.23	0.16
	Tsushima	FP											0.19	0.32	0.21	0.27	0.15
Lao PDR	Vientiane	FP						0.22	0.22	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.46	0.37	0.38	0.47	0.81	0.81	0.44	0.35	0.55	***	0.36	0.20	0.26	0.22	0.12
	Tanah Rata	FP	0.07	0.07	0.09	0.28	0.42	0.18	0.12	0.05	<0.01	***	0.06	0.09	0.08	0.08	0.06
	Danum Valley	FP	0.07	0.02	0.02	0.04	0.07	0.04	0.03	0.02	0.04	***	0.02	0.01	0.01	0.02	0.02
Mongolia	Ulaanbaatar	FP	1.45	3.35	***	***	***	***	0.55	0.74	0.83	0.54	0.42				
	Khan-Uul	FP											0.58	0.79	***	***	1.35
	Terelj	FP	0.16	0.32	***	***	***	***	0.40	0.06	0.08	0.06	0.05	0.11	***	***	0.08
Myanmar	Yangon	FP		1.82	1.03	0.29	0.51	3.11	1.69	0.40	0.24	0.27	0.54	0.34	0.39	0.14	0.18
Philippines	Manila Observatory	FP	0.66	***	***	***	***	***	***	***	***	0.71	1.08	1.39	0.52	1.11	0.54
	Los Baños	FP	***	***	***	***	***	***	***	***	***	***	***	***	0.14	2.19	0.26
	Mt. Sto. Tomas	FP	0.50	***	0.35	0.29	0.39	0.48	0.18	***	***	***	***	***	***	***	***
Republic of Korea	Ganghwa	FP with PM _{2.5} cyclone	0.07	***	***	0.14	0.11	0.02	0.03	0.05	0.03	0.02	0.04	0.06	0.03	0.05	0.03
	Jeju	FP with PM _{2.5} cyclone	0.07	***	***	0.09	0.10	0.08	0.12	0.05	0.08	0.07	0.03	0.04	0.02	0.03	0.03
	Imsil	FP with PM _{2.5} cyclone	0.09	***	***	0.08	0.07	0.09	0.14	0.08	0.08	0.06	0.02	0.02	0.03	0.04	0.03
Russia	Mondy	FP	0.04	0.04	0.05	<0.01	<0.01	0.03	0.08	0.06	0.05	0.01	0.01	<0.01	0.20	<0.01	
	Listvyanka	FP	0.12	0.10	0.14	0.06	0.08	0.15	0.21	0.07	0.10	0.05	0.04	0.03	0.08	0.07	0.13
	Irkutsk	FP	0.59	0.35	0.49	0.36	0.42	0.44	0.38	0.23	0.27	0.17	0.13	0.16	0.33	0.38	0.46
	Primorskaya	FP	0.41	0.28	0.41	0.35	0.35	0.44	0.34	0.09	0.05	0.06	0.17	0.05	0.11	0.15	0.03
Thailand	Bangkok	FP	0.94	1.03	0.74	1.29	2.09	0.97	1.01	0.49	1.29	1.09	0.73	***	0.27	0.57	***
	Pathumthani	FP	0.98	0.50	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.04	0.12	0.28	0.12	0.23	0.14	1.65	0.07	0.16	0.39	***	***	***	***	***
	Mae Hia	FP	0.53	0.22	0.47	0.46	0.12	0.15	0.42	0.27	0.18	0.30					
	Sakaerat	FP	0.09	0.16	0.14	0.11	0.16	0.22	0.31	0.22	1.36	0.93					
Vietnam	Hanoi	FP	7.75	8.67	4.07	6.23	4.11	5.99	4.76	3.01	1.92	2.99	4.38	3.68	5.57	2.75	2.42
	Hoa Binh	FP	1.24	1.62	1.50	3.12	1.62	1.84	2.04	0.94	1.36	1.50	2.15	1.84	2.03	2.71	0.35
	Can Tho	FP					1.52	1.53	1.74	1.36	1.41	2.00	1.70	1.39	1.83	1.82	1.91
	Ho Chi Minh	FP					1.18	1.05	1.78	2.88	2.63	2.71	2.85	2.28	2.41	2.57	3.78
	Yen Bai	FP						4.08	0.17	2.42	2.63	2.26	3.12	3.02	3.10	2.64	1.17

Terms and abbreviations are given in Table 4.2.

Table 4.39 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}**Site: Rishiri****Country: Japan**

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	0.10	0.03	0.15	0.01	0.06	0.03	1.54	0.07	1.65	0.03	0.18	0.05
Feb	0.06	0.03	0.13	0.01	0.05	0.03	0.79	0.06	0.84	0.01	0.09	0.02
Mar	0.04	0.03	0.13	0.04	0.06	0.03	0.94	0.08	1.00	0.02	0.11	0.03
Apr	0.04	0.02	0.16	0.06	0.05	0.03	0.48	0.06	0.52	0.01	0.06	0.01
May	0.01	0.02	0.20	0.06	0.05	0.03	0.78	0.06	0.83	0.01	0.09	0.02
June	0.03	0.02	0.21	0.07	0.04	0.02	0.60	0.05	0.64	0.01	0.07	0.02
July	0.03	0.02	0.20	0.06	0.04	0.02	0.50	0.05	0.54	0.01	0.06	0.01
Aug	0.03	0.02	0.20	0.07	0.04	0.02	0.58	0.06	0.61	0.01	0.07	0.02
Sept	0.00	0.02	0.17	0.07	0.05	0.03	0.58	0.07	0.62	0.01	0.07	0.02
Oct	0.05	0.03	0.12	0.04	0.05	0.03	0.77	0.07	0.82	0.01	0.09	0.02
Nov	0.03	0.03	0.17	0.04	0.05	0.03	0.93	0.06	0.99	0.02	0.11	0.03
Dec	0.06	0.03	0.11	0.03	0.05	0.02	1.06	0.05	1.13	0.02	0.12	0.03
Annual	0.49	0.29	1.96	0.56	0.59	0.32	9.56	0.73	10.20	0.18	1.12	0.28

Table 4.40 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}**Site: Ochiishi****Country: Japan**

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	0.10	0.06	0.08	***	0.03	0.03	1.39	0.05	1.25	0.03	0.13	0.03
Feb	0.09	0.07	0.08	***	0.08	0.09	2.18	0.15	1.96	0.07	0.23	0.06
Mar	0.06	0.07	0.11	***	0.07	0.07	3.30	0.12	2.91	0.07	0.34	0.09
Apr	0.06	0.04	0.49	***	0.02	0.04	0.67	0.04	0.63	0.01	0.07	0.03
May	0.07	0.07	0.67	***	0.07	0.13	1.85	0.08	1.90	0.04	0.21	0.05
June	0.10	0.10	0.73	***	0.05	0.07	0.59	0.06	0.69	0.01	0.08	0.02
July	0.10	0.24	0.74	***	0.06	0.05	0.26	0.06	0.42	0.01	0.04	0.01
Aug	0.03	0.04	--	***	0.03	0.04	0.92	0.02	0.92	0.02	0.10	0.02
Sept	0.06	0.06	0.13	***	0.03	0.07	1.47	0.03	1.43	0.03	0.16	0.03
Oct	0.05	0.32	0.34	***	0.01	0.02	2.38	0.01	2.05	0.04	0.23	0.05
Nov	0.03	0.11	0.33	***	0.03	0.04	1.73	0.07	1.52	0.04	0.17	0.04
Dec	0.12	0.05	0.13	***	0.03	0.02	0.59	0.06	0.54	0.01	0.06	0.02
Annual	0.86	1.22	3.84	***	0.52	0.67	17.32	0.75	16.21	0.40	1.82	0.44

Table 4.41 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}**Site: Sado-seki^{*3}****Country: Japan**

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	0.34	0.18	0.40	0.01	0.34	0.47	51.59	0.48	47.17	1.14	5.32	1.25
Feb	0.10	0.19	0.52	0.01	0.29	0.30	24.98	0.30	23.69	0.72	2.77	0.87
Mar	0.11	0.32	0.94	0.09	0.52	0.75	45.87	0.73	42.86	1.22	5.03	2.39
Apr	***	0.35	1.08	***	0.30	0.51	7.83	0.21	9.17	0.42	1.21	2.00
May	***	0.47	1.24	***	0.21	0.31	8.07	0.17	9.71	0.35	1.09	0.77
June	***	0.70	1.78	***	0.28	0.22	2.56	0.27	4.53	0.17	0.54	0.35
July	***	0.46	1.86	***	0.33	0.41	9.80	0.23	14.39	0.49	1.63	0.49
Aug	***	0.21	1.42	***	0.23	0.27	3.75	0.20	5.44	0.16	0.60	0.16
Sept	***	0.23	1.19	***	0.11	0.15	3.14	0.10	3.98	0.14	0.42	0.12
Oct	***	0.17	0.64	***	0.16	0.27	12.53	0.14	13.20	0.39	1.49	0.43
Nov	***	0.19	0.48	***	0.23	0.33	44.88	0.24	41.80	1.16	4.80	1.29
Dec	***	0.10	0.36	***	0.33	0.40	94.64	0.40	82.99	1.96	9.41	2.17
Annual	0.56	3.57	11.90	0.11	3.32	4.39	309.64	3.46	298.94	8.32	34.32	12.29

1 NO₂ = NOx - NO

Table 4.42 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}

Site: Happo

Country: Japan

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	***	0.21	0.04	***	0.09	0.04	0.15	0.10	0.50	0.04	0.05	0.09
Feb	***	0.20	0.06	***	0.07	0.03	0.05	0.09	0.17	0.04	0.04	0.11
Mar	***	0.45	0.36	***	0.43	0.68	0.94	0.61	2.03	0.23	0.51	2.22
Apr	***	0.46	0.57	***	0.19	0.30	0.16	0.20	0.57	0.12	0.19	1.05
May	***	0.45	0.43	***	0.09	0.04	0.01	0.09	0.22	0.05	0.06	0.20
June	***	0.98	0.70	***	0.18	0.05	0.01	0.25	0.17	0.07	0.06	0.28
July	***	0.80	0.58	***	0.11	0.01	0.01	0.14	0.16	0.04	0.03	0.08
Aug	***	0.51	0.24	***	0.16	0.00	0.00	0.22	0.11	0.03	0.02	0.02
Sept	***	0.33	0.22	***	0.08	0.00	0.01	0.10	0.07	0.01	0.02	0.01
Oct	***	0.23	0.17	***	0.07	0.01	0.01	0.08	0.25	0.03	0.03	0.03
Nov	***	0.21	0.12	***	0.05	0.01	0.01	0.05	0.34	0.03	0.04	0.05
Dec	***	0.26	0.04	***	0.08	0.03	0.05	0.06	0.80	0.06	0.10	0.14
Annual	***	5.10	3.52	***	1.60	1.19	1.40	1.99	5.39	0.74	1.17	4.29

Table 4.43 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}

Site: Ijira^{*3}

Country: Japan

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	***	0.02	0.04	***	0.01	0.01	0.04	0.02	0.08	0.01	0.01	0.01
Feb	***	0.02	0.06	***	0.02	0.01	0.04	0.03	0.09	0.01	0.01	0.02
Mar	***	0.11	0.13	***	0.05	0.05	0.15	0.08	0.39	0.05	0.06	0.12
Apr	***	0.17	0.25	***	0.05	0.07	0.06	0.06	0.39	0.05	0.07	0.22
May	***	0.20	0.22	***	0.05	0.04	0.04	0.07	0.34	0.06	0.04	0.06
June	***	0.22	0.35	***	0.04	0.02	0.01	0.06	0.15	0.04	0.02	0.04
July	***	0.11	0.36	***	0.03	0.00	0.00	0.04	0.07	0.03	0.01	0.02
Aug	***	0.27	0.39	***	0.06	0.01	0.01	0.08	0.15	0.03	0.02	0.04
Sept	***	0.09	0.26	***	0.02	0.01	0.02	0.03	0.10	0.03	0.01	0.01
Oct	***	0.04	0.08	***	0.02	0.01	0.02	0.02	0.10	0.02	0.01	0.01
Nov	***	0.02	0.04	***	0.02	0.01	0.04	0.03	0.10	0.02	0.01	0.02
Dec	***	0.01	0.03	***	0.01	0.01	0.03	0.01	0.05	0.01	0.00	0.01
Annual	***	1.27	2.20	***	0.36	0.23	0.45	0.52	2.02	0.35	0.28	0.57

Table 4.44 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}

Site: Oki^{*3}

Country: Japan

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	***	0.16	0.31	***	0.32	0.77	44.31	0.57	41.93	1.00	4.69	1.18
Feb	***	0.15	0.30	***	0.35	0.47	32.35	0.45	31.40	1.06	3.58	1.13
Mar	***	0.43	0.86	***	0.59	1.27	49.56	0.84	48.57	1.45	5.70	3.08
Apr	***	0.22	0.51	***	0.14	0.25	4.12	0.15	4.96	0.18	0.59	0.55
May	***	0.38	0.49	***	0.32	0.50	13.76	0.36	15.64	0.46	1.74	0.74
June	***	0.68	1.16	***	0.49	0.45	4.32	0.50	8.73	0.36	1.02	0.57
July	***	0.31	0.77	***	0.49	0.66	17.32	0.40	21.01	0.57	2.31	0.55
Aug	***	0.43	0.80	***	0.40	0.34	4.49	0.41	7.11	0.20	0.77	0.22
Sept	***	0.16	0.52	***	0.16	0.21	7.39	0.14	8.43	0.24	0.90	0.20
Oct	***	0.09	0.39	***	0.21	0.34	18.83	0.21	19.56	0.56	2.17	0.53
Nov	***	0.14	0.23	***	0.24	0.49	33.29	0.35	31.57	0.90	3.56	0.90
Dec	***	0.14	0.22	***	0.19	0.65	52.66	0.42	47.34	1.13	5.38	1.39
Annual	***	3.30	6.56	***	3.89	6.37	282.40	4.81	286.24	8.13	32.42	11.05

1 NO₂ = NOx - NO

Table 4.45 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}

Site: Yusuhara

Country: Japan

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	***	0.01	0.01	***	0.20	0.26	0.46	0.42	1.21	0.10	0.14	0.14
Feb	***	0.01	0.01	***	0.16	0.12	0.10	0.27	0.65	0.12	0.10	0.10
Mar	***	0.01	0.03	***	0.24	0.27	0.49	0.35	1.36	0.15	0.25	0.54
Apr	***	0.00	0.01	***	0.05	0.03	0.05	0.06	0.28	0.03	0.05	0.12
May	***	0.02	0.04	***	0.13	0.06	0.02	0.15	0.70	0.06	0.09	0.14
June	***	0.01	0.03	***	0.13	0.01	0.02	0.15	0.33	0.04	0.04	0.05
July	***	0.01	0.03	***	0.16	0.01	0.00	0.19	0.51	0.03	0.05	0.04
Aug	***	0.01	0.04	***	0.14	0.01	0.02	0.17	0.43	0.03	0.05	0.04
Sept	***	0.00	0.02	***	0.05	0.02	0.23	0.06	0.46	0.02	0.04	0.02
Oct	***	0.00	0.02	***	0.07	0.04	0.25	0.06	0.70	0.04	0.06	0.03
Nov	***	0.01	0.02	***	0.13	0.08	0.40	0.18	1.01	0.07	0.11	0.08
Dec	***	0.00	0.01	***	0.16	0.24	0.50	0.31	1.25	0.10	0.14	0.14
Annual	***	0.11	0.29	***	1.63	1.14	2.54	2.35	8.88	0.80	1.11	1.42

Table 4.46 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}

Site: Hedo^{*3}

Country: Japan

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.47 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}

Site: Ogasawara

Country: Japan

	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
2024												
Jan	***	0.00	0.00	***	0.00	0.00	0.05	0.00	0.04	0.00	0.00	0.00
Feb	***	0.00	0.00	***	0.01	0.00	0.26	0.00	0.16	0.01	0.02	0.01
Mar	***	0.00	0.01	***	0.01	0.01	0.21	0.00	0.13	0.01	0.02	0.01
Apr	***	0.00	0.01	***	0.01	0.01	0.19	0.00	0.12	0.01	0.01	0.01
May	***	0.00	0.01	***	0.01	0.01	0.17	0.00	0.12	0.01	0.01	0.01
June	***	0.00	0.01	***	0.01	0.00	0.10	0.00	0.07	0.00	0.01	0.00
July	***	0.00	0.01	***	0.01	0.00	0.04	0.00	0.03	0.00	0.00	0.00
Aug	***	0.00	0.01	***	0.02	0.00	0.15	0.00	0.13	0.01	0.02	0.01
Sept	***	0.00	0.01	***	0.00	0.00	0.22	0.00	0.13	0.01	0.02	0.01
Oct	***	0.00	0.01	***	0.01	0.00	0.21	0.00	0.12	0.00	0.01	0.01
Nov	***	0.00	0.01	***	0.01	0.00	0.17	0.00	0.11	0.00	0.01	0.01
Dec	***	0.00	0.00	***	0.01	0.00	0.11	0.00	0.08	0.00	0.01	0.00
Annual	***	0.01	0.09	***	0.11	0.04	1.88	0.01	1.22	0.05	0.15	0.08

1 NO₂ = NOx- NO

Table 4.48 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}**Site: Niigata-maki****Country: Japan**

2024	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	***	0.10	0.43	***	0.04	0.05	0.30	0.07	0.30	0.01	0.03	0.01
Feb	***	0.11	0.54	***	0.04	0.04	0.18	0.06	0.18	0.01	0.02	0.01
Mar	***	0.08	0.52	***	0.06	0.08	0.35	0.10	0.34	0.01	0.04	0.03
Apr	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	0.30	1.48	***	0.13	0.17	0.83	0.24	0.81	0.03	0.10	0.04

Table 4.49 Monthly and annual dry deposition amounts of gaseous and particulate substances^{*2}**Site: Tsushima^{*3}****Country: Japan**

2024	Gases				Particulate matter components							
	SO ₂	HNO ₃	NH ₃	NO ₂ ^{*1}	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺
	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	***	0.15	0.11	***	0.07	0.16	0.07	0.22	0.12	0.01	0.01	0.01
Feb	***	0.14	0.17	***	0.06	0.10	0.08	0.17	0.10	0.01	0.01	0.01
Mar	***	0.20	0.52	***	0.10	0.19	0.11	0.21	0.15	0.01	0.02	0.05
Apr	***	0.21	0.72	***	0.06	0.11	0.04	0.03	0.14	0.01	0.02	0.05
May	***	0.21	0.53	***	0.10	0.13	0.07	0.12	0.21	0.01	0.02	0.02
June	***	0.50	0.76	***	0.16	0.03	0.01	0.21	0.08	0.01	0.01	0.01
July	***	0.25	1.13	***	0.05	0.03	0.03	0.06	0.07	0.01	0.01	0.00
Aug	***	0.30	0.73	***	0.19	0.09	0.05	0.21	0.23	0.01	0.02	0.01
Sept	***	0.01	0.23	***	0.06	0.03	0.02	0.06	0.09	0.00	0.01	0.00
Oct	***	0.08	0.18	***	0.06	0.07	0.17	0.06	0.24	0.01	0.02	0.01
Nov	***	0.11	0.14	***	0.06	0.10	0.12	0.09	0.19	0.01	0.02	0.01
Dec	***	0.19	0.06	***	0.05	0.12	0.05	0.13	0.10	0.01	0.01	0.01
Annual	***	2.36	5.29	***	1.03	1.16	0.81	1.57	1.73	0.10	0.20	0.20

1 NO₂ = NOx - NO

*2 The cloud cover needed to calculate their deposition velocity for dry deposition was obtained from "Grid Point Value (GPV) data of numerical weather prediction (Meso-Scale Model (MSM))", Japan Meteorological Agency, which were collected and distributed by Research Institute for Sustainable Humansphere, Kyoto University.
(<http://database.rish.kyoto-u.ac.jp/index-e.html>)

*3 Since some necessary meteorological data for dry deposition calculation were not available at Sado-seki, Ijira, Oki, Hedo, and Tsushima sites, corresponding data were obtained from neighbouring monitoring sites of Japan Meteorological Agency. Their Names and locations of the sites are as follows:

Sado-seki: Aikawa- latitude:38°01'42"N, Longitude: 138.14°24"E, Alltitude: 5.5 m (for wind speed.)
Niigata- latitude:37°53'36"N, Longitude: 139.01°06"E, Alltitude: 4.1 m (for solar radiation.)
Happo : Nagano-latitude:36°39'42"N, Longitude: 138.11°30"E, Alltitude: 418.2 m (for relative humidity.)
Ijira: Gifu- latitude:35°24'30"N, Longitude: 136.45°42"E, Alltitude: 12.7 m (for relative humidity.)
Oki: Saigo- latitude:36°12'12"N, Longitude: 133.20°00"E, Alltitude: 26.5 m
(for temperature, relative humidity, wind speed and precipitation.)
Matsue- latitude:35°27'24"N, Longitude: 133.03°54"E, Alltitude: 16.9 m (for solar radiation.)
Hedo: Oku- latitude:26°50'06"N, Longitude: 128.16°18"E, Alltitude: 232 m
(for temperature, wind speed and precipitation.)
Nago- latitude:26°35'36"N, Longitude: 127.57°54"E, Alltitude: 6.2 m (for relative humidity.)
Naha- latitude:26°12'24"N, Longitude: 127.41°12"E, Alltitude: 28.1 m (for solar radiation.)
Ogasawara: Chichijima- latitude:27°05.30"N, Longitude: 142.11°24"E, Alltitude: 2.7 m
(for relative humidity from July.)
Tsushima: Izuhara- latitude:34°11'48"N, Longitude: 129.17°30"E, Alltitude: 4.6 m
(for temperature and relative humidity.)
Fuluoka- latitude:33°34'54"N, Longitude: 130.22°30"E, Alltitude: 2.5 m (for solar radiation.)

Table 4.50 Conversion ratios from ppb to $\mu\text{g}/\text{m}^3$ (20°C, 1 atm)

Species	SO ₂	HNO ₃	HCl	NH ₃	NO	NO ₂	O ₃
Ratio	x 2.66	x 2.62	x 1.52	x 0.71	x 1.25	x 1.91	x 2.00

Table 4.51 Reporting limits for summarizing air concentration data

Species	Reporting limit
SO ₂	0.1 ppb
HNO ₃	0.1 ppb
HCl	0.1 ppb
NH ₃	0.1 ppb
NO, NO ₂ , NO _x	0.1 ppb
O ₃	1 ppb
PM	1 $\mu\text{g}/\text{m}^3$
Particulate matter components	0.01 $\mu\text{g}/\text{m}^3$

CHAPTER 5

Soil and Vegetation Monitoring

5. Soil and Vegetation Monitoring

5.1 Method

The basic survey was primarily carried out to achieve the initial objectives (namely, establishment of baseline data and early detection of possible impacts) in the participating countries, in accordance with the *Technical Documents for Soil and Vegetation Monitoring in East Asia (2000)*. General items are described in Table 5.1, but the actual implementation of item sets depended on respective site.

Table 5.1 Basic survey for soil and forest

Item	Parameters
Soil	- pH(H₂O), pH(KCl), Exchangeable base cations (Na⁺, K⁺, Ca²⁺, and Mg²⁺), Exchangeable acidity, Effective cation exchange capacity (ECEC), Carbonate content (if pH > 7) - Exchangeable Al and H, Total C content, Total N content (optional) - Available P, Sulfate (voluntary) - Physical properties (Fine earth bulk density, and Penetration resistance) (optional)
Forest	- General description of the forest (Description of trees, and Understory vegetation) - Observation of tree decline - Photographic record of tree decline, Estimation of decline causes (optional)

5.1.1 Field Operation

Basically, two forest areas with soils of different sensitivities to acid deposition are recommended to be selected in an area. Several plots (at least two) ranging from 5 m x 5 m to 10 m x 10 m should be chosen randomly in each forest area (each soil type). Five subplots, each measuring 1 m x 1 m, should be set up for soil sampling at the center and along the diagonal lines of the plot (Figure 5.1).

Three coaxial circular plots are established for the general description of trees, with areas of 1000, 400 and 200 square meters respectively (Figure 5.2). Observation of tree decline is carried out primarily for twenty selected dominant trees in four directions. The Sub-Manual on Forest Vegetation Monitoring, which was endorsed in 2006, recommends that the observation should be done at least once a year to detect possible effects of meteorological events. Decline symptoms of the observed trees were recorded according to the decline scale shown in Table 5.2.

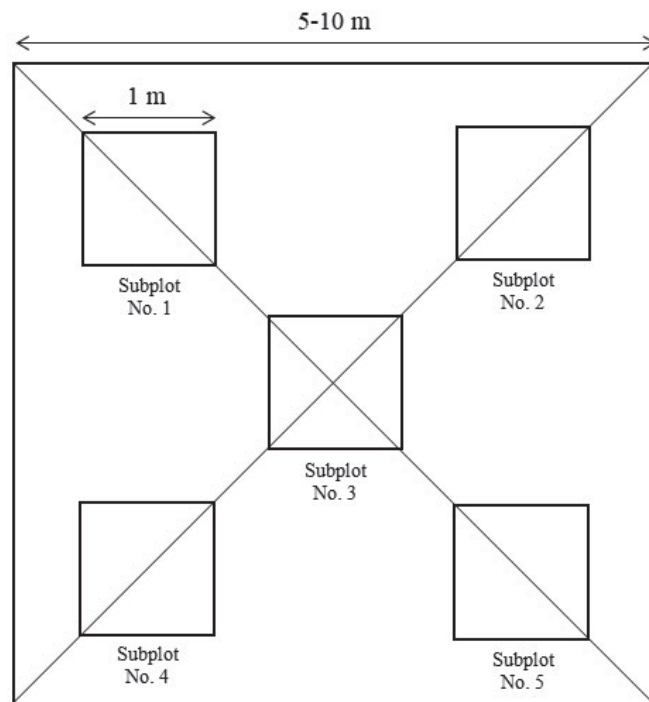


Figure 5.1 Plot for soil sampling

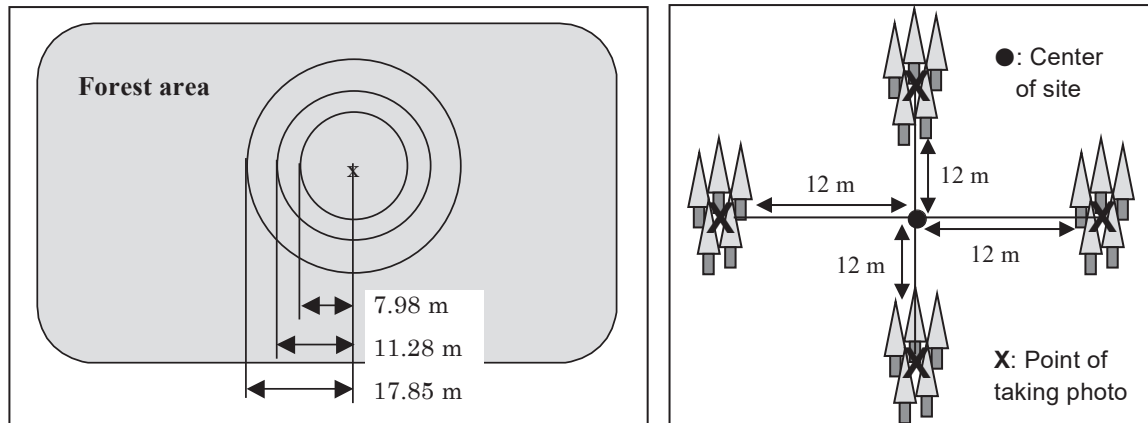


Figure 5.2 Plots for description of trees (Left) and selection of observation trees (Right)

Table 5.2 Observation items and decline scale

Items	Decline scale and observations
Vitality of tree	0. No damage, 1. Slightly damaged, 2. Evidently damaged, 3. Severely damaged, 4. Dead
Form of tree	0. Normal, 1. Some branches lacking, 2. Evidently wanting, 3. Severely wanting, 4. Dead or almost dead
Branch growth	0. Normal growth, 1. Somewhat reduced, 2. Short and slender, 3. Extremely short
Dieback of stem	0. Not found, 1. Slightly dieback, 2. Evidently dieback, 3. Severe dieback if found, 4. Completely dead
Defoliation of crown ^{*1}	0. Not defoliated (0–10%), 1. Slightly defoliated (>10–25%), 2. Moderately defoliated (>25–60%), 3. Severely defoliated (>60%), 4. Dead
Deformation of leaves	0. Normal, 1. Slightly deformed, 2. Evidently deformed, 3. Completely deformed
Size of leaves	0. Normal, 1. Somewhat small, 2. Evidently small, 3. Very small
Discoloration of leaves ^{*1}	0. None (0–10%), 1. Slight (>10–25%), 2. Moderate (>25–60%), 3. Severe (>60%)
Injury of leaves	0. No symptoms, 1. Slightly injured, 2. Evidently injured, 3. Severely injured

^{*1}. Definition of the scale was updated in the Sub-Manual on Forest Vegetation Monitoring (2006).

5.1.2 Laboratory Operation

Analytical methods recommended in the manual are presented in Table 5.3.

Table 5.3 Analytical equipment and methods for soil monitoring

Parameters	Equipment/methods
<i>Chemical Properties of Soil</i>	
a) Moisture Content	Drying oven, Balance
b) pH(H ₂ O) and pH(KCl)	Glass electrode
c) Exchangeable Base Cations (Ca ²⁺ , Mg ²⁺ , K ⁺ and Na ⁺)	AAS or ICP-AES (CH ₃ COONH ₄ -Extraction)
d) Exchangeable Acidity	Titration (KCl-Extraction)
e) Exchangeable Al, H	ibid.
f) Effective Cation Exchange Capacity (ECEC)	Calculation (as sum of exchangeable cations)
g) Carbonate Content (for calcareous soil)	Volumetric calcimeter
h) Total Carbon Content	Titration (Walkley-Black method) or CN-analyzer
i) Total Nitrogen Content	Titration (Kjeldahl method) or CN-analyzer
j) Available Phosphate	Spectrophotometry (Bray-1 test)
k) Sulfate	Turbidimetry, IC or ICP-AES
<i>Physical Properties of Soil</i>	
a) Fine Earth Bulk Density	Metal sampling cylinder, Drying oven, Balance
b) Penetration Resistance (in the fieldwork)	Pocket penetrometer

5.1.3 Monitoring Sites

Soil and vegetation monitoring data were submitted from eight regions across three countries this year. The list of monitoring sites and the items reported for 2024 is presented in Table 5.4.1. Soil analysis was conducted at two sites in Mongolia, and tree decline observations were carried out at seven sites. None of the sites conducted tree census and understory vegetation surveys. Table 5.4.2 shows the number of soil and vegetation plots at each monitoring site, along with the number of surveys conducted up to 2024.

Table 5.4.1 Outline of the Monitoring Sites in 2024

Country	Nearest air concentration / acid deposition monitoring site	Site name EANET site code	Soil type	Items ^{*1}
China	Jinyunshan (Chongqing)	Jinyunshan CNS004	Acidic-Udic Argosol	F ₁
	Jiwozi (Xi'an)	Dabagou CNS007	Brown soil	F ₁
	Xiaoping (Xiamen)	Xiaoping CNS009	Red soil	F ₁
	Zhuxiandong (Zhuhai)	Zhuxiandong CNS011	Red soil	F ₁
Japan	Happo	Sekido-san JPS005	Cambisols	F ₁
	Ijira	Ijira JPS006	Cambisols	F ₁
		Yamato JPS106	Andosols	F ₁
Mongolia	Ulaanbaatar	Bogdkhan Mountain MNS001	Brown soil	S
	Terelj	Terelj Mountain MNS002	Brown soil	S

^{*1} S, Soil chemical analysis; F₁, Observation of tree decline; F₂, Description of trees and understory vegetation survey

Table 5.4.2 Site locations, number of plots, and surveys conducted up to 2024

Country	Area (Nearest air concentration / acid deposition monitoring site)	Soil and vegetation monitoring site	EANET site code	Number of plots		Start year	Latest survey	Number of surveys until 2024			
				Forest plot	Soil plot			Tree decline	Forest survey	Understory survey	Soil survey
China	Jinyunshan (Chongqing)	Jinyunshan	CNS004	2	2	2000	2024	19	6	6	7
	Jiwozi (Xi'an)	Dabagou	CNS007	1	2	2001	2024	19	6	6	7
	Xiaoping (Xiamen)	Xiaoping	CNS009	1	1	2000	2024	18	5	4	5
	Zhuxiandong (Zhuhai)	Zhuxiandong	CNS011	3	3	2001	2024	11	8	8	7
Indonesia	Serpong	Bogor Research Forest (Dramaga Experimental Forest)	IDS002	1	1	2001	2019	7	1	1	5
Japan	Happo	Sekido-san	JPS005	1	2	2001	2024	22	5	5	5
		Horyu-zan ^{*1}	JPS105	1	2	2001	2023	21	5	5	5
	Ijira	Ijira	JPS006	1	2	2000	2024	22	5	5	5
	Yamato	Yamato	JPS106	1	2	2003	2024	22	4	4	4
Malaysia	Petaling Jaya	Pasoh Reserve Forest 1	MYS001	0	1	2000	2018				3
		Pasoh Reserve Forest 2	MYS101	0	1	2014	2018				2
	Petaling Jaya	Pasoh TEAM Plot 1	MYS201	1	1	2022	2023	0	0	0	1
		Pasoh TEAM Plot 8	MYS202	1	1	2022	2023	0	0	0	1
	(Bintulu)	UPMKB Rehabilitated Forest Planted in 1991	MYS005	0	2	2009	2012				2
		UPMKB Rehabilitated Forest Planted in 2008	MYS105	0	2	2009	2012				2
Mongolia	Ulaanbaatar	Bogdkhan Mountain	MNS001	1	2	2005	2024	1	1	0	3
	Terelj	Terelj Mountain	MNS002	0	2	2014	2024				3
Philippines	Los Baños	Mt. Makiling	PHS002	1	2	2000	2023	3	4	4	4
		UP Quezon, Land Grant	PHS102	1	2	2000	2023	4	3	4	5
	Metro Manila	La Mesa Watershed	PHS001	1	2	2007	2010	2	2	2	2
	Mt. Sto Tomas	Boneco Long Term Ecological Research Site	PHS003	1	2	2008	2008	1	1	1	1
Republic of Korea	Imsil	Mt. Naejang	KRS003	1	2	2001	2004	2	2	2	2
Russia	Irkutsk	Irkutsk	RUS003	1	1	2001	2013	2	2	2	2
	Listvyanka	Bolshie Koty	RUS002	1	2	2000	2013	1	1	1	2
		Pereemnaya river catchment	RUS102	1	2	2005	2005	1	1	1	1
	Mondy	Ilchir Lake	RUS001	0	2	1999	1999				1
		Okinskoe Lake	RUS101	0	1	1999	1999				1
		Solar Observatory	RUS201	1	2	1999	2014	1	1	1	2
	Primorskaya	Primorskaya	RUS004	1	1	2006	2013	1	1	1	2
Thailand	Vajiralongkorn Dam (old name: Kao Lam Dam)	Vajiralongkorn Dam	THS004	1	2	2000	2012	2	4	3	6
		Vajiralongkorn Puye	THS104	1	1	2002	2012	2	5	4	4
Vietnam	Hoa Binh	Cave of Heaven	VNS002	0	2	1999	1999				1
		Thang Ranh	VNS102	0	2	1999	1999				1

Bold text indicates that soil and/or vegetation monitoring was conducted in 2024. Gray cells indicate sites where only soil monitoring was conducted.

5.2 Results of Monitoring

The results of the soil analysis and tree decline surveys are presented in the following tables:

➤ **Table 5.5: Soil chemical analysis**

Table 5.5.1 Bogdkhan Monuntain (Mongolia) MNS001

Table 5.5.2 Terelj Mountain (Mongolia) MNS002

➤ **Table 5.6: Observation of tree decline**

Table 5.6.1 Jinyunshan-1 (Area: Jinyunshan, China) CNS004

Table 5.6.2 Jinyunshan-2 (Area: Jinyunshan, China) CNS004

Table 5.6.3 Dabagou (Area: Jiwozi, China) CNS007

Table 5.6.4 Xiaoping (Area: Xiaoping, China) CNS009

Table 5.6.5 Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Table 5.6.6 Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Table 5.6.7 Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Table 5.6.8 Sekido-san (Area: Happo, Japan) JPS005

Table 5.6.9 Ijira (Area: Ijira, Japan) JPS006

Table 5.6.10 Yamato (Area: Ijira, Japan) JPS106

Table 5.5.1 Soil chemical analysis: Bogdkhan Monuntain (Mongolia) MNS001

Soil sampling date: 6 June 2024

Name of analysis laboratory: Central Laboratory of Environment and Metrology

Location	Soil type	Plot No.	Subplot No.*1	Layer analyzed (cm)	Repeat analysis	Moisture content (%)	pH		Exchangeable base cations (B)				Ex-acidity (A)	Ex-acid cations		ECEC
							H ₂ O	KCl	Ca	Mg	K	Na	(A)	Al	H	(A) + (B)
									(cmol _c kg ⁻¹)							
Bogdkhan Monuntain	Brown soil	1	1	0-10	1	4.1	5.8	4.8	- *1	-	-	-	-	-	-	
			2		1	4.6	6.2	5.0								
			3		1	5.0	6.0	4.9								
			4		1	4.8	6.3	5.2								
			5		1	4.1	6.1	4.9								
			1	10-20	1	4.0	6.0	4.9								
			2		1	4.1	5.8	4.8								
			3		1	4.3	6.2	4.8								
			4		1	4.1	6.7	5.8								
			5		1	4.1	5.9	4.8								
Bogdkhan Monuntain	Brown soil	2	1	0-10	1	4.2	6.5	5.5	-	-	-	-	-	-	-	
			2		1	4.5	6.1	5.3								
			3		1	4.5	6.2	5.4								
			4		1	4.7	6.3	5.4								
			5		1	4.6	6.1	5.4								
			1	10-20	1	4.1	6.3	5.3								
			2		1	5.1	6.1	5.3								
			3		1	4.9	6.3	5.4								
			4		1	5.2	6.2	5.5								
			5		1	4.9	6.0	5.2								

*1: Exchangeable base cations and exchangeable acid cations were not submitted.

Table 5.5.2 Soil chemical analysis: Terelj Mountain (Mongolia) MNS002

Soil sampling date: 5 June 2024

Name of analysis laboratory: Central Laboratory of Environment and Metrology

Location	Soil type	Plot No.	Subplot No.*1	Layer analyzed (cm)	Repeat analysis	Moisture content (%)	pH		Exchangeable base cations (B)				Ex-acidity	Ex-acid cations		ECEC
							H ₂ O	KCl	Ca	Mg	K	Na	(A)	Al	H	(A) + (B)
									(cmol _c kg ⁻¹)							
Terej Mountain	Brown soil	1	1	0-10	1	4.1	6.1	5.8	- *1	-	-	-	-	-	-	-
			2		1	4.5	5.8	5.3								
			3		1	4.1	5.4	5.3								
			4		1	4.2	5.2	5.3								
			5		1	4.6	5.3	5.3								
			1	10-20	1	4.1	5.3	5.3								
			2		1	4.0	5.0	5.0								
			3		1	4.0	5.4	5.2								
			4		1	4.0	5.3	5.1								
			5		1	4.0	5.1	5.0								
Terej Mountain	Brown soil	2	1	0-10	1	4.0	6.6	5.9	-	-	-	-	-	-	-	-
			2		1	4.5	6.7	5.9								
			3		1	4.0	6.8	6.1								
			4		1	3.9	6.5	5.8								
			5		1	3.8	6.6	5.7								
			1	10-20	1	4.0	6.6	5.6								
			2		1	4.0	7.3	6.5								
			3		1	3.9	7.4	6.9								
			4		1	3.9	7.2	6.5								
			5		1	4.0	7.6	7.0								

*1: Exchangeable base cations and exchangeable acid cations were not submitted.

Table 5.6.1 Observation of tree decline: Jinyunshan-1 (Area: Jinyunshan, China) CNS004

Plot name: Jinyunshan-1, Forest type: Secondary, Stand age: 77 years in 2020

Date: 8 November 2024

Surveyor: Lihanqing

Individual No.	1 (3)	2 (2)	3 (58)	4 (101)	5 (105)	6 (70)	8 (72)	9 (103)	10 (104)	7 (102)
Direction (E, W, S, or N)	E	E	E	S	S	W	W	N	N	S
Plant Name	<i>Cunninghamia lanceolata</i>	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>
Relative height				Dead			Null			Null
Tree height (m)	20.8	12.3	9.4		15.5	10.8		14.8	14.6	
DBH (cm)	19.5	16.7	14.0		15.9	11.5		14.8	11.0	
Vitality of tree	1									
Form of tree	1									
Branch growth		1							1	
Dieback of stem				Dead in 2024			Dead in 2023			Dead in 2016
Defoliation of crown	1		1		1	1			1	
Deformation of leaves									1	
Size of leaves										
Discoloration of leaves										
Injury of leaves										
Damage class ^{*1}										

Estimated cause of decline: Insect pest (termite)

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes

Table 5.6.2 Observation of tree decline: Jinyunshan-2 (Area: Jinyunshan, China) CNS004

Plot name: Jinyunshan-2, Forest type: Secondary, Stand age: 77 years in 2020

Date: 8 November 2024

Surveyor: Lihanqing

Individual No.	1 (67)	2 (68)	3 (74)	4 (76)	6 (41)	8 (71)	9 (70)	10 (69)
Direction (E, W, S, or N)	E	E	S	S	W	N	N	N
Plant Name	<i>Symplocos setchuensis</i>	<i>Symplocos setchuensis</i>	<i>Adinandra bockiana</i>	<i>Symplocos setchuensis</i>	<i>Adinandra bockiana</i>	<i>Symplocos lanceolata</i>	<i>Elaeagnus japonicus</i>	<i>Macclura pingii</i>
Relative height					Dead			Null
Tree height (m)	13.4	12.5	18.4	19.5		16.9	20.4	
DBH (cm)	14.7	18.9	20.9	27.2		18.4	41.6	
Vitality of tree								
Form of tree				1				
Branch growth					Dead in 2024			Dead in 2016
Dieback of stem		1	2	1				
Defoliation of crown			2				2	
Deformation of leaves								
Size of leaves								
Discoloration of leaves								
Injury of leaves						1		
Damage class ^{*1}								

Estimated cause of decline: Insect pest (termite)

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes.

Table 5.6.3 Observation of tree decline: Dabagou (Area: Jiwozi, China) CNS007

Plot name: Dabagou, Forest type: Man-made, Stand age: 41-44 years in 2024

Date: 24 October 2024

Surveyor: Song Xue Juan

Individual No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Direction (E, W, S, or N)	E	E	E	E	E	S	S	S	S	S	W	W	W	W	W	N	N	N	N	N
Plant Name	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>	<i>Pinus ammodi</i>
Relative height																				
Tree height (m)	17.3	14.5	12.2	14.9	12.1	12.0	10.0	9.1	11.1	14.9	14.6	12.6	10.9	15.8	11.4	13.4	11.9	13.8	11.5	8.8
DBH (cm)	26.0	26.0	17.0	21.7	25.0	18.0	12.9	19.2	16.1	19.3	28.8	24.2	15.1	24.7	16.7	24.7	16.4	24.4	16.2	9.2
Vitality of tree																				
Form of tree																				
Branch growth																				
Dieback of stem																				
Defoliation of crown																				
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves																				
Injury of leaves																				
Damage class ^{*1}																				
Estimated cause of decline:																				

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes

Table 5.6.4 Observation of tree decline: Xiaoping (Area: Xiaoping, China) CNS009

Plot name: XPZ-01, Forest type: Man-made, Stand age: 28 years in 2012

Date: 18 October 2024

Surveyor: Zhang Yashuang

Individual No.	120	210	211	116	203	225	227	301	220	221	337	334	333	313	314	310	309	308
Direction (E, W, S, or N)	E	E	E	E	S	S	S	S	W	W	W	W	W	N	N	N	N	N
Plant Name	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>
Relative height																		
Tree height (m)	17.1	17.6	18.7	17.7	16.8	17.7	18.7	18.3	17.9	18.7	18.2	17.8	18.8	17.5	17.5	17.6	17.5	19.7
DBH (cm)	17.6	21.1	19.9	20.3	21.8	24.9	21.7	20.5	18.5	22.9	20.7	20.5	18.9	21.8	20.7	20.6	21.7	29.9
Vitality of tree																		
Form of tree																		
Branch growth																		
Dieback of stem																		
Defoliation of crown																		
Deformation of leaves																		
Size of leaves																		
Discoloration of leaves																		
Injury of leaves																		
Damage class ^{*1}																		
Estimated cause of decline:																		

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes

Table 5.6.5 Observation of tree decline: Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-1, Forest type: Man-made, Stand age: Approx. 30 years in 2023

Date: 27 December 2024

Surveyor: Zheng Mingxuan

Individual No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Direction (E, W, S, or N)	E	E	E	E	E	S	S	S	S	S	W	W	W	W	W	N	N	N	N	N
Plant Name	<i>Tridactea cochinchinensis</i>	<i>Pinus elliptica</i>	<i>Tridactea cochinchinensis</i>	<i>Acacia confusa</i>	<i>Pinus elliptica</i>	<i>Pinus elliptica</i>	<i>Pinus elliptica</i>	<i>Pinus elliptica</i>	<i>Heplopleurum heptaphyllum</i>	<i>Mangifera indica</i>	<i>Pinus elliptica</i>	<i>Cratogeomys cochinchinensis</i>	<i>Pinus elliptica</i>	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	<i>Pinus elliptica</i>	<i>Malurus paniculatus</i>	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	<i>Pinus elliptica</i>	<i>Cratogeomys cochinchinensis</i>	<i>Cratogeomys cochinchinensis</i>
Relative height																				
Tree height (m)	5.7	12.3	6.4	7.3	14.3	13.2	13.5	14.5	3.8	8.4	14.0	7.1	13.4	5.3	14.5	6.6	5.4	14.5	6.5	6.3
DBH (cm)	13.6	17.0	13.6	9.9	27.0	21.1	20.5	29.1	5.5	15.1	24.6	7.3	18.9	8.3	24.7	8.0	7.3	32.4	7.8	7.6
Vitality of tree					1	1	1	1	1		2		1	1		1	1	1		
Form of tree	1	1	1		1	1	1	1	1		1	1	1		2					
Branch growth																				
Dieback of stem						1														
Defoliation of crown	1		1																	
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves	1						1													
Injury of leaves																				
Damage class ^{*1}						1														
Estimated cause of decline: Not specified.																				

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes

Table 5.6.6 Observation of tree decline: Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-2, Forest type: Man-made, Stand age: Approx. 27 years in 2024

Date: 27 December 2024

Surveyor: Zheng Mingxuan

Individual No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Direction (E, W, S, or N)	E	E	E	E	E	S	S	S	S	S	W	W	W	W	W	N	N	N	N	N
Plant Name	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Cratogeomys cochinchinensis</i>	<i>Microcos paniculatus</i>	<i>Acacia confusa</i>	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Malurus paniculatus</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	<i>Microcos paniculatus</i>	<i>Syzygium euryanthum</i>	<i>Acacia confusa</i>	<i>Syzygium euryanthum</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>
Relative height																				
Tree height (m)	7.9	8.6	6.5	5.6	7.8	3.8	4.5	10.2	5.2	9.6	6.5	6.3	5.8	3.8	5.3	6.3	5.0	4.3	3.8	4.1
DBH (cm)	23.5	23.6	6.5	13.6	19.5	7.9	20.3	22.0	6.4	32.9	19.3	21.7	16.8	5.3	10.5	11.6	20.0	11.3	23.5	22.3
Vitality of tree				1			1	1					1		1					
Form of tree							2													
Branch growth	1	1	1			1	1	1	1		2	1	1	1		1	1	1	1	1
Dieback of stem											1	1							1	1
Defoliation of crown				1									1							
Deformation of leaves				1																
Size of leaves																				
Discoloration of leaves				1			1		1	1	1						1		1	
Injury of leaves																				
Damage class ^{*1}				1					1											
Estimated cause of decline: Not specified.																				

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes.

Table 5.6.7 Observation of tree decline: Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011
 Plot name: Zhuxiandong-3, Forest type: Secondary, Stand age: Approx. 22 years in 2024
 Date: 27 December 2024
 Surveyor: Zheng Mingxuan

Individual No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Direction (E, W, S, or N)	W	W	W	W	W	S	S	S	S	S	E	E	E	E	E	N	N	N	N	N
Plant Name	<i>Lisea glutinosa</i>	<i>Machilus velutina</i>	<i>Machilus velutina</i>	<i>Machilus velutina</i>	<i>Eurya nitida</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Eurya nitida</i>	<i>Archidendron lucidum</i>	<i>Archidendron lucidum</i>	<i>Acacia confusa</i>	<i>Machilus velutina</i>	<i>Triadica cochinchinensis</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Triadica cochinchinensis</i>	<i>Triadica cochinchinensis</i>	<i>Triadica cochinchinensis</i>	<i>Triadica cochinchinensis</i>	<i>Lisea rotundifolia</i> var. <i>oblongifolia</i>
Relative height																				
Tree height (m)	3.9	4.5	4.8	4.3	4.1	5.9	6.2	3.3	4.2	4.3	4.3	4.1	3.9	5.6	8.2	5.1	5.3	5.2	6.3	3.9
DBH (cm)	5.6	12.7	15.2	6.0	6.0	7.3	11.2	4.5	8.6	10.3	8.3	5.9	11.3	11.5	10.1	4.1	14.1	18.2	22.9	6.6
Vitality of tree						1	1											1		
Form of tree			1					1		1							1			
Branch growth		1			1	1	1	1	1	1	1	1		1	1					
Dieback of stem					1			1	1	1	1									
Defoliation of crown													1			1	1	1	1	
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves			1						1											
Injury of leaves																				
Damage class ^{*1}			1						1									1		
Estimated cause of decline:	Not specified.																			

Blank cells indicate "0" (no damage).
^{*1}1, The damage class is determined by a combination of defoliation and discoloration classes

Table 5.6.8 Observation of tree decline: Sekido-san (Area: Happo, Japan) JPS005

Plot name: Sekido-san, Forest type: Secondary, Stand age: not specified

Date: 20 September 2024

Surveyor: Yuko Tomizawa

Individual No.	1	2	3	4	5	6	7	8-2	9	10	11	58	13	14	15	16	17	18	19	20
Direction (E, W, S, or N)	N	N	N	N	N	W	W	W	W	W	S	S	S	S	S	E	E	E	E	E
Plant Name	<i>Fagus crenata</i>	<i>Betula grossa</i>	<i>Acer pictum</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Carpinus ischonoshiki</i>	<i>Fagus crenata</i>	<i>Betula grossa</i>	<i>Acer pictum</i>	<i>Fagus crenata</i>	<i>Acer pictum</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Quercus crispula</i> var. <i>crispula</i>	<i>Cerasus jamasakura</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>
Relative height	+	+	-	+				-		-		-								
Tree height (m)	30.3	35.0	22.4	31.6	25.0	24.8	25.4	18.3	21.6	20.4	26.0	15.4	27.2	24.0	26.5	26.1	21.2	20.6	26.8	22.8
DBH (cm)	42.6	57.4	42.2	66.5	53.1	55.7	55.7	30.4	40.9	33.5	60.0	23.7	67.8	37.6	48.0	50.3	68.4	36.4	60.6	43.5
Vitality of tree																				
Form of tree								1		1		1				1	1			
Branch growth																				
Dieback of stem																				
Defoliation of crown																				
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves																				
Injury of leaves																				
Damage class ^{*1}																				

Estimated cause of decline: 16, Form of tree is declined due to suppression by surrounding trees. 17, Form of tree is declined due to broken lower branch.

Trees locating on the eastern direction are shielded by lower trees.

+ :Significantly taller than other trees. - : Significantly lower than other trees.

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes

Table 5.6.- Observation of tree decline: Horyu-zan (Area: Happo, Japan) JPS105

Survey at Horyu-zan was not conducted due to road damage from the 2024 earthquake.

Table 5.6.9 Observation of tree decline: Ijira (Area: Ijira, Japan) JPS006

Plot name: Ijira-lake, Forest type: Man-made, Stand age: 43-53 years in 2024

Date: 6 September 2024

Surveyor: Yoshizumi Hisada

Individual No.	1	2	3-2	4	5-2	6	7	8	9	10	11	12	13	14	15	16	17	18-2	19	20
Direction (E, W, S, or N)	N	N	N	N	N	E	E	E	E	E	S	S	S	S	S	W	W	W	W	W
Plant Name	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Cryptomeria japonica</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>
Relative height				—		+	+									—			—	—
Tree height (m)	16.2	15.1	17.7	12.9	16.9	19.6	20.3	18.0	17.3	16.2	18.2	16.3	16.2	18.6	17.9	13.9	15.6	18.4	13.8	13.8
DBH (cm)	23.9	16.8	18.5	15.7	19.4	26.3	28.6	23.6	18.5	19.6	16.7	16.3	17.0	22.8	21.2	22.4	17.5	25.6	12.4	18.4
Vitality of tree																			1	1
Form of tree	1	1		1	1		1	1		1	1	1	1	1	1	1	1		1	1
Branch growth																				
Dieback of stem																				
Defoliation of crown																				
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves																				
Injury of leaves																				
Damage class ^{*1}																				

Estimated cause of decline: No. 1, 2, 4, 5-2, 8, 11, 12, 14, 15 and 17, bent stem; No. 7, dichotomy; No. 10, bent stem and tip; No. 13, bent stem and dichotomy; No. 16, The presence of tip breakage; No. 19, suppression by other surrounding trees and bent stem; No. 20 suppression by other surrounding trees and dichotomy.

+ :Significantly taller taller than other trees. - : Significantly lower than other trees.

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes.

Table 5.6.10 Observation of tree decline: Yamato (Area: Ijira, Japan) JPS106

Plot name: Yamato, Forest type: Man-made, Stand age: 103-113 years in 2024

Date: 5 September 2024

Surveyor: Yoshizumi Hisada

Individual No.	1	2	3	4	5-2	6-2	7-2	8	9-2	10-2	11-2	12-3	13-2	14-2	15	16-2	17	18-2	19-2	20
Direction	N	N	N	N	N	E	E	E	E	E	S	S	S	S	S	W	W	W	W	W
Plant Name	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>	<i>Chamaecyparis obtusa</i>
Relative height	+				—	+		+				—								—
Tree height (m)	33.5	29.9	32.0	30.3	28.3	32.4	30.7	33.0	31.6	28.9	29.6	26.6	32.3	29.0	30.0	29.5	29.0	32.0	32.2	27.3
DBH (cm)	41.1	40.5	45.6	45.3	31.6	46.9	42.8	38.8	42.4	44.6	35.1	33.7	50.5	36.9	45.1	36.5	35.6	48.7	48.3	35.3
Vitality of tree																				
Form of tree					1			1	1		1	1	1				1			1
Branch growth		1																		
Dieback of stem																				
Defoliation of crown																				
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves																				
Injury of leaves																				
Damage class ^{*1}																				

Estimated cause of decline: No. 20, one side branch and leaning; bent stem; No. 8, 12-3 and 17, bent stem and tip; No. 11-2, dichotomy and leaning; No. 18-2, insect damage on stem; No. 13-2, bent tip; No. 5-2 and 9-2, one side branch.

+ :Significantly taller taller than other trees. - : Significantly lower than other trees.

Blank cells indicate "0" (no damage).

*1, The damage class is determined by a combination of defoliation and discoloration classes.

CHAPTER 6

Inland Aquatic Environment Monitoring

6. Inland Aquatic Environment Monitoring

6.1 Method

There were evidences over Northern Europe and North America that the lake water pH levels decreased in the 1970's compared to the levels in the 1930's and the damages noted as results of this decrease, including decline of fish population. The cause of this pH decline is believed to be the deposition of acidic substances into lakes in excess amounts of their neutralization or buffering capacity. In general, inland bodies of water with low alkalinity and low electric conductivities are prone to be sensitive to acidification by acid deposition. Therefore, it is important to conduct continuous monitoring of water bodies and aquatic fauna and so on.

Items specified in the technical manual (2000) include water temperature, pH, electric conductivity (EC), alkalinity and concentration of SO_4^{2-} , NO_3^- , Cl^- , NH_4^+ , Na^+ , K^+ , Ca^{2+} , and Mg^{2+} of targeted lakes/ rivers at least four times a year (seasonally), and transparency, water color, DOC (if impossible, COD), NO_2^- , and PO_4^{3-} more than once a year while some other optional items are specified to be monitored. In near future, it is expected that some additional items (*i.e.* Chlorophyll a, T-P, T-N, DO) will be adopted as mandatory parameters according to the new manual (2010) at each laboratory.

6.1.1 Selection of Sampling Sites

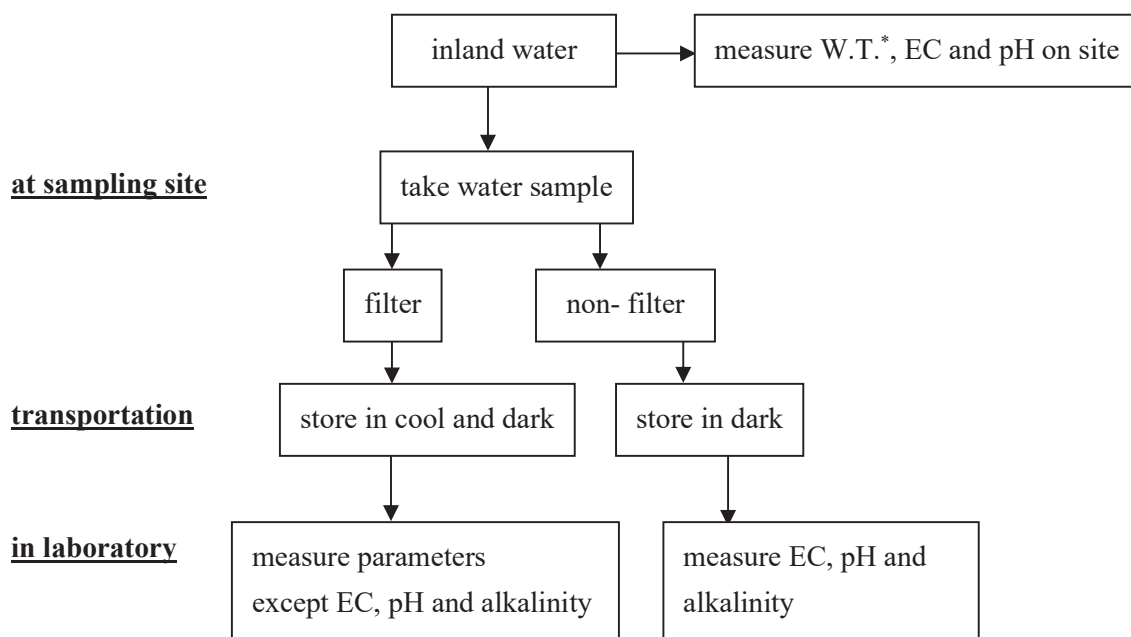
According to the technical manual (2010), the lakes chosen for monitoring should be harmonic type lakes, preferably with depths of approximately 10 m or less, a water residence time of 1 year or less, an area of 1 ha or more, with low alkalinity and electric conductivity, minimal anthropogenic water pollution and no coverage of the surface with aquatic organisms. If appropriate lakes are not available, rivers (streams) that are potentially susceptible to acidification and have little artificial influence should be selected.

For the monitoring sites, it is desirable to locate in nature protection areas, and human activities such as deforestation, and cultivation should be few and far between in the upstream area.

6.1.2 Field Operation

Surface water is sampled at one location at the center of the lake or river. In principle, measurements of pH and electric conductivity (EC) are conducted at the site before a more precise measurement is taken in the laboratory. Water samples for further analyses are kept in a tightly stoppered polyethylene bottle and stored in a cool dark place. The samples are shipped to the laboratory for chemical analysis. The water samples for analysis of chemical components

other than pH, EC and alkalinity are filtered at the sampling site with a glass fiber filter. An example of treatment procedure is described in Figure 6.1.



W.T.* : Water Temperature

Figure 6.1 Example of treatment procedure of inland water sample

6.1.3 Laboratory Operation

Collected samples are analyzed by analytical methods specified in Table 6.1 immediately, otherwise they are stored in a refrigerator. In addition, with regard to alkalinity, the Gran's plot titration method is adopted newly and recommended as a measurement parallel to the end-point pH 4.8 method in the latest version of the manual 2010.

Electric conductivity are measured at 25°C using a water bath. If it is measured at any other water temperature, its value is corrected to 25°C.

Table 6.1 Parameters and recommended analytical methods

Parameter	Analytical method
pH	pH meter (glass electrode)
Electric conductivity	Conductivity meter
Alkalinity	Titration by burette or digital burette with pH meter
NH_4^+ , NO_3^- , NO_2^- , PO_4^{3-}	Ion Chromatography or spectrometry
K^+ , Mg^{2+} , Ca^{2+} , Na^+	Ion Chromatography or atomic absorption spectrometry
SO_4^{2-}	Ion Chromatography or turbidimetry
DOC	Combustion-infrared method or wet-oxidation method

6.1.4 Monitoring Sites

As described in Table 6.2.1, the monitoring sites were established in 13 lakes/reservoirs and 6 rivers/streams. For 2024, 9 countries (China, Japan, Lao PDR, Malaysia, Mongolia, Philippines, Russia, Thailand and Vietnam) carried out the monitoring. The data from the rest of countries have not been submitted yet. Properties of all the monitoring sites are shown on Table 6.3. However, more information should be appended to these tables in the future.

6.2 Results of Monitoring

The results of monitoring of each parameter are shown in Table 6.4.1 to Table 6.4.9. Data within or exceeded the criteria of R_1 and R_2 (details are shown below) are judged and marked as “O” or “×” in these tables respectively according to *QA/QC Program for Monitoring on Inland Aquatic Environment in East Asia*. The annual mean values of each monitoring sites are summarized in Table 6.4.10.

There were 4 sites (Nam Houm Lake in Lao PDR, Baru River in Malaysia, Terelj River in Mongolia, Ambulalakaw Lake in Philippines, Komarovka River in Russia) which have results exceeding allowable range of R_1 and/or R_2 . However, those main reasons could not be identified.

The annual mean values of each parameter from 2001 to 2024 are shown in Table 6.5.1 to Table 6.5.20.

Ion balance (R_1):

Calculated as:

$$R_1 = (C - A) / (C + A) \times 100 (\%)$$

where A: total anion equivalent concentration ($\mu\text{eq L}^{-1}$)

C: total cation equivalent concentration ($\mu\text{eq L}^{-1}$)

$$A = c(\text{SO}_4^{2-}) + c(\text{NO}_3^-) + c(\text{Cl}^-) + (\text{ALK})^*$$

* If PO_4^{3-} , NO_2^- etc were measured, add next formula, $\{+ c(\text{PO}_4^{3-}) + c(\text{NO}_2^-) + \dots\}$.

Alkalinity (ALK: $\mu\text{eq L}^{-1}$) considered to be corresponded to bicarbonate ions (HCO_3^-).

$$C = 10^{(6-\text{pH})} + c(\text{NH}_4^+) + c(\text{Na}^+) + c(\text{K}^+) + c(\text{Ca}^{2+}) + c(\text{Mg}^{2+})^*$$

* If Fe^{2+} , Mn^{2+} etc were measured, add next formula, $\{+ c(\text{Fe}^{2+}) + c(\text{Mn}^{2+}) + \dots\}$.

where $c(\)$: the ionic concentration ($\mu\text{eq L}^{-1}$).

When the concentration of ion is shown as (mg L^{-1}), it should be changed in equivalent concentration ($\mu\text{eq L}^{-1}$) as follows:

$$\mu\text{eq L}^{-1} = \text{mg L}^{-1} \times (1000/\text{equivalent weight})$$

Required criteria for R₁ :

The required ion balances of precipitation analyses are given in Table 6.2.2

Table 6.2.2 Required criteria for R₁

(C+A) (μeq L ⁻¹)	R ₁ (%)
<50	± 30
50 – 100	± 15
>100	± 8

Comparison between calculations and measurement in electrical conductivity (R₂):

Calculated as:

$$R_2 = (\Lambda_{\text{calc}} - \Lambda_{\text{meas}}) / (\Lambda_{\text{calc}} + \Lambda_{\text{meas}}) \times 100 (\%)$$

where Λ_{calc} : the calculated conductivity (mS m⁻¹)

Λ_{meas} : the measured conductivity (mS m⁻¹)

Λ_{calc} should be calculated as follows:

$$\Lambda_{\text{calc}} (\mu\text{S cm}^{-1}) = 349.7 \times 10^{(3-\text{pH})} + \{80.0 \times c(\text{SO}_4^{2-}) + 71.4 \times c(\text{NO}_3^-) + 76.3 \times c(\text{Cl}^-) + 73.5 \times c(\text{NH}_4^+) + 50.1 \times c(\text{Na}^+) + 73.5 \times c(\text{K}^+) + 59.5 \times c(\text{Ca}^{2+}) + 53.0 \times c(\text{Mg}^{2+}) + 44.5 \times (\text{ALK})\} / 1000$$

c: equivalent concentration (μeq L⁻¹) of ions in the parenthesis, each constant value is ionic equivalent conductivity at 25 °C. Alkalinity considered to be corresponded to bicarbonate ions (HCO₃⁻).

For SI unit system, convert Λ_{calc} (μS cm⁻¹) into Λ_{calc} (mS m⁻¹) following

$$\Lambda_{\text{calc}} (\text{mS m}^{-1}) = \Lambda_{\text{calc}} (\mu\text{S cm}^{-1}) \times (1/10)$$

Required criteria for R₂:

The required conductivity comparison criteria are given in Table 6.2.3.

Table 6.2.3 Required criteria for R₂

Λ_{meas} (mS m ⁻¹)	R ₂ (%)
<0.5	± 20
0.5 – 3	± 13
>3	± 9

Table 6.2.1 Outline of Inland Aquatic Environment Monitoring of 2024

Country	Site	Distance from the site	Nearest deposition monitoring site	Start year	Interval
Cambodia	Sras Srang Lake (Kampong Speu province)	-	Remote	2012	-
China	Jinyunshan Lake (Chongqing)	-	Rural	2001	4 times/yr.
	Xiaoping Dam (Xiamen)	-	Remote	2001	4 times/yr.
	Jiwozi River (Xi'an)	-	Remote	2001	4 times/yr.
	Zhuxiandong Stream (Zhuhai)	-	Urban	2004	4 times/yr.
	Patengang Lake (Bandung)	47 km	Urban	2001	-
Indonesia	Gunung Lake (Sukabumi)	-	-	2008	-
Japan	Ijira Lake (Gifu Pref.)	1.1 km	Rural/Ecolog. (Ijira)	2001	4 times/yr.
	Futago-ike Lake (Nagano Pref.)	82 km	Remote (Happo)	2019	3 times/yr.
Lao PDR	Nam Houm Lake (Vientiane province)	-	Vientiane	2009	4 times/yr.
Malaysia	Baru River	-	Remote (Danum Valley)	2022	6 times/yr.
	Kuala Tahan*	-	-	-	-
Mongolia	Terelj River	-	Remote (Terelj)	2002	6 times/yr.
Philippines	Pandin Lake	30 km	Rural (Mt. Makiling)	2004	4 times/yr.
	Ambulalakaw Lake	-	Remote (Mt. Sto. Tomas)	2005	4 times/yr.-
Russia	Pereemnaya River (Listvyanka)	48 km	Rural (Listvyanka)	2004	4 times/yr.
	Komarovka River (Primorskaya)	0.5 km	Rural (Primorskaya)	2005	5 times/yr.
Thailand	Vajiralongkorn Dam (Kanchanaburi Province)	-	Remote	2002	3 times/yr.
Vietnam	Hoa Binh Reservoir	-	Rural	2001	4 times/yr.

*Kuala Tahan is currently under preparation.

Table 6.3.1 Properties of lakes or streams

Lake Name: Sras Srang Lake

Country	Cambodia
Location	KIRIRUM national Park, Kampong Speu province
Latitude and longitude	11° 19' 69.29" N, 104° 2' 22.97" E
Altitude	800 m
Origin	-
Area and shape	10,403 m ²
Shore line length	-
Lake hydrologic type	-
Lake trophic type	-
Water depth	-
Water volume	-
Annual water level fluctuation	-
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
Residence time of water	-
Lake utilization	-
River (inflow)	-
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	-

Watershed area	-
Surface geology	-
Vegetation (dominant plants)	-
Land use	-

- : No information.

Table 6.3.2 Properties of lakes or streams

Lake Name: Jinyunshan Lake

Country	China
Location	Chongqing Prefecture
Latitude and longitude	-
Altitude	-
Origin	Artificial lake
Area and shape	9,990 m ²
Shore line length	About 2 km
Lake hydrologic type	Reservoir
Lake trophic type	Oligotrophic to Mesotrophic
Water depth	6-13 m
Water volume	60,000 m ³
Annual water level fluctuation	2-4 m
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
Residence time of water	-
Lake utilization	For drink, Irrigation water
River (inflow)	-
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	-

Watershed area	-
Surface geology	-
Vegetation (dominant plants)	-
Land use	-

- : No information.

Table 6.3.3 Properties of lakes or streams

Lake Name: Xiaoping Dam

Country	China
Location	Xiaoping, Xiamen
Latitude and longitude	-
Altitude	595 m
Origin	Artificial lake
Area and shape	264,000 m ²
Shore line length	100 m
Lake hydrologic type	Natural
Lake trophic type	Normal
Water depth	57.5 m
Water volume	4,080,000 m ³
Annual water level fluctuation	-
Annual air temperature	21.3 °C (mean) *1
Precipitation	1,084.5 mm/year *1
Sunshine duration	164.3 hrs/month (mean) *1
Solar radiation	-
Wind speed	2.4 m/s (mean) *1
Wind direction	E and ENE (dominant) *1
Residence time of water	15 days
Lake utilization	Water power
River (inflow)	Dingxi lake
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	-

Watershed area	18.1 km ²
Surface geology	-
Vegetation (dominant plants)	-
Land use	-

- : No information.

*1 Xiamen, 2014.

Table 6.3.4 Properties of lakes or streams

Stream Name: Jiwozi River

Country	China
Location	Xi'an
Latitude and longitude	-
Altitude	-
Origin	Natural stream
Water depth	-
Water discharge	-
River length	-
Drainage area	-
The mean height of the river basin	-
Annual air temperature	15.4 °C (mean) *1
Precipitation	593.0 mm/year *1
Sunshine duration	146.0 hrs/month (mean) *1
Solar radiation	-
Wind speed	Mean 2.2 m/s *1
Wind direction	NE (dominant) *1
Lake (flows into)	-
River (meet in 10m from sampling point)	-

Watershed area	-
Surface geology	-
Soil type Mountain	-
Vegetation (dominant plants)	-
Population	-

- : No information.

*1 Xi'an, 2019.

Table 6.3.5 Properties of lakes or streams

Stream Name: Zhuxiandong Stream

Country	China
Location	Zhuhai
Latitude and longitude	-
Altitude	-
Origin	Natural stream
Water depth	-
Water discharge	-
River length	-
Drainage area	-
The mean height of the river basin	-
Annual air temperature	24.1 °C (mean) *1
Precipitation	1984.4 mm *1
Sunshine duration	143.6 hrs/month (mean) *1
Solar radiation	-
Wind speed	Mean 2.6 m/s *1
Wind direction	ESE (dominant) *1
Lake (flows into)	-
River (meet in 10m from sampling point)	-

Watershed area	-
Surface geology	-
Soil type Mountain	-
Vegetation (dominant plants)	-
Population	-

- : No information.

*1 Zhuhai, 2019.

The monitoring had conducted between 2001 and 2003 at Zhuxiandong reservoir, after that, Zhuxiandong Stream was selected as a new site for inland water monitoring in 2004. This site is located in the upper stream of Zhuxiandong Reservoir. Therefore continuous monitoring has been conducted since 2004 at Zhuxiandong Stream.

Table 6.3.6 Properties of lakes or streams

Lake Name: Patengang Lake

Country	Indonesia
Location	Bandung
Latitude and longitude	-
Altitude	1600-1700 m
Origin	Natural lake
Area and shape	4.5 km ²
Shore line length	-
Lake hydrologic type	-
Lake trophic type	Oligotrophic
Water depth	8 m (max)
Water volume	4.98 x 10 ⁶ m ³
Annual water level fluctuation	1.42 m-4.20 m
Annual air temperature	24.0 °C (mean) *1
Precipitation	6,728.8 mm *1
Sunshine duration	-
Solar radiation	408.1 MJ/m ² /month (mean) *1
Wind speed	Mean 1.7 m/s *1
Wind direction	W (dominant) *1
Residence time of water	-
Lake utilization	Tourism
River (inflow)	1
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	LAPAN Bandung

Watershed area	650 km ²
Surface geology	-
Vegetation (dominant plants)	Strawberry, tea
Land use	-

- : No information.

*1 Bandung, 2017.

Table 6.3.7 Properties of lakes or streams

Lake Name: Gunung Lake

Country	Indonesia
Location	Sukabumi, West Java
Latitude and longitude	-
Altitude	950-1036 m
Origin	Natural lake
Area and shape	95,000 m ²
Shore line length	-
Lake hydrologic type	Reservoir
Lake trophic type	Eutrophic
Water depth	Ave 2.75 m (< 10 m)
Water volume	-
Annual water level fluctuation	-
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
Residence time of water	-
Lake utilization	Irrigation
River (inflow)	1
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	Serpong

Watershed area	1.2 km ²
Surface geology	-
Vegetation (dominant plants)	Pine Tree, <i>Agathis Damara</i>
Land use	Agricultural area (5%), Residential area (1%, population < 500)

- : No information.

Table 6.3.8 Properties of lakes or streams

Lake Name: Ijira Lake

Country	Japan
Location	Gifu prefecture
Latitude and longitude	35° 33' 51" N, 136° 42' 12" E
Altitude	110 m
Origin	Artificial (dam-made lake)
Area and shape	0.1 km ²
Shore line length	1.8 km
Lake hydrologic type	Reservoir
Lake trophic type	Oligotrophic or mesotrophic
Water depth	Ave. 5.4 m (Max 10.9 m)
Water volume	0.00054 km ³
Annual water level fluctuation	0-0.74 m (Ave. 0.22 m)
Annual air temperature	17.8 °C (mean) *1
Precipitation	2108.5 mm/year *1
Sunshine duration	184.35 hrs/month (mean) *1
Solar radiation	-
Wind speed	Mean 2.6 m/s *1
Wind direction	WNW (dominant) *1
Residence time of water	23 days
Lake utilization	Irrigation and fishing
River (inflow)	Kamagatani River, Kobora River
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	Gifu Local Meteorological Observatory

Watershed area	5.4 km ²
Surface geology	Chert
Vegetation (dominant plants)	<i>Pinus densiflora</i> , <i>Chamaecyparis obtuse</i> , <i>Cryptomeria japonica</i>
Land use	-

- : No information.

*1 Gifu Local Meteorological Observatory, 2024.

Table 6.3.9 Properties of lakes or streams

Lake Name: Futago-ike Lake (Oike and Meike)

Site	Oike	Meike
Country	Japan	
Location	Nagano prefecture	
Latitude and longitude	36° 05' 42" N, 138° 20' 05" E	36° 05' 52" N, 138° 19' 57" E
Altitude	2050 m	2050 m
Origin	Dammed lake	Dammed lake
Area and shape	0.019 km ²	0.017 km ²
Shore line length	0.64 km	0.55 km
Lake hydrologic type	Dammed lake	Dammed lake
Lake trophic type	Extreme oligotrophic	Oligotrophic
Water depth	Ave. 3.82 m	Ave. 2.65 m
Water volume	73369 m ³	45002 m ³
Annual water level fluctuation	0-4 m	0-1 m
Annual air temperature	11.2 °C (mean) *1	
Precipitation	1491 mm/year *1	
Sunshine duration	178.2 hrs/month (mean) *1	
Solar radiation	-	
Wind speed	Mean 2.1 m/s *1	
Wind direction	SW(dominant) *1	
Residence time of water	-	
Lake utilization	Sightseeing	
River (inflow)	None	None
Amount of inlet water	-	-
Amount of outlet water	-	-
Nearest meteorological station	Haramura AMeDAS of Japan Meteorological Agency	

Watershed area	0.488 km ²	0.338 km ²
Surface geology	Lava bed	
Vegetation (dominant plants)	<i>Abies veitchii</i> , <i>Larix kaempferi</i>	
Land use	-	

- : No information.

*1 Haramura AMeDAS of Japan Meteorological Agency, 2024.

Table 6.3.10 Properties of lakes or streams

Lake Name: Nam Houm Lake

Country	Lao PDR
Location	-
Latitude and longitude	-
Altitude	-
Origin	-
Area and shape	-
Shore line length	-
Lake hydrologic type	-
Lake trophic type	-
Water depth	Mean: 5 m, Maximum: 10 m
Water volume	-
Annual water level fluctuation	-
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
Residence time of water	-
Lake utilization	Irrigation
River (inflow)	-
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	-

Watershed area	-
Surface geology	-
Vegetation (dominant plants)	-
Land use	-

- : No information.

Table 6.3.11 Properties of lakes or streams

Lake Name: Baru River

Country	Malaysia
Location	Danum Valley, Sabah
Latitude and longitude	-
Altitude	-
Origin	-
Area and shape	-
Shore line length	-
Lake hydrologic type	-
Lake trophic type	-
Water depth	-
Water volume	-
Annual water level fluctuation	-
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
Residence time of water	-
Lake utilization	-
River (inflow)	-
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	-

Watershed area	-
Surface geology	-
Vegetation (dominant plants)	-
Land use	-

- : No information.

Table 6.3.12 Properties of lakes or streams

Stream Name: Kuala Tahan

Country	Malaysia
Location	-
Latitude and longitude	-
Altitude	-
Origin	-
Water depth	-
Water discharge	-
River length	-
Drainage area	-
The mean height of the river basin	-
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
Lake (flows into)	-
River (meet in 10m from sampling point)	-

Watershed area	-
Surface geology	-
Soil type Mountain	-
Vegetation (dominant plants)	-
Population	-

- : No information.

Table 6.3.13 Properties of lakes or streams

Stream Name: Terelj River

Country	Mongolia
Location	Terelj
Latitude and longitude	48° 00' 06.12" N, 107° 27' 17.06 " E
Altitude	-
Origin	Natural stream
Water depth	-
Water discharge	Mean: 7.96 m ³ sec ⁻¹
River length	65 km
Drainage area	1220 km ²
The mean height of the river basin	-
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
Lake (flows into)	-
River (meet in 10m from sampling point)	-

Watershed area	-
Surface geology	Main type of bed rocks is granite and drainage area is forest steppe
Soil type Mountain	Brown, marshy
Vegetation (dominant plants)	Grazing crop, Plantain
Population	3400

- : No information.

Table 6.3.14 Properties of lakes or streams

Lake Name: Pandin Lake

Country	Philippines
Location	San Pablo City
Latitude and longitude	-
Altitude	200m
Origin	Natural lake
Area and shape	0.24 km ²
Shore line length	-
Lake hydrologic type	-
Lake trophic type	oligatrophic
Water depth	61.75 m (mean), 63 m (max)
Water volume	6600 m ³
Annual water level fluctuation	-
Annual air temperature	27.6 °C (mean) *1
Precipitation	1859.7 mm *1
Sunshine duration	-
Solar radiation	-
Wind speed	2.0 m/s (mean) *1
Wind direction	ENE (dominat) *1
Residence time of water	-
Lake utilization	domestic, electric power and tourism
River (inflow)	-
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	-

Watershed area	-
Surface geology	-
Vegetation (dominant plants)	-
Land use	-

- : No information.

*1 UP Agrometeorological Station Los Baños College, 2024.

Table 6.3.15 Properties of lakes or streams

Lake Name: Ambulalakao Lake

Country	Philippines
Location	Kabayan, Benguet
Latitude and longitude	-
Altitude	2400 m
Origin	Natural lake
Area and shape	0.006087 km ²
Shore line length	-
Lake hydrologic type	-
Lake trophic type	-
Water depth	1.5 m (mean), 4.0 m (max), 0.2 m (min)
Water volume	11476 m ³
Annual water level fluctuation	-
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
Residence time of water	-
Lake utilization	Tourism
River (inflow)	-
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	-

Watershed area	-
Surface geology	-
Vegetation (dominant plants)	-
Land use	-

- : No information.

Table 6.3.16 Properties of lakes or streams

Stream Name: Pereemnaya River

Country	Russia
Location	Southern Baikal
Latitude and longitude	51°56'N, 105°17'E
Altitude	460 m-1500 m
Origin	Natural stream
Water depth	0.9 m (mean), 2 m (max)
Water discharge	-
River length	42 km
Drainage area	About 360 km ²
The mean height of the river basin	1,260 m
Annual air temperature	1.2°C *1
Precipitation	464 mm/year *1
Sunshine duration	-
Solar radiation	-
Wind speed	Mean: 3.1 m/sec
Wind direction	N
Lake (flows into)	Lake Baikal
River (meet in 10m from sampling point)	-

Watershed area	About 360 km ²
Surface geology	Archaean rocks, presented mainly by gneisses, crystal schists, and pegmatites
Soil type Mountain	-
Vegetation (dominant plants)	The larger part of the basin belongs to the zone of mountain-taiga soils. The lower taiga border begins from the lake's shore, and the upper border rises up to 900-1800 m depending on the slopes exposition. Above, within loach zone, waste-mountain landscapes with undersized motley grass and lichens prevail. Coniferous forest
Population	-

- : No information.

*1 Listvyanka Meteorological station, 2024.

Table 6.3.17 Properties of lakes or streams

Stream Name: Komarovka River

Country	Russia
Location	Primorskli Kray, Ussuriyskii district, near Kamenushka settlement
Latitude and longitude	43°42' N, 132°07'E
Altitude	386 m
Origin	Natural stream
Water depth	Mean 0.8 m Maximum 2 m
Water discharge	Mean:1.55 m ³ /sec, Min:0.66, Max:3.79
River length	67 km
Drainage area	-
The mean height of the river basin	-
Annual air temperature	5.4°C *1
Precipitation	805.1 mm/year*1
Sunshine duration	-
Solar radiation	-
Wind speed	0.7-1.2 (mean 1.0) m/s*1
Wind direction	-
Lake (flows into)	River Razdolnaya, Amurskiy Bay
River (meet in 10m from sampling point)	-

Watershed area	About 1490 km ²
Surface geology	Rocks, sandstones, clayey schist
Soil type Mountain	Mountain- forest brown type of soil
Vegetation (dominant plants)	Komarovka valley is situated near Komarovskiy reserve surrounded by hills which protect the site from winds. The valley is covered by the mixed forest from broad-leaves to conifer.
Population	About 2000

- : No information.

*1 Primorskaya Meteorological station, 2024.

Table 6.3.18 Properties of lakes or streams

Lake Name: Vajiralongkorn Dam

Country	Thailand
Location	Tha Khanon sub-district, Thongpaphum District, Khanchanaburi Province 71180
Latitude and longitude	14°46' N, 98°35' E
Altitude	170 m
Origin	Artificial (Lake by Dam Reservoir area)
Area and shape	3,720 km ² , Multi-shape
Shore line length	-
Lake hydrologic type	Reservoir
Lake trophic type	-
Water depth	137.0-152.0 m (mean: 143.8 m) (2021)
Water volume	3.5134-7.7479 km ³ (mean: 5.2607 km ³) (2021)
Annual water level fluctuation	Depth: 4.2 m (2010)
Annual air temperature	27.0 °C (mean)*1
Precipitation	1690.1 mm*1
Sunshine duration	-
Solar radiation	-
Wind speed	0.17 m/s (mean) *1
Wind direction	-
Residence time of water	165 days
Lake utilization	Irrigation, Electric power generation, Fishery, Flooding protection and Sight seeing
River (inflow)	-
Amount of inlet water	Annual : 6140.5×10^6 m ³ /year, daily : 16.8×10^6 m ³ /day
Amount of outlet water	Annual : 2990.3×10^6 m ³ /year, daily : 8.2×10^6 m ³ /day
Nearest meteorological station	Vajiralongkorn Dam (0.3 km from the site)

Watershed area	3,720 km ²
Surface geology	Ferric Acrisols, USA Texonomy: Hapluf Talff / FAO : Luvisols
Vegetation (dominant plants)	banana, pine apple, pomelo, para rubber tree, tapioca, corn, rice , rambutan, longon, durien (2008)
Land use	Agriculture area 183,832 km ² (8.7%) Residential area 21,941 km ² (1.0%) Forest area 1,788,561 km ² (84.6%) Others 118,807 km ² (5.6%) (2010)

- : No information.

*1 Thongpaphum Meteorological station, 2022.

Table 6.3.19 Properties of lakes or streams

Lake Name: Hoa Binh Reservoir

Country	Vietnam
Location	Hoa Binh Province
Latitude and longitude	-
Altitude	23 m
Origin	Artificial (dam-made lake)
Area and shape	208 km ² -25 km ² *1
Shore line length	208 km-16.7 km *1
Lake hydrologic type	Reservoir
Lake trophic type	Mesotrophic
Water depth	60 m (max: 120 m)
Water volume	9.45 km ³ -2.5 km ³ *1
Annual water level fluctuation	80 m-120 m (Ave.100 m)
Annual air temperature	24.6 °C (mean) *2
Precipitation	2477.8 mm *2
Sunshine duration	123.5 hrs/month (mean) *2
Solar radiation	-
Wind speed	Mean 1.1 m/s *2
Wind direction	NE, SE (dominant) *2
Residence time of water	365 days
Lake utilization	Electric power and flood control
River (inflow)	Da River
Amount of inlet water	-
Amount of outlet water	-
Nearest meteorological station	-

Watershed area	51,700 km ² -13,700 km ² *1
Surface geology	-
Vegetation (dominant plants)	-
Land use	-

- : No information.

*1 Second value is in affected area of reservoir.

*2 Hoa Binh, 2022.

Table 6.4.1 Result of Inland Aquatic Environment Monitoring

Duration: 2024.1-2024.12

Country: China

Lake/Stream: (See below)

Mandatory Parameters : 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Chongqing -Jinyunshan Lake	23-Mar-24*3												
	07-Jun-24	20.0	6.28	9.98	0.107	22.21	11.08	1.58	0.01	2.16	1.97	9.29	3.01
	16-Sep-24	29.0	6.39	10.04	0.108	21.06	7.64	1.70	0.09	2.09	2.21	8.87	2.98
	28-Nov-24	15.0	6.59	10.12	0.312	21.93	4.88	1.84	0.18	2.20	2.27	10.01	3.65
	mean*2	21.3	6.40	10.05	0.176	21.73	7.87	1.71	0.09	2.15	2.15	9.39	3.21
Xiamen -Xiaoping Dam	04-Jan-24	15.2	7.41	4.78	0.233	2.52	3.16	2.10	0.03	3.55	2.76	3.33	0.57
	03-Apr-24	21.6	7.69	6.23	0.252	2.29	2.99	3.78	0.02	4.52	3.09	3.54	0.78
	08-Jul-24	28.5	7.63	5.36	0.196	2.56	3.36	3.86	0.12	4.96	1.89	2.42	0.52
	05-Nov-24	21.8	7.52	5.21	0.207	1.67	2.65	2.83	0.02	3.92	2.69	2.82	0.48
	mean*2	21.8	7.55	5.40	0.222	2.26	3.04	3.14	0.05	4.24	2.61	3.03	0.59
Xi'an -Jiwozi River	17-Mar-24	6.0	7.43	6.24	0.310	5.34	2.21	0.72	0.80	1.88	0.51	7.13	0.50
	24-Apr-24	7.0	7.35	5.39	0.360	4.44	3.97	0.62	0.05	1.80	0.97	7.49	1.12
	08-Jul-24	19.0	6.85	4.63	0.150	6.48	2.58	0.48	0.15	0.41	0.52	5.39	0.28
	10-Dec-24	6.0	7.01	6.63	0.200	6.05	5.29	1.30	4.45	0.92	0.49	3.44	0.29
	mean*2	9.5	7.10	5.72	0.255	5.58	3.51	0.78	1.36	1.25	0.62	5.86	0.55
Zhuhai -Zhuxiandong Stream	03-Jan-24	18.4	7.70	7.17	0.480	1.96	2.36	5.73	<0.02*1	7.98	1.23	4.12	1.62
	02-Apr-24	24.6	6.85	7.44	0.474	1.43	1.35	5.20	<0.02*1	9.59	1.35	3.88	1.27
	02-Jul-24	26.2	7.42	7.46	0.413	1.84	2.67	5.70	<0.02*1	7.83	1.49	4.22	1.85
	04-Nov-24	22.0	7.29	6.66	0.420	1.58	2.42	6.56	<0.02*1	7.74	1.12	3.60	1.62
	mean*2	22.8	7.20	7.18	0.447	1.70	2.20	5.80	<0.02*1	8.29	1.30	3.96	1.59

Mandatory Parameters : Once /year						
Site	Sampling Date	Transparency (m)	Water Color	PO ₄ ³⁻ (mg/l)	NO ₂ ⁻ (mg/l)	COD (mg/l)
Chongqing -Jinyunshan Lake	23-Mar-24*3	-	-	-	-	-
	07-Jun-24	1.5	-	-	-	-
	16-Sep-24	2.6	-	-	-	-
	28-Nov-24	0.7	-	-	-	-
	mean	1.6	-	-	-	-
Xiamen -Xiaoping Dam	04-Jan-24	1.7	-	-	0.039	4.0
	03-Apr-24	0.8	-	-	0.036	4.0
	08-Jul-24	0.9	-	-	0.018	6.0
	05-Nov-24	1.2	-	0.007	0.012	9.0
	mean	1.2	-	0.007	0.026	5.8
Xi'an -Jiwozi River	17-Mar-24	-	-	-	-	-
	24-Apr-24	-	-	-	-	-
	08-Jul-24	-	-	-	-	-
	10-Dec-24	-	clear,colorless	<0.051*1	<0.016*1	<4*1
	mean	-	-	<0.051*1	<0.016*1	<4*1
Zhuhai -Zhuxiandong Stream	03-Jan-24	-	-	-	-	-
	02-Apr-24	0.1	-	<0.051*1	<0.016*1	3.0
	02-Jul-24	-	-	-	-	-
	04-Nov-24	-	-	-	-	-
	mean	0.1	-	<0.051*1	<0.016*1	3.0

note

- : No analysis or measurement.

*1: Less than determination limit.

*2: Mean of pH takes an average of hydrogen ion.

*3: No sample due to lake drought.

When the value is under detection limit, it is considered as "0". Then the average and R1R2 were calculated by using it.

		Anion	Cation	R1	Judge	Acalc	R2	Judge
Chongqing -Jinyunshan Lake	23-Mar-24*3	-	-	-	-	-	-	-
	7-Jun-24	793	857	3.9	O	10.7	3.7	O
	16-Sep-24	718	841	7.9	O	10.1	0.3	O
	28-Nov-24	900	964	3.4	O	11.6	6.7	O
Xiamen -Xiaoping	4-Jan-24	396	440	5.3	O	4.8	0.5	O
	3-Apr-24	455	517	6.5	O	5.6	-5.0	O
	8-Jul-24	412	434	2.6	O	5.0	-3.9	O
	5-Nov-24	364	421	7.2	O	4.5	-6.9	O
Xi'an -Jiwozi River	17-Mar-24	477	536	5.8	O	5.9	-3.2	O
	24-Apr-24	534	572	3.4	O	6.3	7.4	O
	8-Jul-24	340	332	-1.3	O	4.1	-5.7	O
	10-Dec-24	448	495	5.0	O	6.1	-4.6	O
Zhuhai -Zhuxiandong Stream	3-Jan-24	735	717	-1.2	O	7.9	4.7	O
	2-Apr-24	690	750	4.2	O	7.7	1.6	O
	2-Jul-24	668	742	5.2	O	7.7	1.8	O
	4-Nov-24	691	678	-0.9	O	7.5	6.0	O

Table 6.4.2 Result of Inland Aquatic Environment Monitoring

Duration: 2024.5-2025.1
Country: Japan
Lake/Stream: Ijira Lake

Mandatory Parameters : 4times/year														
	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	Gran's ANC (mg/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Center (Surface)	22-May-24	19.0	7.12	3.47	0.161	0.147	4.52	0.43	1.67	<0.01*1	1.84	0.26	2.52	1.20
	24-Jul-24	25.5	7.38	3.29	0.161	0.148	4.11	0.35	1.53	<0.01*1	1.76	0.25	2.38	1.14
	22-Oct-24	20.9	6.95	3.69	0.178	0.164	4.30	0.83	1.57	<0.01*1	1.88	0.27	2.78	1.23
	22-Jan-25	6.8	7.14	3.89	0.171	0.164	5.14	0.74	1.80	<0.01*1	1.91	0.22	3.05	1.21
	mean*2	18.1	7.12	3.58	0.167	0.155	4.52	0.59	1.64	<0.01*1	1.85	0.25	2.68	1.19
Center (near bottom)	22-May-24	15.4	6.71	3.56	0.163	0.145	4.47	0.62	1.65	0.03	1.83	0.25	2.59	1.23
	24-Jul-24	18.7	6.49	3.50	0.188	0.173	3.47	0.18	1.54	0.05	1.71	0.32	2.58	1.20
	22-Oct-24	19.7	6.76	3.91	0.198	0.179	4.29	0.82	1.60	0.11	1.90	0.31	2.90	1.33
	22-Jan-25	6.4	7.13	3.90	0.169	0.179	5.14	0.74	1.79	<0.01*1	1.91	0.22	3.06	1.21
	mean*2	15.1	6.72	3.72	0.179	0.169	4.34	0.59	1.65	0.05	1.84	0.27	2.78	1.24
Kamagatani River (Input)	22-May-24	15.6	7.09	3.76	0.154	0.135	5.57	0.89	1.68	<0.01*1	1.95	0.25	2.61	1.35
	24-Jul-24	20.8	7.14	3.67	0.155	0.141	4.84	1.12	1.62	<0.01*1	1.85	0.29	2.53	1.29
	22-Oct-24	20.8	7.13	3.98	0.155	0.140	5.75	1.45	1.69	<0.01*1	2.00	0.27	2.77	1.37
	22-Jan-25	8.0	7.13	3.99	0.135	0.140	6.62	1.17	1.74	<0.01*1	1.95	0.20	2.71	1.40
	mean*2	16.3	7.12	3.85	0.149	0.139	5.69	1.16	1.68	<0.01*1	1.94	0.25	2.65	1.35
Kobora River (Input)	22-May-24	16.5	7.03	3.31	0.142	0.111	4.42	0.60	1.72	<0.01*1	2.18	0.25	1.79	1.25
	24-Jul-24	21.4	7.02	3.17	0.132	0.112	3.72	1.09	1.66	<0.01*1	2.09	0.28	1.68	1.15
	22-Oct-24	21.4	6.98	3.40	0.132	0.114	4.36	1.33	1.75	<0.01*1	2.21	0.25	1.82	1.24
	22-Jan-25	7.4	7.00	3.45	0.126	0.114	4.95	0.93	1.81	<0.01*1	2.17	0.18	1.84	1.28
	mean*2	16.7	7.01	3.33	0.133	0.113	4.36	0.99	1.74	<0.01*1	2.16	0.24	1.78	1.23

Mandatory Parameters : Once/year								Optional Parameters
Site	Sampling Date	Transparency (m)	Water Color (Forel-Ule Scale)	Water Color (sample)	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	DOC (mg/L)	Chl-a (µg/L)
Center (Surface)	22-May-24	3.2	16	clear, colorless	<0.02*1	<0.01*1	0.5	4.0
	24-Jul-24	2.8	16	clear, colorless	-	<0.01*1	-	4.6
	22-Oct-24	2.7	12	clear, colorless	-	<0.01*1	-	5.8
	22-Jan-25	3.3	16	clear, colorless	-	<0.01*1	-	4.8
	mean	3.0	-	-	<0.02*1	<0.01*1	0.5	4.8
Center (near bottom)	22-May-24	-	-	clear, colorless	<0.02*1	<0.01*1	0.5	6.4
	24-Jul-24	-	-	clear, colorless	-	<0.01*1	-	16.1
	22-Oct-24	-	-	clear, colorless	-	<0.01*1	-	6.3
	22-Jan-25	-	-	clear, colorless	-	<0.01*1	-	7.2
	mean	-	-	-	<0.02*1	<0.01*1	0.5	9.0
Kamagatani River (Input)	22-May-24	-	-	clear, colorless	0.02	<0.01*1	0.2	-
	24-Jul-24	-	-	clear, colorless	-	<0.01*1	-	-
	22-Oct-24	-	-	clear, colorless	-	<0.01*1	-	-
	22-Jan-25	-	-	clear, colorless	-	<0.01*1	-	-
	mean	-	-	-	0.02	<0.01*1	0.2	-
Kobora River (Input)	22-May-24	-	-	clear, colorless	<0.02*1	<0.01*1	0.3	-
	24-Jul-24	-	-	clear, colorless	-	<0.01*1	-	-
	22-Oct-24	-	-	clear, colorless	-	<0.01*1	-	-
	22-Jan-25	-	-	clear, colorless	-	<0.01*1	-	-
	mean	-	-	-	<0.02*1	<0.01*1	0.3	-

note
- : No analysis or measurement.
*1: Less than detection limit.
*2: Mean of pH takes an average of hydrogen ion.
When the value is under detection limit, it is considered as "0". Then the average and R1R2 were calculated by using it.
Annual precipitation is 2108.5 mm/year in 2024 (Gifu pref. Meteorological observatory).

		Anion	Cation	R1	Judge		Acalc	R2	Judge
Center (Surface)	22-May-24	309	310	0.2	O		3.6	1.9	O
	24-Jul-24	295	295	0.0	O		3.4	1.8	O
	22-Oct-24	325	329	0.6	O		3.8	1.2	O
	22-Jan-25	340	340	0.1	O		4.0	1.3	O
Center (near bottom)	22-May-24	312	318	1.0	O		3.7	1.6	O
	24-Jul-24	306	313	1.0	O		3.5	0.4	O
	22-Oct-24	345	350	0.7	O		4.0	1.1	O
	22-Jan-25	338	341	0.5	O		4.0	1.0	O
Kamagatani River (Input)	22-May-24	332	332	0.1	O		3.9	2.1	O
	24-Jul-24	319	320	0.1	O		3.7	1.1	O
	22-Oct-24	345	345	-0.1	O		4.1	1.4	O
	22-Jan-25	340	340	0.0	O		4.1	1.3	O
Kobora River (Input)	22-May-24	292	293	0.2	O		3.4	1.6	O
	24-Jul-24	274	276	0.4	O		3.2	0.5	O
	22-Oct-24	294	295	0.2	O		3.5	0.9	O
	22-Jan-25	295	296	0.1	O		3.5	0.7	O

Table 6.4.3 Result of Inland Aquatic Environment Monitoring

Duration: 2024.6-2024.10
 Country: Japan
 Lake/Stream: Futago-ike Lake (Oike and Meike)

Mandatory Parameters : 3 times/year														
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	Gran's ANC (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Oike (center) surface	26-Jun-24	12.8	6.92	1.75	0.126	0.116	0.95	0.82	0.35	<0.02*1	1.02	0.25	1.59	0.18
	27-Aug-24	16.9	6.99	1.85	0.140	0.120	0.95	0.91	0.34	<0.02*1	1.23	0.27	1.94	0.19
	28-Oct-24	9.8	7.11	1.97	0.149	0.134	0.99	0.76	0.35	<0.02*1	1.26	0.29	2.06	0.19
	mean*2	13.2	7.00	1.86	0.138	0.123	0.96	0.83	0.34	<0.02*1	1.17	0.27	1.86	0.19
Oike (center) near bottom	26-Jun-24	6.5	6.96	2.01	0.148	0.139	1.05	1.09	0.40	<0.02*1	1.20	0.28	1.93	0.21
	27-Aug-24	6.9	6.98	2.14	0.155	0.138	1.05	1.10	0.39	<0.02*1	1.45	0.29	2.25	0.23
	28-Oct-24	7.2	7.05	2.12	0.155	0.142	1.01	0.90	0.38	<0.02*1	1.37	0.30	2.21	0.22
	mean*2	6.9	7.00	2.09	0.153	0.139	1.03	1.03	0.39	<0.02*1	1.34	0.29	2.13	0.22
Meike (center) surface	26-Jun-24	16.2	5.82	0.49	0.027	0.009	0.57	<0.1*1	0.37	<0.02*1	0.39	0.14	0.26	0.07
	27-Aug-24	20.7	6.05	0.44	0.028	0.010	0.46	<0.1*1	0.34	<0.02*1	0.57	0.10	0.26	0.07
	28-Oct-24	11.4	5.77	0.41	0.024	0.010	0.34	<0.1*1	0.37	<0.02*1	0.63	0.00	0.21	0.00
	mean*2	16.1	5.87	0.45	0.026	0.010	0.46	<0.1*1	0.36	<0.02*1	0.53	0.08	0.24	0.05
Meike (center) near bottom	26-Jun-24	12.9	5.65	0.56	0.025	0.011	0.62	<0.1*1	0.35	<0.02*1	0.37	0.18	0.28	0.07
	27-Aug-24	17.5	6.08	0.48	0.029	0.011	0.48	<0.1*1	0.42	<0.02*1	0.79	0.06	0.26	0.07
	28-Oct-24	11.4	5.84	0.43	0.028	0.010	0.35	<0.1*1	0.39	<0.02*1	0.64	0.06	0.21	0.00
	mean*2	13.9	5.82	0.49	0.027	0.011	0.48	<0.1*1	0.39	<0.02*1	0.60	0.10	0.25	0.05

Mandatory Parameters : Once/year										Optional Parameters	
Site	Sampling Date	Transparency (m)	Water Color (Lake)	Water Color (Sample)	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	DOC (mg/L)	COD (mg/L)	D-Al (mg/L)	Chl-a (µg/L)	
Oike (center) surface	26-Jun-24	9.0	pale blue-green	clear, colorless	<0.01*1	<0.01*1	0.7	2.0	0.025	0.2	
	27-Aug-24	8.8	clear, colorless	clear, colorless	<0.01*1	<0.01*1	1.0	1.9	0.014	0.6	
	28-Oct-24	7.8	clear, colorless	clear, colorless	<0.01*1	<0.01*1	0.9	2.0	0.015	1.3	
	mean	8.5	-	-	<0.01*1	<0.01*1	0.9	2.0	0.018	0.7	
Oike (center) near bottom	26-Jun-24	-	-	clear, colorless	<0.01*1	<0.01*1	0.7	2.1	0.019	0.3	
	27-Aug-24	-	-	clear, colorless	<0.01*1	<0.01*1	1.1	2.1	0.015	0.9	
	28-Oct-24	-	-	clear, colorless	<0.01*1	<0.01*1	1.1	2.4	0.016	2.6	
	mean	-	-	-	<0.01*1	<0.01*1	1.0	2.2	0.017	1.3	
Meike (center) surface	26-Jun-24	1.7	pale green	clear, colorless	<0.01*1	<0.01*1	2.4	8.1	0.058	22.3	
	27-Aug-24	1.8	green	clear, colorless	<0.01*1	<0.01*1	5.4	11.6	0.018	38.8	
	28-Oct-24	1.8	green	clear, colorless	<0.01*1	<0.01*1	7.3	16.7	0.013	48.8	
	mean	1.8	-	-	<0.01*1	<0.01*1	5.0	12.1	0.029	36.6	
Meike (center) near bottom	26-Jun-24	-	-	clear, colorless	<0.01*1	<0.01*1	2.5	8.7	0.135	24.0	
	27-Aug-24	-	-	clear, colorless	<0.01*1	<0.01*1	5.5	13.7	0.026	62.6	
	28-Oct-24	-	-	clear, colorless	<0.01*1	<0.01*1	7.1	15.7	0.013	50.5	
	mean	-	-	-	<0.01*1	<0.01*1	5.0	12.7	0.058	45.7	

- : No analysis or measurement.

*1: Less than determination limit.

*2: Mean of pH takes an average of hydrogen ion.

When the value is under detection limit, it is considered as "0". Then the average and R1R2 were calculated by using it.

Annual precipitation is 1491.0 mm/year in 2024 (Hara village Meteorological observatory).

		Anion	Cation	R1	Judge			
						Acalc	R2	Judge
Oike (center) surface	26-Jun-24	168	144	-7.7	O	1.7	-1.1	O
	27-Aug-24	183	173	-3.0	O	1.9	2.3	O
	28-Oct-24	191	181	-2.8	O	2.0	1.1	O
Oike (center) near bottom	26-Jun-24	199	173	-7.0	O	2.0	0.4	O
	27-Aug-24	205	201	-1.0	O	2.2	1.9	O
	28-Oct-24	201	195	-1.6	O	2.2	0.7	O
Meike (center) surface	26-Jun-24	49	41	-9.0	O	0.6	6.9	O
	27-Aug-24	47	46	-0.6	O	0.5	10.9	O
	28-Oct-24	41	40	-2.2	O	0.5	10.6	O
Meike (center) near bottom	26-Jun-24	48	43	-5.4	O	0.6	3.1	O
	27-Aug-24	51	55	3.7	O	0.6	12.4	O
	28-Oct-24	46	41	-5.0	O	0.5	10.2	O

Table 6.4.4 Result of Inland Aquatic Environment Monitoring

Duration: 2024.3-2024.11
 Country: Lao PDR
 Lake/Stream: Nam Houm Lake

Mandatory Parameters: 4 times/year													
Site	Sampling Date	Temp. (°C)	pH*2	EC*2 (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Nam Houm Lake	13-Mar-24	26.5	6.40	31	0.8	2.46	0.24	0.24	0.03	2.40	2.28	12.0	1.38
	20-Jun-24	26.7	6.39	35	0.7	1.55	0.17	1.66	0.02	1.92	1.90	8.75	1.34
	12-Sep-24	26.7	6.41	34	0.7	1.76	0.21	1.45	0.02	3.88	1.72	7.72	0.98
	24-Nov-24	26.7	6.41	36	0.7	0.63	0.03	4.34	0.07	12.0	1.03	4.59	0.73
	mean*1	26.7	6.40	34	0.724	1.60	0.16	1.92	0.04	5.04	1.73	8.26	1.11

Mandatory Parameters: Once/year							Optional Parameters	
Site	Sampling Date	Transparency (m)	Water Color	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	COD (mg/L)	DO*2 (mg/L)	T-P (mg/L)
Nam Houm Lake	13-Mar-24	-	-	0.001	1.25	17.1	7.2	0.02
	20-Jun-24	-	-	0.001	1.26	18.6	7.6	0.01
	12-Sep-24	-	-	0.001	1.24	17.6	7.9	0.02
	24-Nov-24	-	-	0.001	1.24	17.1	7.6	0.03
	mean	-	-	0.001	1.25	17.6	7.6	0.02

- : No analysis or measurement.

*1 : Mean of pH takes an average of hydrogen ion.

*2 : Measured on-site

		Anion	Cation	R1	Judge	Acalc	R2	Judge
Nam Houm Lake	13-Mar-24	938	875	-3.5	O	9.61	-52.7	×
	20-Jun-24	761	680	-5.6	O	7.73	-63.8	×
	12-Sep-24	767	680	-6.0	O	7.68	-63.1	×
	24-Nov-24	900	839	-3.5	O	9.05	-59.8	×

Table 6.4.5 Result of Inland Aquatic Environment Monitoring

Duration: 2024.2.-2024.12.

Country: Malaysia

Lake/Stream: (See below)

Mandatory Parameters: 6 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Baru River	6-Feb-24	24.6	7.42	4.16	0.357	1.39	0.49	1.70	0.01	4.55	0.35	2.97	1.53
	9-Apr-24	25.0	7.79	9.11	0.805	1.91	0.69	3.42	0.021	6.71	1.04	6.56	3.14
	4-Jun-24	24.8	7.58	4.97	0.400	2.40	0.48	1.71	0.028	4.68	0.70	2.84	1.54
	13-Aug-24	25.7	7.55	4.58	0.401	1.44	0.62	2.46	0.010	4.91	0.38	3.24	1.69
	1-Oct-24	25.8	7.47	4.85	0.431	1.49	0.42	1.54	<0.003*1	4.39	0.36	3.19	1.67
	3-Dec-24	24.9	6.96	2.51	0.205	0.79	0.95	1.59	<0.003*1	3.43	0.30	1.35	0.71
	mean*2	25.1	7.38	5.03	0.433	1.57	0.61	2.07	0.01	4.78	0.52	3.36	1.71

Mandatory Parameters: 6times/year					
Site	Sampling Date	PO ₄ ³⁻ (mg/L)	TOC (mg/L)	T-P (mg/L)	COD (mg/L)
Baru River	6-Feb-24	<0.10*1	2.9	0.5	8.1
	9-Apr-24	<0.10*1	5.6	0.2	16.6
	4-Jun-24	<0.10*1	3.2	0.3	11.9
	13-Aug-24	<0.10*1	1.4	0.4	5.3
	1-Oct-24	<0.10*1	1.8	1.0	5.7
	3-Dec-24	<0.10*1	1.2	0.8	3.6
	mean	<0.10*1	2.6	0.5	8.5

- : No analysis or measurement.

*1: Less than determination limit.

*2: Mean of pH takes an average of hydrogen ion.

When the value is under detection limit, it is considered as "0". Then the average and R1R2 were calculated by using it.

		Anion	Cation	R1	Judge
Baru River	6-Feb-24	442	482	4.3	O
	9-Apr-24	952	905	-2.5	O
	4-Jun-24	506	491	-1.5	O
	13-Aug-24	510	525	1.4	O
	1-Oct-24	512	497	-1.5	O
	3-Dec-24	282	283	0.2	O

	Acalc	R2	Judge
Baru River	4.9	7.8	O
	9.7	3.2	O
	5.3	3.2	O
	5.5	9.0	O
	5.3	4.0	O
	3.0	9.2	×

Table 6.4.6 Result of Inland Aquatic Environment Monitoring

Duration: 2024.5-2024.10

Country: Mongolia

Lake/Stream: Terelj River

Mandatory Parameters: 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (mcq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Terelj River	8-May-24	11.5	7.36	3.36	0.248	3.00	0.01	0.45	0.01	1.46	0.61	5.20	0.70
	5-Jun-24	9.9	7.47	4.92	0.361	3.80	0.01	0.48	0.01	1.84	0.58	7.30	0.95
	3-Jul-24	14.6	7.54	3.42	0.248	2.86	0.01	0.25	0.01	1.51	0.55	5.64	0.73
	14-Aug-24	14.0	7.49	4.28	0.372	3.62	0.16	0.30	0.01	1.89	0.61	7.16	0.93
	4-Sep-24	10.2	7.51	4.74	0.361	3.51	0.31	0.39	0.01	1.79	0.62	7.14	0.93
	9-Oct-24	4.3	7.69	5.65	0.423	4.62	0.94	0.50	0.02	2.06	0.57	8.36	1.10
	mean*1	10.8	7.50	4.40	0.336	3.57	0.24	0.40	0.01	1.76	0.59	6.80	0.89

Mandatory Parameters : Once/year			
Site	Sampling Date	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)
Terelj River	8-May-24	-	-
	5-Jun-24	-	-
	3-Jul-24	-	-
	14-Aug-24	-	-
	4-Sep-24	-	-
	9-Oct-24	-	-
	mean	-	-

note

- : No analysis or measurement.

*1: Mean of pH takes an average of hydrogen ion.

		Anion	Cation	R1	Judge
Terelj River*2	8-May-24	323	397	10.2	×
	5-Jun-24	454	538	8.5	×
	3-Jul-24	315	422	14.5	×
	14-Aug-24	458	532	7.4	O
	4-Sep-24	450	527	7.9	O
	9-Oct-24	548	613	5.6	O

Acate	R2	Judge
4.0	8.7	O
5.5	5.1	O
4.1	8.7	O
5.4	11.7	×
5.4	6.1	O
6.4	6.3	O

Table 6.4.7 Result of Inland Aquatic Environment Monitoring

Duration: 2024.2-2024.11

Country: Philippines

Lake/Stream: (See below)

Mandatory Parameters: 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Pandin Lake	22-Feb-24	-	7.83	19.11	1.983	1.68	0.85	3.66	<0.03*1	9.05	4.71	17.79	9.29
	16-May-24	-	7.38	19.35	1.864	1.66	0.08	3.54	<0.03*1	9.33	4.32	16.31	9.09
	30-Aug-24	-	8.36	17.08	1.641	2.29	0.10	3.39	0.095	8.75	4.57	13.47	8.52
	21-Nov-24	-	6.82	19.99	1.597	2.90	0.095	3.36	<0.03*1	7.67	4.22	13.87	8.11
	mean*2	-	7.28	18.88	1.771	2.13	0.28	3.49	0.02	8.70	4.45	15.36	8.75
Ambulalakaw Lake	18-Mar-24	-	5.66	3.79	0.017	0.11	< 0.06*1	0.59	0.1	<0.03*1	0.20	0.17	0.07
	26-Jun-24	-	6.36	8.68	0.035	0.10	< 0.06*1	0.45	<0.01*1	0.13	<0.04*1	0.56	0.09
	15-Oct-24	-	5.75	4.87	0.017	0.12	< 0.06*1	0.70	0.12	<0.03*1	0.07	0.19	0.21
	10-Dec-24	-	5.73	4.15	0.037	0.04	< 0.06*1	0.20	<0.01*1	<0.03*1	0.41	0.23	0.21
	mean	-	5.80	5.37	0.03	0.09	< 0.06*1	0.48	0.06	0.03	0.17	0.29	0.15

Mandatory Parameters: Once/year						Optional Parameters		
Site	Sampling Date	Transparency (m)	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	TOC (mg/L)	DOC (mg/L)	Chl-a (µg/L)	COD (mg/L)
Pandin Lake	22-Feb-24	-	<0.3*1	0.05	8.20	1.70	4.40	<10*1
	16-May-24	-	<0.3*1	<0.03*1	8.09	1.73	2.41	<10*1
	30-Aug-24	-	<0.3*1	<0.03*1	8.91	2.67	1.70	<10*1
	21-Nov-24	-	0.35	<0.03*1	1.48	*1	2.48	24.70
	mean	-	0.09	0.01	6.67	1.53	2.75	6.18
Ambulalakaw Lake	18-Mar-24	-	<0.3*1	<0.06*1	-	-	-	-
	26-Jun-24	-	<0.3*1	<0.06*1	-	-	-	-
	15-Oct-24	-	<0.3*1	<0.06*1	-	-	-	-
	10-Dec-24	-	<0.3*1	<0.06*1	-	-	-	-
	mean	-	<0.3*1	<0.06*1	-	-	-	-

note

- : No analysis or measurement.

*1: Less than determination limit.

*2: Mean of pH takes an average of hydrogen ion.

When the value is under detection limit, it is considered as "0". Then the average and R1R2 were calculated by using it.

		Anion	Cation	R1	Judge			
Pandin Lake	22-Feb-24	2136	2165	0.7	O	22.2	7.6	O
	16-May-24	2000	2077	1.9	O	21.0	4.2	O
	30-Aug-24	1786	1876	2.5	O	19.0	5.3	O
	21-Nov-24	1765	1801	1.0	O	18.6	-3.7	O
	mean							
Ambulalakaw Lake	18-Mar-24	35.9	27.6	-12.9	O	0.5	-78.3	×
	26-Jun-24	49.8	41.6	-8.9	O	0.5	-88.7	×
	15-Oct-24	39.2	36.5	-3.5	O	0.5	-80.8	×
	10-Dec-24	43.6	41.1	-3.0	O	0.5	-77.8	×
	mean							

Table 6.4.8 Result of Inland Aquatic Environment Monitoring

Duration: 2024.2-2024.11

Country: Russia

Lake/Stream: (See below)

Mandatory Parameters: 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Pereemnaya River	4-Mar-24	0.2	6.62	5.51	0.131	14.32	0.73	0.12	0.008	1.34	0.63	6.16	0.94
	6-May-24	6.4	6.70	3.50	0.096	7.77	1.12	0.06	0.005	0.66	0.54	3.70	0.70
	15-Jul-24	16.6	6.89	5.38	0.141	14.53	0.38	0.04	0.007	1.06	0.75	5.67	1.10
	10-Oct-24	4.1	6.73	5.07	0.154	11.65	0.59	0.07	0.008	0.93	0.89	5.04	1.00
	mean*1	6.8	6.72	4.86	0.131	12.07	0.70	0.07	0.007	1.00	0.70	5.14	0.93
Komarovka River	12-Feb-24	0.1	6.44	7.96	0.371	8.08	0.16	1.50	0.07	4.07	1.52	7.32	0.52
	8-Apr-24	5.0	6.67	7.73	0.739	7.73	0.66	3.70	0.08	5.15	1.83	9.73	3.07
	11-Jun-24	13.8	6.68	7.47	0.924	7.52	0.31	4.78	0.07	13.02	1.62	11.97	0.50
	10-Sep-24	17.3	6.86	8.21	0.241	7.53	1.30	3.08	0.37	4.25	0.47	4.72	0.36
	11-Nov-24	3.8	6.48	8.20	0.954	1.85	0.20	3.18	0.10	4.15	1.50	13.08	2.38
	mean*1	8.0	6.60	7.91	0.646	6.54	0.53	3.25	0.14	6.13	1.39	9.36	1.37

Mandatory Parameters: Once/year							Optional Parameters			
Site	Sampling Date	Transparency (m)	Water color	COD (mg/L)	NO ₂ ⁻ (mg/L)	PO ₄ ³⁻ (mg/L)	Si (mg/L)	O ₂ (mg/L)	TP (mg/L)	Fe (mg/L)
Pereemnaya River	4-Mar-24	-	colorless	0.7	0.001	0.002	3.85	12.29	0.004	-
	6-May-24	-	light yellow	3.9	0.003	0.004	0.45	9.51	0.009	-
	15-Jul-24	-	colorless	2.0	0.001	0.002	0.99	9.95	0.004	-
	10-Oct-24	-	colorless	3.9	0.002	0.002	1.02	11.39	0.008	-
	mean	-	-	2.6	0.002	0.002	1.58	10.79	0.006	-
Komarovka River	12-Feb-24	-	colorless	2.8	0.007	0.021	5.92	8.75	-	0.15
	8-Apr-24	-	colorless	4.8	0.013	0.009	4.83	9.91	-	0.18
	11-Jun-24	-	colorless	5.9	0.008	0.034	5.58	8.84	-	0.46
	10-Sep-24	-	colorless	6.8	0.011	0.019	4.64	7.39	-	0.56
	11-Nov-24	-	colorless	5.1	0.044	0.029	4.52	7.09	-	0.78
	mean	-	-	5.1	0.017	0.022	5.10	8.40	-	0.43

note

-: No analysis or measurement.

*1: Mean of pH takes an average of hydrogen ion.

#Construction of a new bridge has started in 2021 at the water sampling site on the Pereemnaya River.

Water samples were taken upstream from the construction place, but in winter there was a flooding of a large area around.

Deviations from natural values may be observed in 2021-2022, especially in winter.

		Anion	Cation	R1	Judge			
Pereemnaya River	4-Mar-24	444	460	1.7	O	Acalc	R2	Judge
	6-May-24	278	285	1.3	O	5.75	2.2	O
	15-Jul-24	451	439	-1.3	O	3.53	0.4	O
	10-Oct-24	408	398	-1.3	O	5.65	2.5	O
Komarovka River	12-Feb-24	585	627	3.5	O	5.03	-0.3	O
	8-Apr-24	1016	1013	-0.1	O	7.0	-6.7	O
	11-Jun-24	1221	1250	1.2	O	11.2	18.4	×
	10-Sep-24	507	482	-2.5	O	13.4	28.4	×
	11-Nov-24	1087	1074	-0.6	O	5.9	-16.5	×
						11.5	16.6	×

Table 6.4.9 Result of Inland Aquatic Environment Monitoring

Duration: 2024.2-2024.8
 Country: Thailand
 Lake/Stream: Vajiralongkorn Dam&Resovior

Mandatory Parameters : 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Station1 (Ban Pong Chang)	22-Feb-24	29.0	7.6	12.5	1.15	1.12	0.10	1.10	-	-	-	-	-
	20-Jun-24	30.8	7.9	13.2	1.15	1.35	0.05	0.98	-	-	-	-	-
	22-Aug-24	31.8	7.1	12.3	1.07	1.29	0.11	1.09	-	-	-	-	-
	mean*1	30.5	7.5	12.7	1.12	1.25	0.09	1.05	-	-	-	-	-
Station2 (Ban Pang Pueng)	22-Feb-24	27.5	7.9	11.8	1.13	1.25	0.10	1.06	-	-	-	-	-
	20-Jun-24	30.8	7.7	12.9	1.14	1.47	0.00	0.96	-	-	-	-	-
	22-Aug-24	30.4	6.5	12.1	1.06	1.50	0.25	1.26	-	-	-	-	-
	mean*1	29.6	7.0	12.3	1.11	1.41	0.12	1.09	-	-	-	-	-

Mandatory Parameters : Once/year						
Site	Sampling Date	Transparency (m)	Water color	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	COD (mg/L)
Station1 (Ban Pong Chang)	22-Feb-24	5.0	light green	0.01	-	-
	20-Jun-24	4.0	light green	0.01	-	-
	22-Aug-24	3.3	light green	0.01	-	-
	mean	4.1	-	0.01	-	-
Station2 (Ban Pang Pueng)	22-Feb-24	5.0	light green	0.01	-	-
	20-Jun-24	4.4	light green	0.01	-	-
	22-Aug-24	3.0	light green	0.01	-	-
	mean	4.1	-	0.01	-	-

note

- : No analysis or measurement.

*1: Mean of pH takes an average of hydrogen ion.

	Date	Anion	Cation	R1	Judge	Acalc	R2	Judge
Station1 (Ban Pong Chang)	22-Feb-24	1201	-	-	-	-	-	-
	20-Jun-24	1202	-	-	-	-	-	-
	22-Aug-24	1125	-	-	-	-	-	-
Station2 (Ban Pang Pueng)	22-Feb-24	1183	-	-	-	-	-	-
	20-Jun-24	1198	-	-	-	-	-	-
	22-Aug-24	1131	-	-	-	-	-	-

Table 6.4.10 Result of Inland Aquatic Environment Monitoring

Duration: 2024.3-2024.12
Country: Vietnam
Lake/Stream: Hoa Binh Reservoir

Mandatory Parameters: 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Hoa Binh Reservoir	15-Mar-24	22.3	7.25	14.96	1.259	4.72	0.90	0.40	0.10	2.04	1.25	21.33	2.16
	15-Jun-24	31.2	7.46	15.66	1.319	3.66	1.52	1.94	0.10	2.74	1.69	23.14	2.13
	15-Sep-24	29.5	7.65	15.82	1.366	4.52	2.06	0.94	0.08	2.25	1.85	24.12	2.19
	15-Dec-24	25.3	7.60	16.12	1.345	4.93	3.91	1.51	0.10	2.84	1.93	23.88	2.06
	mean*1	27.1	7.46	15.64	1.322	4.46	2.10	1.20	0.09	2.47	1.68	23.12	2.14

Mandatory Parameters: Once/year							
Site	Sampling Date	Transparency (m)	Water Color (PtCo unit)	F ⁻ (mg/L)	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	COD (mg/L)
Hoa Binh Reservoir	15-Mar-24	1.2	5	0.083	-	0.010	5.5
	15-Jun-24	1.2	6	0.128	-	0.117	5.2
	15-Sep-24	1.2	6	0.098	-	0.018	6.1
	15-Dec-24	1.2	5	0.110	0.029	0.050	5.7
	mean	1.2	-	0.105	0.029	0.049	5.6

note
- : No analysis or measurement.
*1 : Mean of pH takes an average of hydrogen ion.

		Anion	Cation	R1	Judge			
Hoa Binh Reservoir	15-Mar-24	1383	1369	-0.5	O	Acalc	R2	Judge
	15-Jun-24	1477	1498	0.7	O	14.6	-1.2	O
	15-Sep-24	1520	1533	0.4	O	15.9	0.7	O
	15-Dec-24	1555	1539	-0.5	O	16.3	1.5	O
						16.6	1.6	O

Table 6.4.11 Summary of Inland Aquatic Environment Monitoring

Mandatory Parameters : 4 times/year														
Country	Location	Site	pH	EC (mS/m)	Alkalinity (meq/L)	Gran's ANC (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Cambodia	Kampong Speu province	Sras Srang Lake	-	-	-	-	-	-	-	-	-	-	-	-
China	Chongqing	Jinyunshan Lake*2	6.40	10.05	0.176	-	21.73	7.87	1.71	0.09	2.15	2.15	9.39	3.21
	Xiamen	Xiaoping Dam*3	7.55	5.40	0.222	-	2.26	3.04	3.14	0.05	4.24	2.61	3.03	0.59
	Xi'an	Jiwozi River*3	7.10	5.72	0.255	-	5.58	3.51	0.78	1.36	1.25	0.62	5.86	0.55
	Zhuhai	Zhuxiandong*3 Stream	7.20	7.18	0.447	-	1.70	2.20	5.80	<0.02*1	8.29	1.30	3.96	1.59
Indonesia	Bandung	Patengang Lake	-	-	-	-	-	-	-	-	-	-	-	-
	Sukabumi, West Java	Gunung Lake	-	-	-	-	-	-	-	-	-	-	-	-
Japan	Gifu pref.	Ijira Lake*3 (Center, surface)	7.12	3.58	0.167	0.16	4.52	0.59	1.64	<0.01*1	1.85	0.25	2.68	1.19
	Nagano pref.	Futago-ike Lake(Oike)*2 (Center, surface)	7.00	1.86	0.138	0.12	0.96	0.83	0.34	<0.02*1	1.17	0.27	1.86	0.19
		Futago-ike Lake(Meike)*2 (Center, surface)	5.87	0.45	0.026	0.01	0.46	<0.1*1	0.36	<0.02*1	0.53	0.08	0.24	0.05
Lao PDR	Vientiane province	Nam Houm Lake*3	6.40	34	0.724	-	1.60	0.16	1.92	0.04	5.04	1.73	8.26	1.11
Malaysia	-	Baru River*5	7.38	5.03	0.433	-	1.57	0.61	2.07	0.01	4.78	0.52	3.36	1.71
	-	Kuala Tahan	-	-	-	-	-	-	-	-	-	-	-	-
Mongolia	Terelj	Terelj River*5	7.50	4.40	0.336	-	3.57	0.24	0.40	0.01	1.76	0.59	6.80	0.89
Philippines	San Pablo City	Pandin Lake*3	7.28	18.88	1.771	-	2.13	0.28	3.49	0.02	8.70	4.45	15.36	8.75
	Benguet	Ambulalakaw Lake*3	5.80	5.37	0.027	-	0.09	<0.06*1	0.48	0.06	0.03	0.17	0.29	0.15
Russia	Southern Baikal	Pereemnya River *3	6.72	4.86	0.131	-	12.07	0.70	0.07	0.01	1.00	0.70	5.14	0.93
	Primorskaya	Komarovka River*4	6.60	7.91	0.646	-	6.54	0.53	3.25	0.14	6.13	1.39	9.36	1.37
Thailand	Kanchanaburi Province	Vajiralongkorn Dam*2 (Ban Pong Chang)	7.53	12.69	1.118	-	1.41	0.12	1.09	-	-	-	-	-
		Vajiralongkorn Dam*2 (Ban Pang Pueng)	7.01	12.25	1.108	-	1.41	0.12	1.09	-	-	-	-	-
Vietnam	Hoa Binh Province	Hoa Binh Reservoir*3	7.46	15.64	1.322	-	4.46	2.10	1.20	0.09	2.47	1.68	23.12	2.14

Country	Location	Site	Mandatory Parameters : Once/year				
			Transparency (m)	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	DOC (mg/L)	COD (mg/L)
Cambodia	Kampong Speu province	Sras Srang Lake	-	-	-	-	-
China	Chongqing	Jinyunshan Lake*2	1.6	-	-	-	-
	Xiamen	Xiaoping Dam*3*6	1.2	0.007	0.026	-	-
	Xi'an	Jiwozi River*3	-	<0.051*1	<0.016*1	-	<4*1
	Zhuhai	Zhuxiandong*3 Stream	0.1	<0.051*1	<0.016*1	-	3.0
Indonesia	Bandung	Patengang Lake	-	-	-	-	-
	Sukabumi, West Java	Gunung Lake	-	-	-	-	-
Japan	Gift pref.	Ijira Lake*3*6 (Center, surface)	3.0	<0.02*1	<0.01*1	0.5	4.8
	Nagano pref.	Futago-ike Lake(Oike)*2 (Center, surface)	8.5	<0.01*1	<0.01*1	0.9	2.0
		Futago-ike Lake(Meike)*2 (Center, surface)	1.8	<0.01*1	<0.01*1	5.0	12
Lao PDR	Vientiane province	Nam Houm Lake*3*6	-	0.001	1.2	-	17.6
Malaysia	-	Baru River*5	-	<0.10*1	-	-	8.5
	-	Kuala Tahan	-	-	-	-	-
Mongolia	Terej	Terej River*5	-	-	-	-	-
Philippines	San Pablo City	Pandin Lake*3	-	0.09	0.01	1.53	6.18
	Benguet	Ambulalakaw Lake*3	-	*1	*1	-	-
Russia	Southern Baikal	Pereemnya River *3*6	-	0.002	0.002	-	2.6
	Primorskaya	Komarovka River*4	-	0.022	0.017	-	5.1
Thailand	Kanchanaburi Province	Vajiralongkorn Dam*2 (Ban Pong Chang)	4.1	0.010	-	-	-
		Vajiralongkorn Dam*2 (Ban Pang Pueng)	4.1	0.010	-	-	-
Vietnam	Hoa Binh Province	Hoa Binh Reservoir*3*6	1.2	0.029	0.049	-	5.6

note

- : No analysis or measurement.

*1: Less than determination/detection limit.

*2: Surveyed 3 times a year.

*3: Surveyed 4 times a year.

*4: Surveyed 5 times a year.

*5: Surveyed 6 times a year.

*6: NO₂⁻ was surveyed 4 times a year.

Table 6.5.1 Annual mean values of each parameters from 2012 to 2017 at Sras Srang Lake (Cambodia)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2012	6.46	0.88	0.037	-	0.08	0.06	1.65	0.04	0.94	0.13	0.27	0.16	0.7	-	-	-	-
2013	5.74	0.93	0.034	-	0.05	0.28	1.39	0.02	0.94	0.12	0.29	0.13	0.7	-	-	-	-
2014	5.84	0.96	0.035	-	0.06	0.60	1.38	0.12	1.03	0.31	0.26	0.12	0.7	-	-	-	-
2015	5.81	0.98	0.040	-	0.09	0.22	1.17	0.07	0.80	0.19	0.37	0.22	0.8	-	-	-	-
2016	5.95	0.92	0.028	-	0.10	0.30	1.10	0.09	0.91	0.14	0.27	0.13	0.7	-	-	-	-
2017	6.04	0.97	0.034	-	0.07	0.06	1.12	0.01	0.67	0.08	0.17	0.09	0.8	-	-	-	-

Table 6.5.2 Annual mean values of each parameters from 2001 to 2024 at Jinyunshan Lake (China)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2001	7.50	9.05	-	-	26.05	7.68	2.58	0.65	1.78	1.58	6.63	2.63	-	-	-	-	-
2002	6.12	9.52	-	-	26.36	7.99	2.53	0.09	2.50	1.79	9.08	3.28	-	-	-	-	-
2003	6.55	9.79	0.210	-	23.21	5.16	2.68	0.21	2.60	1.72	9.03	3.30	0.9	-	-	-	-
2004	6.34	9.61	0.075	-	25.72	7.94	1.74	0.30	1.98	1.65	9.66	2.71	2.6	-	-	-	7.6
2005	6.04	10.21	0.073	-	28.12	8.16	2.63	0.04	2.70	1.82	9.36	3.22	3.7	*1	*1	-	2.9
2006	6.36	11.92	0.113	-	32.65	9.53	3.05	0.11	2.96	2.27	11.05	3.82	5.0	*1	*1	-	3.2
2007	6.24	12.35	0.086	-	37.19	10.21	3.12	0.12	2.81	2.18	11.24	3.81	3.0	*1	*1	-	4.4
2008	5.42	12.20	0.066	-	33.26	12.78	2.77	0.16	2.65	1.98	11.34	3.77	3.7	*1	*1	-	2.9
2009	5.84	11.18	0.048	-	29.27	8.29	2.95	0.23	2.59	1.96	10.15	3.63	2.3	*1	*1	-	<10*1
2010	5.76	12.79	0.157	-	34.55	10.62	3.00	0.14	2.90	2.07	11.72	3.98	3.4	*1	*1	-	<10*1
2011	5.25	14.17	0.064	-	39.63	15.15	3.76	0.12	2.71	2.27	12.77	3.90	4.5	*1	*1	-	<10*1
2012	5.47	13.54	0.052	-	40.79	9.88	3.71	0.14	3.08	2.38	12.79	3.98	3.1	*1	*1	-	<10*1
2013	6.03	7.12	0.082	-	20.74	3.93	0.68	0.12	0.75	0.77	8.75	0.98	3.5	*1	*1	-	<10*1
2014	5.41	12.39	0.040	-	34.94	14.30	2.65	0.09	2.54	2.14	11.84	3.77	6.3	*1	*1	-	-
2015	6.48	11.35	0.145	-	29.41	10.09	2.24	0.25	2.25	2.01	11.62	3.46	0.9	*1	*1	-	<10*1
2016	6.49	12.17	0.266	-	28.60	11.72	2.97	*1	2.91	2.30	12.66	3.59	2.5	*1	*1	-	<10*1
2017	6.48	11.16	0.122	-	27.27	11.84	2.70	0.02	2.63	1.98	11.32	3.24	2.0	*1	*1	-	<10*1
2018	6.74	10.99	0.223	-	26.04	7.25	2.28	0.62	2.48	1.81	9.96	3.00	2.2	*1	*1	-	<10*1
2019	6.44	10.63	0.147	-	26.54	10.76	2.10	0.03	2.48	1.84	9.96	3.41	2.3	*1	*1	-	<10*1
2020	6.61	9.98	0.147	-	24.03	10.00	1.75	0.01	2.12	2.01	9.30	3.26	2.4	*1	*1	-	4.0
2021	6.27	9.52	0.129	-	23.36	8.47	1.58	0.06	1.96	1.61	8.49	2.70	1.9	<0.05*1	*1	-	4.0
2022	6.63	9.27	0.186	-	22.44	6.01	1.52	0.09	2.10	1.85	8.99	3.13	1.0	<0.05*1	*1	-	4.5
2023	6.43	9.50	0.092	-	23.29	11.21	1.62	0.02	1.86	2.39	9.19	3.25	1.2	<0.05*1	*1	-	6.5
2024	6.40	10.05	0.176	-	21.73	7.87	1.71	0.09	2.15	2.15	9.39	3.21	1.6	-	-	-	-

Table 6.5.3 Annual mean values of each parameters from 2001 to 2024 at Xiaoping Dam (China)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2001	7.21	-	-	-	1.43	1.30	2.18	-	-	-	-	-	-	-	-	-	-
2002	7.39	7.00	-	-	4.67	6.66	2.82	0.20	7.29	2.14	2.29	0.82	-	-	-	-	-
2003	6.73	7.19	0.193	-	2.68	5.02	5.91	0.17	6.53	2.06	2.35	0.86	-	-	-	-	1.8
2004	7.34	5.57	0.242	-	2.68	7.83	4.35	0.18	6.70	2.18	2.92	0.64	-	0.020	0.008	-	2.1
2005	6.73	4.62	0.232	-	2.07	2.83	3.94	0.05	4.77	2.37	2.95	0.61	0.9	0.020	0.008	-	1.3
2006	6.81	5.27	0.190	-	2.46	2.52	5.13	0.19	6.02	2.33	3.19	0.66	0.9	0.020	0.008	-	0.7
2007	7.07	7.32	0.110	-	2.67	2.67	5.13	0.15	3.64	1.63	2.82	0.54	-	-	0.006	-	1.8
2008	6.73	5.66	0.124	-	4.49	2.67	12.95	0.14	4.97	2.46	3.90	0.56	-	0.010	0.007	-	1.9
2009	6.72	7.53	0.193	-	3.14	2.67	7.44	0.10	6.91	3.52	2.43	0.82	-	0.010	0.008	-	3.5
2010	6.63	6.19	0.190	-	2.70	3.70	5.54	0.11	5.80	2.53	2.51	0.69	1.1	0.020	0.015	-	1.9
2011	6.78	4.85	0.168	-	2.60	2.89	3.14	0.09	3.50	2.10	2.57	0.52	0.7	0.050	0.022	-	1.8
2012	6.94	5.08	0.155	-	2.92	3.46	3.10	0.06	3.78	2.50	2.51	0.68	1.2	0.030	0.031	-	2.5
2013	6.80	5.52	0.220	-	2.71	3.42	2.77	0.05	3.80	2.83	3.20	0.76	0.9	0.024	0.029	-	1.7
2014	7.18	5.79	0.219	-	3.71	3.53	2.64	0.05	3.09	2.61	3.70	0.84	0.9	0.041	0.020	-	1.5
2015	7.01	6.01	0.179	-	3.99	3.17	3.43	0.05	3.65	2.64	3.61	0.66	0.7	0.045	0.014	-	1.2
2016	6.65	5.98	0.280	-	2.39	2.61	2.87	0.11	4.43	2.36	3.52	0.66	1.2	0.042	0.017	-	0.9
2017	7.08	5.76	0.259	-	3.17	3.33	2.85	0.08	4.56	2.47	3.96	0.62	1.5	0.032	0.025	-	1.1
2018	7.31	5.68	0.287	-	2.17	2.53	2.32	0.29	3.99	2.19	3.54	0.57	0.8	0.032	0.049	-	1.9
2019	7.23	5.61	0.269	-	2.42	2.56	2.76	0.07	3.40	2.41	3.96	0.64	0.9	0.032	0.156	-	2.0
2020	7.36	5.91	0.282	-	2.21	2.46	2.48	0.03	4.22	2.66	3.62	0.66	1.1	0.021	0.052	-	2.0
2021	7.43	5.81	0.294	-	2.08	2.43	2.47	0.08	4.22	2.71	3.79	0.65	0.9	0.018	0.026	-	1.7
2022	7.35	6.38	0.235	-	2.00	2.56	2.48	0.04	4.65	2.85	4.38	0.71	1.2	0.015	0.049	-	10.0
2023	7.41	6.19	0.161	-	5.48	3.27	4.81	0.13	5.01	2.69	3.13	0.64	0.9	0.005	0.015	-	6.8
2024	7.55	5.40	0.222	-	2.26	3.04	3.14	0.05	4.24	2.61	3.03	0.59	1.2	0.007	0.026	-	5.8

- : No analysis or measurement.

*1: Less than determination/detection limit.

Table 6.5.4 Annual mean values of each parameters from 2001 to 2024 at Jiwozi River (China)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2001	7.11	4.50	0.225	-	10.03	1.47	1.06	0.04	1.90	0.70	8.83	1.38	-	-	-	-	-
2002	7.60	8.47	0.110	-	12.16	1.70	1.80	*1	2.80	1.20	12.73	1.72	-	-	-	-	-
2003	7.54	7.83	0.140	-	11.44	2.01	1.63	*1	2.08	0.95	12.03	1.59	-	-	-	-	-
2004	7.20	6.63	0.243	-	11.68	2.30	1.06	*1	1.79	0.68	9.04	1.35	-	*1	*1	-	3.2
2005	6.99	7.99	0.208	-	15.31	0.81	1.74	0.06	1.77	0.72	7.44	1.35	-	*1	0.090	-	1.6
2006	6.80	7.59	0.238	-	11.80	1.87	1.21	0.07	1.93	0.65	7.64	1.11	-	0.030	0.003	-	2.8
2007	7.32	8.86	0.250	-	16.68	3.46	1.31	0.13	2.09	0.96	11.00	0.96	-	*1	*1	-	2.2
2008	7.05	8.42	0.248	-	13.92	1.89	1.51	0.30	1.43	1.05	9.38	1.20	-	<0.01*1	<0.003*1	-	2.5
2009	6.98	8.28	0.278	-	15.51	2.07	1.34	0.14	1.88	1.04	9.85	1.38	-	<0.01*1	<0.003*1	-	2.5
2010	7.33	8.11	0.280	-	13.92	2.83	1.27	*1	1.22	0.81	10.49	1.35	-	<0.01*1	<0.003*1	-	3.0
2011	6.85	6.83	0.275	-	12.89	0.87	0.51	*1	0.74	0.84	8.09	2.01	-	<0.01*1	<0.003*1	-	3.0
2012	6.83	6.95	0.275	-	12.97	0.96	0.57	*1	0.70	0.83	7.80	2.01	-	<0.01*1	<0.003*1	-	4.0
2013	6.86	8.92	0.333	-	15.01	2.39	3.16	*1	3.50	1.37	11.07	1.69	-	<0.01*1	<0.003*1	-	5.0
2014	7.05	8.24	0.273	-	15.85	1.28	1.32	0.27	1.93	1.06	9.15	1.61	-	<0.01*1	<0.003*1	-	4.0
2015	7.09	7.27	0.263	-	11.32	6.45	1.55	*1	4.12	0.95	9.19	1.28	-	<0.01*1	<0.003*1	-	3.0
2016	7.10	7.60	0.295	-	11.70	2.86	0.82	*1	2.29	0.65	10.07	1.11	-	<0.01*1	<0.003*1	-	*1
2017	6.99	6.87	0.335	-	9.02	2.09	1.02	0.03	2.02	0.82	8.60	1.41	-	<0.01*1	<0.003*1	-	*1
2018	6.95	6.33	0.330	-	8.59	0.77	1.20	0.02	1.81	0.85	7.62	1.48	-	<0.01*1	<0.003*1	-	*1
2019	7.65	6.22	0.295	-	6.80	5.10	1.22	0.28	1.89	0.99	7.48	1.06	-	<0.01*1	<0.003*1	-	<0.5*1
2020	7.13	5.40	0.353	-	5.52	0.75	0.74	0.00	1.69	0.73	7.47	1.13	-	<0.01*1	<0.003*1	-	<5*1
2021	6.74	5.50	0.295	-	5.86	3.71	0.70	0.10	1.41	0.65	7.93	0.76	-	<0.051*1	<0.016*1	-	<5*1
2022	7.43	5.62	0.323	-	4.82	2.25	0.77	0.00	1.41	0.84	7.64	0.84	-	<0.05*1	<0.02*1	-	<4*1
2023	7.06	4.53	0.160	-	5.69	2.59	1.59	0.34	0.77	0.45	5.34	0.58	-	<0.051*1	<0.016*1	-	<4*1
2024	7.10	5.72	0.255	-	5.58	3.51	0.78	1.36	1.25	0.62	5.86	0.55	-	<0.051*1	<0.016*1	-	<4*1

Table 6.5.5 Annual mean values of each parameters from 2004 to 2024 at Zhuxiandong stream and from 2001 to 2003 at Zhuxiandong reservoir(China)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2001	7.62	-	-	-	17.70	0.63	43.13	0.20	-	-	-	-	-	-	-	-	-
2002	7.93	6.70	0.963	-	19.89	0.83	23.80	0.23	7.27	1.57	17.00	2.50	-	-	-	-	-
2003	7.82	7.54	1.603	-	17.50	0.29	19.59	0.17	7.34	1.96	16.80	2.36	-	-	0.029	-	1.7
2004	7.12	8.49	0.645	-	5.47	1.90	6.03	*1	8.95	1.88	5.41	2.84	-	-	*1	-	1.1
2005	6.97	9.53	0.133	-	5.83	1.70	6.73	*1	8.90	1.60	4.63	2.65	1.3	*1	*1	-	0.9
2006	7.18	7.35	0.225	-	2.60	1.15	4.50	1.10	5.40	1.13	4.38	1.58	1.3	*1	*1	-	1.0
2007	7.28	7.80	0.240	-	3.61	1.77	5.09	0.10	6.01	1.22	3.65	1.38	1.3	*1	*1	-	1.1
2008	7.18	7.58	0.165	-	2.95	2.36	4.90	0.05	6.83	1.31	4.40	1.76	1.3	*1	*1	-	1.1
2009	7.16	7.74	0.367	-	2.97	4.20	6.30	0.06	7.86	1.57	2.77	1.96	1.1	*1	*1	-	1.3
2010	7.22	6.86	0.393	-	2.49	2.50	5.15	0.08	6.98	1.23	4.30	1.72	1.1	*1	*1	-	1.4
2011	7.16	7.42	0.467	-	1.95	1.00	4.33	0.09	7.70	1.15	4.68	1.69	1.1	*1	*1	-	1.3
2012	7.26	7.62	0.499	-	2.98	2.00	5.38	0.09	7.50	1.69	4.81	1.88	1.1	*1	*1	-	1.2
2013	7.20	7.87	0.500	-	3.81	4.11	4.66	0.07	6.95	1.77	4.91	1.91	1.2	*1	*1	-	1.1
2014	7.19	8.27	0.502	-	4.64	4.80	3.75	0.02	6.42	1.69	5.22	2.53	-	-	-	-	-
2015	6.38	6.73	0.496	-	2.47	1.31	2.50	0.44	7.48	1.84	2.84	1.14	-	-	-	-	-
2016	6.99	7.45	0.496	-	1.85	2.01	3.69	0.03	6.70	1.53	4.35	1.64	-	-	-	-	-
2017	7.29	15.17	0.492	-	8.15	3.33	14.38	0.15	11.32	1.76	14.03	2.87	-	-	-	-	-
2018	7.19	8.63	0.630	-	2.11	2.11	5.80	0.03	7.58	1.38	6.05	2.25	-	*1	-	-	8.5
2019	7.11	8.05	0.524	-	2.40	2.62	5.63	0.00	7.32	1.36	5.11	1.99	-	0.020	0.003	-	2.1
2020	7.23	7.34	0.448	-	1.85	1.83	5.39	0.00	7.79	1.26	4.47	1.65	-	0.020	0.004	-	1.7
2021	6.97	7.25	0.400	-	2.39	3.45	5.86	0.01	7.91	1.42	3.75	1.47	1.0	0.020	0.004	-	1.7
2022	7.11	6.36	0.340	-	1.92	2.83	5.09	0.01	7.91	1.60	2.54	0.99	0.3	0.010	*1	-	6.0
2023	7.25	6.50	0.359	-	1.94	3.06	5.19	0.01	7.91	1.76	3.03	1.13	0.3	0.010	0.012	-	2.6
2024	7.20	7.18	0.447	-	1.70	2.20	5.80	<0.02*1	8.29	1.30	3.96	1.59	0.1	<0.051*1	<0.016*1	-	3.0

Table 6.5.6 Annual mean values of each parameters from 2001 to 2019 at Patenggang Lake (Indonesia)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2001	7.90	7.28	0.488	-	4.33	0.07	8.19	0.13	4.90	0.54	6.32	2.18	-	-	-	-	-
2002	8.46	5.83	0.255	-	7.33	0.06	6.30	0.17	4.60	0.71	4.03	1.93	-	-	-	-	-
2003	7.34	6.58	0.460	-	7.76	0.19	7.50	0.53	4.30	0.49	5.17	2.53	0.6	0.207	*1	12.4	-
2004	7.29	5.89	0.340	-	2.65	0.03	3.85	0.02	2.10	0.85	5.75	2.20	0.6	0.014	*1	7.3	-
2005	7.19	6.71	0.459	-	8.83	0.23	2.30	0.43	4.04	1.87	5.70	2.70	0.1	0.010	*1	10.9	-
2006	7.49	5.74	0.414	-	3.80	0.47	2.58	0.39	2.87	1.70	5.70	1.43	0.1	0.085	0.016	8.1	-
2007	7.17	6.75	0.420	-	7.45	0.32	2.59	0.41	3.40	1.53	5.75	1.47	0.1	0.038	0.012	3.8	-
2008	6.76	6.43	0.448	-	7.89	0.07	2.18	0.05	2.84	1.29	6.18	2.39	0.9	0.202	0.019	10.2	-
2009	6.99	6.96	0.490	-	5.16	0.58	2.24	0.19	3.68	2.33	6.66	1.09	1.1	0.011	0.007	8.6	-
2010	6.66	6.75	0.512	-	4.93	0.01	2.33	0.17	3.43	1.52	6.87	2.12	1.1	0.031	0.006	7.5	-
2011	7.84	7.40	0.522	-	8.08	0.02	2.48	0.34	3.18	1.38	6.46	2.61	0.7	0.292	0.006	6.9	-
2012	7.72	6.09	0.403	-	7.40	*1	1.80	0.43	3.50	1.47	5.26	2.06	0.8	0.133	*1	7.6	-
2013	7.41	6.64	0.442	-	8.23	0.06	1.50	0.09	4.83	2.03	4.60	1.97	0.9	*1	0.009	12.1	-
2014	7.48	6.19	0.357	-	7.15	0.12	2.44	0.47	3.00	1.15	4.90	2.06	1.6	0.010	0.007	6.8	-
2015	7.75	7.03	0.375	-	9.96	0.12	2.06	0.06	3.12	1.50	5.74	2.22	-	-	-	-	-
2016	8.09	9.51	0.426	-	6.40	0.82	3.62	0.09	4.68	1.14	5.32	1.84	-	-	-	-	-
2017	7.88	6.56	0.493	-	6.65	0.48	2.24	0.07	3.07	1.53	6.58	1.80	1.4	-	-	-	-
2018	7.81	6.39	0.459	-	6.11	0.79	2.22	0.02	3.57	1.32	6.57	1.82	-	-	-	-	-
2019	7.94	6.07	0.432	-	6.05	0.97	1.51	0.93	3.93	1.44	5.83	1.82	-	-	-	-	-

- : No analysis or measurement.

*1: Less than determination/detection limit.

Table 6.5.7 Annual mean values of each parameters from 2008 to 2019 at Gunung Lake (Indonesia)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2008	6.73	5.90	0.438	-	5.59	0.03	2.01	0.57	2.24	0.71	5.09	1.87	1.1	0.040	0.007	6.7	-
2009	6.69	5.54	0.460	-	3.48	0.06	1.30	0.16	3.14	1.02	4.62	2.20	1.0	0.014	0.005	10.8	-
2010	6.24	5.14	0.442	-	1.70	0.00	1.15	0.11	2.01	0.87	5.35	1.66	1.1	0.125	0.002	5.0	-
2011	7.38	5.15	0.414	-	4.04	0.07	1.00	0.12	2.36	0.84	5.04	2.02	0.7	0.037	0.004	10.2	-
2012	6.56	5.86	0.450	-	4.04	*1	1.10	*1	1.74	0.88	5.30	2.54	0.5	0.710	*1	9.5	-
2013	7.38	4.15	0.321	-	3.05	0.04	0.75	0.08	2.75	0.76	2.92	1.18	1.0	*1	0.002	5.3	-
2014	6.97	3.96	0.248	-	4.05	0.04	1.68	0.13	2.74	0.87	2.65	0.92	1.0	0.020	0.004	8.8	4.8
2015	7.33	4.91	0.274	-	6.74	0.05	1.96	0.03	1.74	0.49	4.46	2.00	-	-	-	-	-
2016	7.41	3.92	0.412	-	1.27	0.15	0.81	0.09	4.10	0.51	5.53	1.36	-	-	-	-	-
2017	7.88	4.47	0.318	-	1.59	0.13	0.82	0.09	1.87	0.92	5.07	1.17	0.8	-	-	-	-
2018	6.99	4.87	0.487	-	0.84	0.15	1.12	0.03	2.35	0.65	6.31	1.61	-	-	-	-	-
2019	7.76	5.58	0.436	-	2.50	0.14	1.09	0.56	1.68	0.98	6.39	1.64	-	-	-	-	-

Table 6.5.8 Annual mean values of each parameters from 2001 to 2024 at Ijira Lake (Japan)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2001	6.85	4.33	0.138	-	4.66	2.31	2.19	0.07	2.37	0.40	3.51	1.61	-	<0.01*1	-	-	-
2002	6.72	4.52	0.173	-	5.63	2.01	2.27	0.09	2.23	0.38	3.39	1.37	2.2	<0.066*1	<0.01*1	3.2	-
2003	6.75	4.10	0.146	-	5.14	2.07	2.40	0.08	1.86	0.30	2.94	1.36	3.0	<0.01*1	<0.03*1	1.4	-
2004	7.17	4.05	0.145	-	4.79	1.88	2.34	0.12	2.15	0.23	2.71	1.23	2.8	<0.03*1	<0.02*1	1.1	-
2005	6.94	4.47	0.153	-	5.73	2.37	2.32	0.08	2.29	0.39	3.27	1.42	3.0	<0.03*1	0.068	0.7	-
2006	6.81	3.94	0.164	-	4.53	2.11	2.09	0.03	2.00	0.33	2.80	1.23	2.4	<0.1*1	<0.02*1	0.6	-
2007	7.09	4.58	0.206	-	5.77	1.22	2.27	0.03	2.24	0.30	3.57	1.46	2.7	<0.1*1	<0.02*1	1.0	-
2008	7.19	4.36	0.183	-	5.37	1.78	2.16	0.04	2.10	0.28	3.24	1.45	2.7	<0.1*1	<0.01*1	0.8	-
2009	7.04	4.26	0.176	-	5.18	1.47	2.13	0.01	2.08	0.26	3.03	1.35	2.7	<0.1*1	<0.01*1	0.7	-
2010	7.01	3.74	0.158	-	4.58	1.10	1.96	<0.01*1	1.88	0.25	2.61	1.18	2.3	<0.1*1	<0.01*1	0.5	-
2011	7.11	3.85	0.159	-	4.77	1.34	1.86	<0.01*1	1.89	0.23	3.05	1.22	1.8	<0.1*1	<0.01*1	0.8	-
2012	7.11	3.76	0.154	-	4.66	1.31	1.89	<0.01*1	1.85	0.23	2.78	1.23	2.3	<0.1*1	<0.01*1	0.5	-
2013	7.17	3.94	0.165	-	5.02	1.06	1.97	<0.01*1	1.97	0.24	2.73	1.25	2.4	<0.1*1	<0.01*1	0.5	-
2014	7.06	3.73	0.140	-	4.67	1.21	1.86	<0.01*1	1.82	0.27	2.34	1.12	1.9	<0.1*1	<0.01*1	0.5	-
2015	7.16	3.57	0.149	-	4.38	1.06	1.87	<0.01*1	1.79	0.27	2.12	1.05	2.2	<0.1*1	<0.01*1	0.6	-
2016	7.11	3.73	0.141	-	5.37	1.39	1.78	<0.01*1	1.89	0.27	2.39	1.20	4.8	<0.1*1	<0.01*1	0.6	-
2017	7.02	3.89	0.165	-	5.33	0.97	1.84	<0.01*1	1.96	0.26	2.82	1.31	3.3	<0.1*1	<0.01*1	0.6	-
2018	6.95	3.59	0.162	0.143	4.54	0.74	1.87	<0.01*1	1.82	0.26	2.75	1.16	2.6	<0.1*1	<0.01*1	2.4	-
2019	7.16	3.84	0.176	0.160	4.81	0.74	1.88	<0.01*1	1.95	0.24	3.08	1.20	3.3	<0.02*1	<0.01*1	3.0	-
2020	6.99	3.64	0.163	0.151	4.56	0.85	1.73	<0.01*1	1.90	0.24	2.72	1.13	2.2	0.030	<0.01*1	0.9	-
2021	7.18	3.51	0.160	0.149	4.32	0.60	1.70	<0.01	1.83	0.24	2.52	1.12	2.4	<0.02*1	<0.01*1	0.5	-
2022	7.01	3.61	0.163	0.153	4.43	0.81	1.74	<0.01*1	1.85	0.25	2.64	1.17	2.3	<0.02*1	<0.01*1	0.6	-
2023	7.11	3.50	0.161	0.134	4.30	0.75	1.73	<0.01*1	1.84	0.25	2.62	1.16	3.0	<0.02*1	<0.01*1	0.5	-
2024	7.12	3.58	0.167	0.155	4.52	0.59	1.64	<0.01*1	1.85	0.25	2.68	1.19	3.0	<0.02*1	<0.01*1	0.5	-

Table 6.5.9 Annual mean values of each parameters from 2019 to 2024 at Futago-ike Lake (Oike) (Japan)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2019	7.01	1.86	0.129	0.112	1.19	0.80	0.33	<0.02*1	1.13	0.25	2.10	0.19	8.2	<0.01*1	<0.01*1	0.9	1.5
2020	6.98	1.77	0.121	0.106	1.09	0.74	0.32	<0.02*1	1.07	0.27	1.93	0.19	9.0	<0.01*1	<0.01*1	1.0	1.5
2021	6.94	1.72	0.122	0.107	1.00	0.80	0.33	<0.02*1	1.02	0.27	1.88	0.18	9.1	<0.01*1	<0.01*1	1.2	2.0
2022	7.11	1.83	0.135	0.121	0.98	0.77	0.33	<0.02*1	1.12	0.27	2.10	0.19	8.6	<0.01*1	<0.01*1	0.9	1.5
2023	7.01	1.89	0.131	0.119	1.02	0.90	0.37	<0.02*1	1.22	0.26	2.26	0.20	8.5	<0.01*1	<0.01*1	1.1	1.8
2024	7.00	1.86	0.138	0.123	0.96	0.83	0.34	<0.02*1	1.17	0.27	1.86	0.19	8.5	<0.01*1	<0.01*1	0.9	2.0

Table 6.5.10 Annual mean values of each parameters from 2019 to 2024 at Futago-ike Lake (Meike) (Japan)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2019	6.93	2.04	0.141	0.125	1.27	0.96	0.36	<0.02*1	1.25	0.27	2.34	0.21	4.8	<0.01*1	<0.01*1	1.1	1.5
2020	6.11	0.62	0.033	0.017	0.82	0.08	0.31	<0.02*1	0.40	0.23	0.43	0.09	3.6	<0.01*1	<0.01*1	1.6	2.7
2021	5.94	0.59	0.030	0.015	0.76	0.10	0.28	<0.02*1	0.33	0.19	0.37	0.08	4.2	<0.01*1	<0.01*1	1.8	3.1
2022	5.86	0.52	0.027	0.013	0.69	0.06	0.29	<0.02*1	0.28	0.17	0.31	0.06	4.3	<0.01*1	<0.01*1	1.1	1.8
2023	5.84	0.49	0.026	0.008	0.60	<0.1*1	0.30	<0.02*1	0.29	0.15	0.31	0.06	2.0	<0.01*1	<0.01*1	3.5	5.0
2024	5.87	0.45	0.026	0.010	0.46	<0.1*1	0.36	<0.02*1	0.53	0.08	0.24	0.05	1.8	<0.01*1	<0.01*1	5.0	12.0

Table 6.5.11 Annual mean values of each parameters from 2009 to 2024 at Nam Houm Lake (Lao PDR)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2009	7.55	3.90	0.411	-	1.83	0.65	1.45	0.15	0.94	1.75	4.43	0.86	-	0.001	-	-	10.2
2014	7.18	4.12	0.438	-	-	-	-	-	-	-	-	-	0.8	0.013	-	-	23.1
2016	7.20	2.34	0.340	-	2.61	0.02	1.83	0.01	1.07	0.40	1.14	1.72	0.6	0.010	-	-	11.2
2017	7.54	3.39	0.303	-	3.76	0.01	0.48	-	-	-	-	-	0.6	0.010	-	-	3.7
2018	7.43	4.11	0.390	-	2.26	0.41	0.40	-	-	-	-	-	0.6	0.010	-	-	7.5
2019	8.05	3.37	0.338	-	3.65	0.01	0.40	-	-	-	-	-	0.6	0.010	-	-	19.4
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2024	6.40	34	0.724	-	1.60	0.16	1.92	0.04	5.04	1.73	8.26	1.11	-	0.001	1.25	-	17.6

- : No analysis or measurement.

*1: Less than determination/detection limit.

Table 6.5.12 Annual mean values of each parameters from 2022 to 2024 at Baru River (Malaysia)

Table 6.5.12 Annual mean values of each parameters from 2022 to 2024 at Bardu River (Malaysia)																	
	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2022	7.62	8.02	0.747	-	2.58	0.42	1.58	<0.003*1	5.27	0.71	9.07	2.63	-	<0.10*1	-	-	5.2
2023	7.29	6.09	0.538	-	1.86	0.37	1.62	0.01	4.89	0.49	4.82	2.09	-	<0.10*1	-	-	4.0
2024	7.38	5.03	0.433	-	1.57	0.61	2.07	0.01	4.78	0.52	3.36	1.71	-	<0.10*1	-	-	8.5

Table 6.5.13 Annual mean values of each parameters from 2002 to 2024 at Terelj River (Mongolia)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2002	7.23	4.84	0.098	-	3.47	1.11	0.43	0.04	1.87	0.52	7.17	0.87	-	-	-	-	-
2003	6.75	4.60	0.266	-	3.16	0.74	0.36	0.04	1.65	0.48	5.88	0.83	-	-	-	-	-
2004	6.80	4.44	0.296	-	2.76	0.70	0.54	0.06	1.60	0.72	5.93	0.89	-	-	-	-	-
2005	6.90	4.84	0.367	-	3.18	0.82	0.56	0.05	1.95	0.68	8.90	1.04	-	-	0.003	-	-
2006	6.99	5.07	0.327	-	3.60	0.79	0.46	0.11	2.07	0.62	9.04	1.07	-	-	0.003	-	-
2007	6.89	5.06	0.339	-	3.18	0.79	0.57	0.07	2.22	0.55	8.63	1.03	-	<0.005*1	0.003	-	-
2008	6.36	6.59	0.282	-	3.82	1.33	0.73	<0.01*1	1.93	0.60	13.70	1.00	-	0.007	<0.005*1	-	-
2009	7.13	4.70	0.331	-	3.47	0.49	0.41	<0.01*1	1.66	0.58	5.41	0.76	-	-	<0.005*1	-	-
2010	6.67	5.57	0.380	-	4.47	0.86	0.78	0.13	2.17	1.19	7.52	1.15	-	0.011	<0.005*1	-	-
2011	6.28	5.33	0.327	-	3.73	0.76	0.79	0.06	1.57	0.68	5.80	0.87	-	0.008	0.002	-	-
2012	7.24	4.55	0.318	-	-	-	-	-	-	-	-	-	-	0.008	0.006	-	-
2013	6.84	4.32	0.294	-	2.81	0.46	0.37	*1	1.46	1.01	6.13	0.83	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	7.23	5.37	0.350	-	4.43	0.82	0.38	-	-	-	-	-	-	-	-	-	-
2016	6.59	4.39	0.277	-	3.42	0.34	0.35	*1	1.45	0.57	6.55	0.82	-	-	-	-	-
2017	6.73	5.09	0.346	-	4.72	0.85	0.48	0.01	1.89	0.52	6.90	0.88	-	-	-	-	-
2018	6.79	4.38	0.279	-	3.52	0.83	0.30	0.00	1.90	0.43	5.72	0.70	-	-	-	-	-
2019	6.48	4.77	0.316	-	4.36	0.36	0.34	0.00	1.78	0.52	6.40	0.82	-	-	-	-	-
2020	6.27	5.02	0.335	-	4.21	0.66	0.33	0.00	2.18	0.49	7.29	0.82	-	-	-	-	-
2021	6.37	4.12	0.320	-	1.24	0.29	1.90	0.02	1.53	0.51	6.23	0.76	-	-	-	-	-
2022	6.48	4.59	0.379	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2023	6.32	3.79	0.263	-	3.21	0.86	0.42	0.03	1.94	0.75	6.46	0.88	-	-	-	-	-
2024	7.50	4.40	0.336	-	3.57	0.24	0.40	0.01	1.76	0.59	6.80	0.89	-	-	-	-	-

Table 6.5.14 Annual mean values of each parameters from 2004 to 2024 at Pandin Lake (Philippines)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2004	8.08	18.23	1.808	-	0.33	0.08	3.16	0.02	8.91	5.81	12.05	6.91	-	0.014	0.072	-	-
2005	7.96	18.14	1.723	-	1.11	0.58	3.76	0.69	8.18	4.89	14.33	7.84	-	0.005	0.295	-	-
2006	7.72	17.34	1.758	-	0.43	0.19	2.40	0.22	8.08	5.08	15.13	7.30	2.2	0.004	0.012	-	-
2007	7.76	17.57	1.708	-	0.52	0.10	3.37	0.26	7.28	6.29	12.10	9.03	-	0.002	0.013	-	-
2008	7.48	17.95	1.627	-	0.76	5.23	3.70	0.02	7.33	4.92	12.65	7.97	-	0.013	-	-	-
2009	7.68	18.70	1.813	-	0.66	5.72	3.78	1.02	8.61	4.35	14.10	7.32	1.8	0.087	-	-	-
2010	8.25	18.35	1.837	-	0.34	3.36	3.28	*1	8.79	5.59	13.07	8.49	-	0.060	-	-	-
2011	7.67	20.46	1.738	-	0.49	2.08	3.29	0.17	7.99	4.14	14.90	7.58	-	0.086	-	-	-
2012	7.95	17.56	1.683	-	1.53	0.48	3.45	0.06	8.19	4.43	14.15	7.59	-	*1	-	-	-
2013	7.29	17.71	1.725	-	0.56	0.16	3.19	0.10	8.17	4.24	15.55	7.89	-	0.004	*1	-	-
2014	7.64	20.51	2.145	-	0.22	0.14	2.54	0.04	7.00	3.70	19.13	9.09	-	-	*1	-	-
2015	7.65	19.48	2.104	-	0.85	0.67	3.26	0.12	10.77	8.46	21.04	3.91	-	0.470	*1	-	-
2016	7.18	18.74	1.744	-	0.84	0.32	3.48	0.32	8.58	4.41	15.77	8.29	-	0.110	*1	-	-
2017	8.02	17.38	1.729	-	0.86	0.15	3.44	0.41	8.68	4.07	16.36	7.91	-	0.274	0.000	-	-
2018	8.20	18.18	1.740	-	0.54	0.20	3.52	0.02	8.41	3.81	15.54	7.09	-	0.000	0.000	-	-
2019	8.65	18.03	1.700	-	0.85	0.03	3.92	0.00	8.05	4.02	16.98	6.96	-	0.244	0.000	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	7.97	17.39	1.821	-	1.07	0.20	2.84	0.07	5.25	4.10	15.73	8.02	-	0.049	0.047	-	5.1
2022	8.32	18.05	1.601	-	1.51	0.04	3.83	0.07	8.91	4.50	14.33	8.65	-	*1	*1	-	4.1
2023	8.09	19.24	1.590	-	1.67	0.04	3.33	0.03	8.54	4.31	12.69	8.67	-	0.083	0.010	3.1	9.9
2024	7.28	18.88	1.771	-	2.13	0.28	3.49	0.02	8.70	4.45	15.36	8.75	-	0.088	0.012	1.5	6.2

Table 6.5.15 Annual mean values of each parameters from 2005 to 2024 at Ambulalakao Lake (Philippines)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2005	5.82	0.44	0.020	-	0.15	0.11	0.06	-	0.22	0.15	0.15	0.04	-	-	0.100	-	-
2007	5.49	0.53	0.031	-	0.46	0.12	0.25	0.02	0.37	0.13	0.40	0.10	-	*1	*1	-	-
2008	5.74	0.38	0.081	-	0.27	0.12	0.17	0.10	0.19	0.07	0.26	0.15	-	0.001	-	-	-
2009*	5.42	0.17	0.290	-	0.21	0.08	0.13	0.17	0.27	0.06	0.17	0.07	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	5.75	0.52	0.060	-	*1	*1	0.39	*1	0.56	0.13	0.49	0.11	-	-	-	-	-
2014	5.69	0.52	0.023	-	0.11	*1	0.20	0.21	0.46	0.35	0.59	0.12	-	-	-	-	-
2015	5.86	0.50	0.031	-	0.21	0.36	0.22	0.05	0.48	0.14	0.37	0.31	-	-	-	-	-
2016	5.81	0.51	0.026	-	0.11	0.02	0.18	0.00	0.46	0.12	0.26	0.10	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	5.65	0.87	0.035	-	0.22	0.20	0.34	*1	0.20	0.05	0.74	0.08	-	-	-	-	-
2023*	6.61	1.50	0.030	-	0.92	0.37	1.20	0.25	0.95	0.48	0.90	0.11	-	0.041	-	-	-
2024	5.80	5.37	0.027	-	0.093	< 0.06*1	0.48	0.06	0.03	0.17	0.29	0.15	-	<0.3*1	<0.06*1	-	-

- : No analysis or measurement.

* : Data for Dec. of 2009, Jun. and Dec. of 2023 were excluded from the aggregation due to the high probability of contamination.

*1: Less than determination/detection limit.

Table 6.5.16 Annual mean values of each parameters from 2004 to 2024 at Pereemnaya River (Russia)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2004	6.55	3.93	0.135	-	7.18	0.76	0.23	0.03	1.10	0.77	3.23	0.94	2.0	0.008	0.002	-	-
2005	6.80	4.03	0.135	-	7.84	0.66	0.20	0.03	0.96	0.71	3.29	1.04	-	0.002	0.005	-	0.8
2006	6.74	3.95	0.140	-	7.49	0.81	0.20	0.04	1.07	0.75	3.36	1.02	-	0.004	0.002	1.5	1.1
2007	6.59	4.21	0.135	-	8.98	0.91	0.18	0.11	1.06	0.76	3.92	0.85	-	0.004	0.003	1.6	1.0
2008	6.68	4.87	0.155	-	9.77	1.03	0.13	0.03	0.93	0.60	4.78	1.05	-	0.007	0.002	1.0	0.8
2009	6.66	4.87	0.128	-	11.69	0.85	0.14	0.02	1.00	0.60	4.94	0.97	-	0.005	0.002	-	0.6
2010	6.88	5.14	0.127	-	12.87	0.79	0.20	0.03	0.99	0.66	5.18	1.05	-	0.007	0.002	-	1.1
2011	6.85	4.79	0.138	-	11.39	0.67	0.16	0.02	1.02	0.68	4.97	0.83	-	0.004	0.003	-	0.9
2012	6.61	4.21	0.139	-	9.49	0.38	0.17	0.09	0.95	0.63	4.42	0.67	-	0.005	0.002	-	1.2
2013	6.76	4.61	0.134	-	11.14	0.57	0.13	0.02	1.00	0.65	4.92	0.82	1.9	0.008	0.002	-	1.0
2014	6.69	4.66	0.142	-	11.19	0.58	0.19	0.01	1.30	0.78	4.87	0.78	1.9	0.009	0.002	-	1.2
2015	6.63	4.29	0.124	-	10.47	0.48	0.20	0.01	1.01	0.66	4.57	0.76	1.9	0.006	0.003	-	0.8
2016	6.78	4.53	0.142	-	11.14	0.70	0.14	0.01	1.06	0.66	4.90	0.85	1.9	0.004	0.002	-	0.9
2017	6.76	4.64	0.128	-	11.87	0.87	0.09	0.01	1.03	0.66	4.89	0.97	-	0.003	0.003	-	0.8
2018	6.68	4.30	0.109	-	11.20	0.74	0.25	0.01	1.06	0.59	4.43	0.80	-	0.007	0.004	-	1.1
2019	6.71	4.72	0.124	-	11.75	0.68	0.17	0.01	1.07	0.70	4.85	0.94	-	0.003	0.004	-	0.9
2020	6.80	4.83	0.118	-	12.00	0.57	0.13	0.00	1.01	0.70	4.70	0.94	-	0.005	0.002	-	1.0
2021	6.79	4.46	0.124	-	10.83	0.67	0.16	0.01	1.00	0.66	4.84	0.84	-	0.002	0.002	-	1.4
2022	6.85	5.15	0.136	-	12.68	0.93	0.17	0.01	1.16	0.72	5.10	1.02	-	0.006	0.002	-	1.0
2023	6.60	4.80	0.127	-	12.60	0.77	0.08	0.00	1.05	0.67	5.47	0.68	-	0.002	0.002	-	1.1
2024	6.72	4.86	0.131	-	12.07	0.70	0.07	0.01	1.00	0.70	5.14	0.93	-	0.002	0.002	-	2.6

Table 6.5.17 Annual mean values of each parameters from 2005 to 2024 at Komarovka River (Russia)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2005	7.24	8.75	0.495	-	11.18	0.33	3.09	0.15	3.34	0.60	9.07	2.25	-	*1	*1	-	-
2006	7.08	8.37	0.428	-	9.02	0.26	3.12	0.08	3.10	0.57	8.51	2.27	-	0.014	0.003	-	-
2007	7.15	8.68	0.395	-	10.51	0.26	4.03	0.09	3.39	0.65	8.04	2.34	-	0.010	0.025	-	4.3
2008	7.22	8.68	0.391	-	12.08	0.52	3.06	0.09	3.80	0.62	8.14	2.08	-	0.030	0.053	-	3.6
2009	7.02	8.64	0.351	-	12.59	1.11	3.69	0.22	3.57	0.60	8.21	2.07	-	0.041	0.067	-	4.4
2010	6.99	8.32	0.445	-	8.62	0.99	3.33	0.19	3.21	0.46	8.29	2.12	-	0.013	0.036	-	4.0
2011	7.09	8.86	0.405	-	12.67	1.63	3.11	0.27	3.88	0.74	8.58	2.22	-	0.010	0.018	-	4.4
2012	6.99	8.54	0.384	-	9.61	1.33	3.88	0.45	3.53	0.79	7.88	2.37	-	0.015	0.038	-	5.1
2013	6.84	8.45	0.372	-	11.87	1.27	3.61	0.16	3.44	0.64	7.71	2.66	-	0.006	0.027	-	4.1
2014	6.91	8.45	0.368	-	11.76	2.81	3.16	0.14	3.52	0.72	8.29	2.27	-	0.005	0.033	-	4.6
2015	6.98	8.75	0.404	-	13.46	1.27	3.06	0.12	3.45	0.58	8.73	2.20	-	0.005	0.026	-	4.4
2016	6.71	9.09	0.375	-	14.25	3.68	3.57	0.24	3.82	0.75	8.85	2.02	-	0.005	0.017	-	5.6
2017	6.93	8.93	0.425	-	11.48	3.97	4.36	0.19	4.39	0.87	10.00	1.91	-	0.005	0.016	-	3.3
2018	6.98	8.50	0.383	-	12.78	3.72	2.25	0.08	4.06	1.02	9.20	2.54	-	0.003	0.011	-	4.6
2019	6.64	8.09	0.303	-	12.97	2.45	3.20	0.11	3.95	1.07	8.42	1.42	-	0.007	0.011	-	3.7
2020	6.77	8.59	0.426	-	11.03	2.02	2.87	0.24	4.37	1.52	9.62	2.25	-	0.006	0.027	-	4.2
2021	7.91	11.31	0.554	-	15.12	1.05	6.24	0.11	6.14	1.49	12.82	3.33	-	0.037	0.006	-	3.8
2022	7.27	8.88	0.611	-	8.37	0.44	3.53	0.08	6.32	1.96	9.50	1.97	-	0.013	0.026	-	4.2
2023	6.93	8.11	0.635	-	8.13	0.37	3.38	0.20	6.17	2.39	8.78	1.98	-	0.029	0.020	-	4.8
2024	6.60	7.91	0.646	-	6.54	0.53	3.25	0.14	6.13	1.39	9.36	1.37	-	0.022	0.017	-	5.1

- : No analysis or measurement.

*1: Less than determination/detection limit.

Table 6.5.18 Annual mean values of each parameters from 2002 to 2024 at Vajiralongkorn Dam (Ban Pong Chang) (Thailand)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2002	7.52	12.13	0.625	-	1.15	0.04	0.89	*1	1.14	1.01	13.27	2.98	5.3	0.024	*1	-	4.0
2003	7.45	10.75	0.625	-	1.29	0.01	0.84	*1	1.14	0.97	16.24	3.52	5.0	*1	*1	-	5.8
2004	7.77	11.53	1.050	-	1.27	0.20	0.98	0.05	1.18	0.97	15.68	3.26	5.6	0.023	0.010	-	7.5
2005	7.33	11.18	1.276	-	1.47	0.11	1.05	0.01	1.26	1.02	15.83	3.12	3.6	0.010	0.010	-	<4.0*1
2006	7.21	10.41	1.125	-	1.31	0.20	0.85	0.06	1.14	1.03	16.24	3.17	4.6	<0.01*1	<0.01*1	-	10.0
2007	7.80	10.41	1.090	-	1.17	0.20	0.75	0.01	1.21	0.96	16.50	3.26	5.1	0.010	0.010	-	5.2
2008	7.71	10.55	1.178	-	1.11	0.05	0.75	<0.01*1	1.16	0.97	16.25	3.23	4.4	<0.01*1	0.010	-	6.8
2009	7.79	10.83	1.111	-	1.33	0.06	0.74	-	1.16	0.95	16.09	3.39	4.4	0.010	<0.01*1	-	-
2010	7.70	11.80	1.176	-	1.55	0.06	0.83	0.01	1.24	1.01	16.59	3.62	3.6	0.010	0.010	-	4.7
2011	7.38	12.76	1.178	-	1.43	0.07	0.82	0.01	1.22	1.04	17.93	3.70	3.0	0.012	<0.01*1	-	5.7
2012	7.32	11.81	1.150	-	1.22	0.19	0.94	0.03	1.21	1.12	16.79	3.53	3.2	0.010	-	-	8.5
2013	7.67	13.53	1.186	-	1.10	0.10	0.87	0.01	1.21	1.02	16.99	3.81	2.8	0.010	-	-	-
2014	7.55	5.62	1.138	-	1.64	0.09	0.88	0.04	1.20	0.95	16.69	3.29	3.8	0.010	-	-	-
2015	7.50	5.33	1.066	-	1.44	0.11	0.93	0.04	1.18	0.86	15.78	3.10	3.0	0.010	-	-	-
2016	7.06	12.16	1.121	-	1.28	0.10	1.06	0.01	1.47	0.96	17.18	3.61	2.7	0.020	-	-	40.0
2017	7.07	11.94	1.193	-	1.57	0.09	1.15	0.01	1.44	1.06	17.91	3.45	2.9	0.018	-	-	-
2018	7.88	12.35	1.130	-	1.11	0.10	0.95	0.01	1.23	1.04	17.21	3.16	3.0	0.010	-	-	-
2019	8.35	12.42	1.072	-	1.53	0.10	1.16	0.02	1.32	1.07	15.10	3.44	3.8	0.010	-	-	-
2020	8.42	12.04	1.070	-	1.24	0.10	1.13	0.01	1.25	0.99	16.38	3.30	4.0	0.010	-	-	-
2021	7.89	10.53	1.168	-	1.39	0.10	1.28	0.01	1.31	1.11	18.73	3.72	3.4	0.010	-	-	-
2022	7.27	12.85	1.168	-	1.95	0.10	1.18	0.01	1.31	1.06	17.66	3.29	3.6	0.010	-	-	-
2023	7.61	12.54	1.196	-	1.20	0.11	1.05	0.01	1.68	0.93	18.60	3.58	3.5	0.010	-	-	-
2024	7.53	12.69	1.118	-	1.25	0.09	1.05	-	-	-	-	-	4.1	0.010	-	-	-

Table 6.5.19 Annual mean values of each parameters from 2002 to 2024 at Vajiralongkorn Dam (Ban Pang Pueng) (Thailand)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2002	7.31	11.98	0.633	-	1.24	0.06	0.90	*1	1.19	0.99	13.28	2.90	5.5	0.034	*1	-	3.0
2003	7.87	10.50	0.590	-	1.41	0.01	0.84	*1	1.17	0.98	16.24	2.94	5.8	*1	*1	-	7.3
2004	7.24	11.12	1.005	-	1.54	0.20	0.95	0.05	1.21	1.03	16.01	2.83	8.1	0.020	0.010	-	5.0
2005	6.98	11.20	1.015	-	1.29	0.11	1.15	0.03	1.52	1.02	16.16	2.98	4.4	0.135	0.010	-	*1
2006	7.12	10.03	1.046	-	1.44	0.20	0.83	0.03	1.14	1.04	16.19	2.64	5.0	<0.01*1	<0.01*1	-	11.0
2007	7.84	10.21	1.050	-	1.25	0.20	0.70	0.01	1.13	0.98	16.75	2.98	5.3	0.010	0.010	-	4.0
2008	7.78	9.88	1.104	-	1.49	<0.06*1	0.75	<0.01*1	1.17	1.00	15.65	2.49	4.4	<0.01*1	0.010	-	4.7
2009	7.93	10.30	1.065	-	1.42	0.06	0.73	-	1.14	2.04	15.88	2.79	4.6	0.010	<0.01*1	-	-
2010	7.79	11.16	1.113	-	1.61	0.06	0.76	0.01	1.16	0.99	16.38	2.86	4.1	0.010	0.010	-	7.1
2011	7.41	11.79	1.098	-	1.51	0.07	0.79	0.02	1.18	0.98	16.93	2.92	3.5	0.010	<0.01*1	-	8.4
2012	7.30	9.41	1.048	-	1.85	0.08	0.86	0.03	1.17	1.08	16.25	2.80	3.8	0.010	-	-	6.9
2013	7.90	11.10	1.093	-	1.26	0.10	0.83	0.01	1.14	1.01	16.84	2.88	4.0	0.010	-	-	-
2014	7.75	5.46	1.091	-	1.46	0.07	0.89	0.03	1.22	0.96	16.49	2.70	4.0	0.011	-	-	-
2015	7.87	6.86	1.076	-	1.41	0.10	1.01	0.01	1.40	0.87	16.31	2.72	3.4	0.010	-	-	-
2016	7.28	11.83	1.119	-	1.55	0.11	1.09	0.01	1.51	0.92	17.78	3.15	2.9	0.020	-	-	40.0
2017	7.17	11.85	1.195	-	1.61	0.10	0.98	0.02	1.37	1.04	18.70	2.98	3.6	0.018	-	-	-
2018	7.99	11.42	1.109	-	1.29	0.10	0.89	0.01	1.21	1.03	16.94	2.69	3.8	0.010	-	-	-
2019	8.53	11.85	1.038	-	1.83	0.10	1.22	0.02	1.37	1.11	15.83	3.02	5.0	0.010	-	-	-
2020	8.69	11.86	1.045	-	1.25	0.10	0.97	0.01	1.20	0.99	16.85	2.86	4.3	0.010	-	-	-
2021	8.11	12.52	1.118	-	1.96	0.10	2.02	0.01	1.49	1.11	18.68	3.20	3.3	0.010	-	-	-
2022	7.19	12.55	1.159	-	1.91	0.14	1.13	0.02	1.26	1.06	18.01	2.98	3.6	0.010	-	-	-
2023	7.51	12.61	1.184	-	1.37	0.09	1.04	0.00	1.61	0.95	19.33	3.20	4.4	0.010	-	-	-
2024	7.01	12.25	1.108	-	1.41	0.12	1.09	-	-	-	-	-	4.1	0.010	-	-	-

Table 6.5.20 Annual mean values of each parameters from 2001 to 2024 at Hoa Binh Reservoir (Vietnam)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2001	7.59	17.40	1.575	-	5.44	0.59	1.16	0.15	1.97	1.22	21.85	6.12	-	-	-	-	-
2002	7.88	17.14	1.613	-	3.90	0.46	1.35	0.21	1.70	1.16	22.53	5.49	-	-	-	-	-
2003	7.29	18.41	1.595	-	6.13	0.63	1.33	0.08	2.14	1.36	24.50	4.78	-	-	-	-	-
2004	6.55	19.27	1.675	-	4.51	1.16	1.38	0.17	2.45	1.11	27.22	4.11	-	-	-	-	-
2005	7.58	19.01	1.605	-	5.62	1.04	1.62	0.16	4.40	1.31	23.12	4.77	-	-	-	-	-
2006	7.22	19.08	1.605	-	7.71	0.87	1.41	0.12	3.62	1.46	25.22	4.87	0.7	0.005	0.006	-	2.2
2007	7.62	19.09	1.613	-	8.14	1.44	1.54	0.11	3.53	1.48	24.90	4.64	0.9	0.015	0.016	-	1.9
2008	7.73	18.26	1.533	-	7.36	1.04	1.65	0.04	2.33	0.91	22.90	5.01	1.5	0.021	0.025	-	2.2
2009	7.98	16.65	1.390	-	6.55	0.67	2.05	0.02	3.10	0.84	20.82	4.49	1.1	0.019	0.010	-	1.4
2010	7.80	17.66	1.420	-	7.26	1.66	2.07	0.11	4.20	1.56	23.30	2.94	1.0	0.013	0.014	-	0.9
2011	7.43	18.46	1.540	-	7.36	1.59	2.26	0.07	3.51	1.26	23.17	4.55	1.1	0.010	0.012	-	3.4
2012	7.10	17.71	1.518	-	4.67	1.52	2.13	0.12	3.59	1.39	23.08	4.25	1.0	0.010	0.016	-	4.3
2013	7.54	17.19	1.435	-	6.92	1.04	2.41	0.14	4.96	1.58	20.02	5.31	1.1	0.008	0.006	-	3.7
2014	7.65	17.22	1.500	-	5.13	0.80	1.64	0.02	3.05	1.31	22.29	4.50	1.1	0.019	0.012	-	3.5
2015	7.60	17.94	1.430	-	7.01	1.47	0.95	0.02	2.93	1.06	24.42	3.65	1.2	0.045	0.009	-	3.5
2016	7.39	18.75	1.545	-	6.70	1.61	1.24	0.00	3.01	1.24	21.84	6.28	1.2	0.038	0.056	-	4.0
2017	7.29	15.85	1.330	-	5.09	1.43	1.04	0.01	2.15	1.09	20.47	4.21	1.0	0.043	0.007	-	4.2
2018	7.81	16.25	1.320	-	4.54	2.13	4.15	0.16	5.82	1.60	18.26	4.56	1.0	0.082	0.006	-	3.9
2019	7.67	18.63	1.505	-	5.42	1.33	4.42	0.08	3.75	1.98	24.28	4.38	1.1	0.108	0.019	-	4.1
2020	7.71	16.70	1.355	-	4.65	1.52	3.00	0.04	3.21	1.84	22.99	2.71	1.2	0.090	0.018	-	4.2
2021	7.69	17.35	1.405	-	4.19	1.35	2.75	0.28	3.28	1.82	23.41	2.66	1.2	0.076	0.022	-	4.4
2022	7.62	17.49	1.506	-	4.33	2.59	1.10	0.10	3.63	1.78	23.55	2.87	1.2	0.064	0.051	-	4.9
2023	7.54	17.53	1.472	-	4.35	2.02	1.45	0.11	3.87	1.81	24.12	2.85	1.2	0.016	0.037	-	5.1
2024	7.46	15.64	1.322	-	4.46	2.10	1.20	0.09	2.47	1.68	23.12	2.14	1.2	0.029	0.049	-	5.6

CHAPTER 7

Catchment-scale Monitoring

7. Catchment-scale Monitoring

7.1 Method

The Guideline for Catchment-scale Monitoring in East Asia (2010) recommends measuring input from atmosphere (total deposition), output from the catchment (discharge from the stream), and some biogeochemical processes in selected small forest catchments to discuss relationship between seasonal or annual changes in stream water chemistry and those in atmospheric deposition. Material/elemental input-output budget in the catchment can be calculated based on atmospheric deposition chemistry, stream water chemistry, and water balance. Based on the catchment-scale dataset, the simulation model on biogeochemical cycles is expected to be developed.

Analytical results of the EANET catchment data have been included in the previous periodic reports, such as the Third Periodic Report of the State of Acid Deposition in East Asia (PRSAD3) and the Forth Periodic Report of the State of Acid Deposition in East Asia (PRSAD4). In addition, research papers based on the EANET catchment monitoring data have been published in international journals (Sase et al. 2019, Biogeochemistry; Sase et al. 2021, Atmospheric Environment). These scientific publications will also be informative to understand effectiveness of catchment-scale monitoring.

7.1.1 Field Operation

Recommended methods and proposed frequency of major monitoring items in the field are summarized in Table 7.1. The existing EANET technical documents can be referred in the field operation for the items. Moreover, the existing EANET data on wet and dry deposition collected at the nearest monitoring sites can be used to calculate total deposition. Similarly, the existing EANET data on soil and vegetation can be referred as the relevant information on biogeochemical processes.

Table 7.1 Methods and frequency of major monitoring items

	Items	Recommended methods	Proposed frequency
Input (total deposition)	Precipitation amount	Rain gauge	Continuously or daily
	Wet deposition ^{*1}	Wet-only sampling	Daily or weekly
		Bulk sampling (when electricity is not available)	Weekly or biweekly
	Dry deposition ^{*1}	Inferential method: based on Filter pack data and Meteorological data	Weekly (for filter pack method)
		Automatic monitors (alternative for air concentration)	Continuously
	Total deposition	Wet + Dry	Biweekly or monthly
		Throughfall–Stemflow method (when electricity is not available)	Biweekly
Output (discharge from the stream)	Water discharge	Weir	Continuously or biweekly
		H-Q curve method (when a weir is not available)	
	Stream water chemistry	Periodical collection of stream water	Weekly or biweekly
		Intensive sampling	During heavy-rain or snow-melting events
	Chemical discharge	Calculation based on the water flux and the chemical concentration	Biweekly, monthly or annual
Soil	Soil chemistry ^{*1}	Collection from the permanent plots	Once for several years
Vegetation	Plant growth ^{*1}	Measurement of tree size (diameter at breast height, height of tree and name of species)	Once for several years

Note. ^{*1}, The relevant EANET data can be referred.

7.1.2 Laboratory Operation

Table 7.2 Chemical parameters for the respective items

Items	Parameters
Rainwater samples	<u>Mandatory:</u> SO_4^{2-} , NO_3^- , Cl^- , NH_4^+ , Ca^{2+} , Mg^{2+} , Na^+ , K^+ , Electric conductivity (EC), and pH <u>Optional:</u> Total organic nitrogen (TON), Total organic carbon (TOC)
Stream water samples	<u>Mandatory:</u> SO_4^{2-} , NO_3^- , Cl^- , NH_4^+ , Ca^{2+} , Mg^{2+} , Na^+ , K^+ , Electric conductivity (EC), pH, and Alkalinity (Gran's ANC and/or pH 4.8 endpoint) <u>Optional:</u> SiO_2 , TON, TOC, Total dissolved Al
Air concentrations (by filter pack method)	Cations: NH_4^+ , Ca^{2+} , Mg^{2+} , Na^+ , and K^+ , Anions: SO_4^{2-} , NO_3^- , and Cl^- , Gasses: SO_2 , HNO_3 , HCl , and NH_3
Soil chemistry	pH(H_2O), pH(KCl), Exchangeable Base Cations (Ca^{2+} , Mg^{2+} , K^+ , and Na^+), Exchangeable Acidity, Al and H, Effective Cation Exchangeable Capacity

Chemical parameters for the respective monitoring items are shown in Table 7.2. Basically, the parameters are same as those for other EANET monitoring items. The existing EANET technical documents can also be referred to in the laboratory operation.

7.1.3 Data Management

Data quality was controlled and assured according to the EANET QA/QC program. In particular, for rainwater and stream water samples, ion balance (R_1) and conductivity check (R_2) can be applied to check the analytical results as same as monitoring on wet deposition and inland aquatic environment.

The data should be evaluated on a catchment scale. The input-output budget should be calculated based on the atmospheric deposition chemistry, stream water chemistry, and water balance to outline the material/elemental cycles in the catchment. The standard units should be used for the input and output. Recommended basic units for evaluation is as follows:

- Water flux (precipitation amount and stream water discharge): mm
- Chemical concentration: $\text{mol}_c \text{L}^{-1}$ (ex. $\mu\text{mol}_c \text{L}^{-1}$ or $\text{mmol}_c \text{L}^{-1}$)
- Ion flux (deposition, discharge or soil/vegetation flux): $\text{mol}_c \text{ha}^{-1}$ or $\text{mol}_c \text{m}^{-2}$
- Elemental flux for N and S: $\text{kg ha}^{-1} \text{y}^{-1}$ or $\text{g m}^{-2} \text{y}^{-1}$

Based on the compiled data with the standard units on a water-year basis, initial evaluations should be made for the following items:

- Water balance on a catchment-scale: input, output and possible evapotranspiration
- Material/elemental balance on a catchment-scale: input-output budget

Dataset should be submitted to the Network Center after an initial evaluation is done by the national center. Since the catchment-scale data should be evaluated based on the water year, the dataset should be compiled on a water-year basis of the respective catchment sites.

7.1.4 Monitoring sites

Several EANET countries have experience of catchment-scale analysis as research activities and/or national monitoring activities. Many research projects were conducted by universities and institutes in China and Japan. The case studies have been conducted in Japan, Malaysia, Russia, and Thailand as the EANET joint research projects. Some countries may have an intention to start regular catchment-scale monitoring as a part of the EANET activities.

Japan submitted the data of the Lake Ijira Catchment, which was started in 2007. Moreover, the Philippines has just started the regular monitoring in 2019. Site characteristics and the survey outline are shown in Table 7.3 and 7.4, respectively. The maps of the Lake Ijira catchment site and the La Mesa Watershed site are shown in Figure 7.1 and 7.2, respectively.

Table 7.3 Site for the catchment-scale monitoring

Country	Site name (and name of river/stream)	Catchment area (km ²)	Geology and soil type	Coverage of forest (%)	Start year
Japan	Lake Ijira Catchment (IJR) , (Kamagatani River)	2.98 at Kamagata ni River	Chert, Cambisols (brown forest soils)	99.6%,	November 2007 (the water year here: from November to the next October)
Philippines	La Mesa Watershed (LMW), (Stream at Tower 1 Station)	0.186 at Tower 1 (La Mesa Watershed (LMW) total area: 26.59)	Clastic and volcanic rocks, Loamy-sand soil at Tower 1	For the whole LMW, 81.5%;	January 2019
Site	Major tree species				
IJR	Japanese cedar (<i>Cryptomeria japonica</i>), Japanese cypress (<i>Chamaecyparis obtusa</i>), and Japanese red pine (<i>Pinus densiflora</i>)				
LMW	Yemane (<i>Gmelina arborea</i> Roxb.), Auriculiformis (<i>Acacia auriculiformis</i> A. Cunn. Ex Berth.) , Mangium (<i>A. mangium</i> Willd.), Narra (<i>Pterpcarpus indicus</i> Willd. forma <i>indicus</i>), Mahogany (<i>Swietenia macrophylla</i> King), Teak (<i>Tectona grandis</i> L.f.), Ipil-ipil (<i>Leucaena leucocephala</i> De Wit), Kaatoan bangkal (<i>Anthocephalus chinensis</i> (Lam.) A. Rich. Ex Walp. And Alibangbang (<i>Bauhinia malabarica</i> Roxb.)				

Table 7.4 Survey outline for the catchment-scale monitoring

Site	Items	Detailed items
Lake Ijira Catchment	Input (total deposition)	1. Precipitation amount (at 3 different slope positions) 2. Wet deposition: Ijira ^{*1} 3. Dry deposition (Air concentration measurement for Inferential method): Ijira ^{*1} 4. Total deposition (calculated as wet+dry)
	Output (chemical discharge)	1. Water discharge (by H-Q curve method) 2. Stream water chemistry: biweekly 3. Chemical discharge
	Soil ^{*2}	Soil chemical properties: Lake Ijira
	Vegetation ^{*2}	1. Plant growth: Lake Ijira 2. Species composition: Lake Ijira
La Mesa Watershed	Input (total deposition)	1. Precipitation amount (PAGASA-Science Garden Station) 2. Wet deposition: Metro Manila (<i>MM</i>) site located at the top of Ionosphere Office, MO, AdMU ^{*1} 3. Dry deposition (Air concentration measurement for Inferential method): Metro Manila (<i>MM</i>) site (same location) ^{*1} 4. Total deposition (calculated as wet+dry)
	Output (chemical discharge)	1. Water discharge: (using the Float Method) 2. Stream water chemistry: monthly 3. Chemical discharge: not determined yet
	Soil ^{*2}	Soil chemical properties: La Mesa Watershed
	Vegetation ^{*2}	3. Plant growth: La Mesa Watershed 4. Species composition: La Mesa Watershed

Note. ^{*1}, The data from the EANET deposition monitoring site will be used; ^{*2}, The data from the EANET soil and vegetation monitoring plots will be referred.

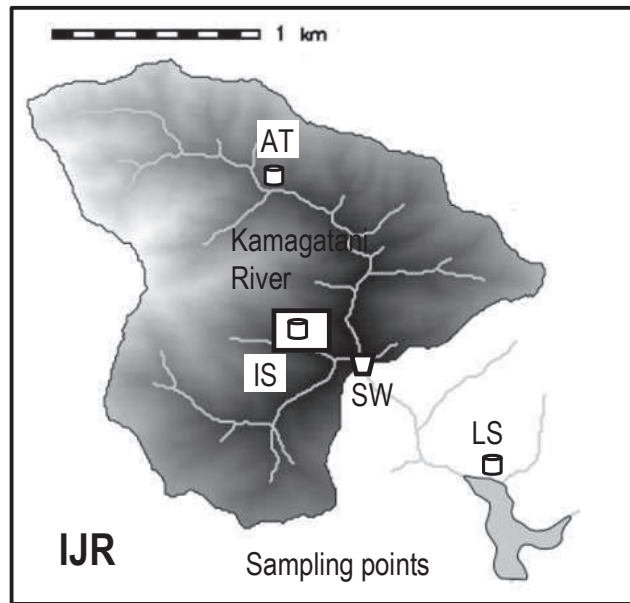


Figure 7.1 Catchment area and sampling design at the Lake Ijira catchment site

Precipitation amount is monitored at three points, namely, Akatani (AT), the Ijira site for wet/dry deposition monitoring (IS), and Lakeside (LS). SW indicates the point for stream water sampling and discharge. Darker colors indicate lower altitudes.

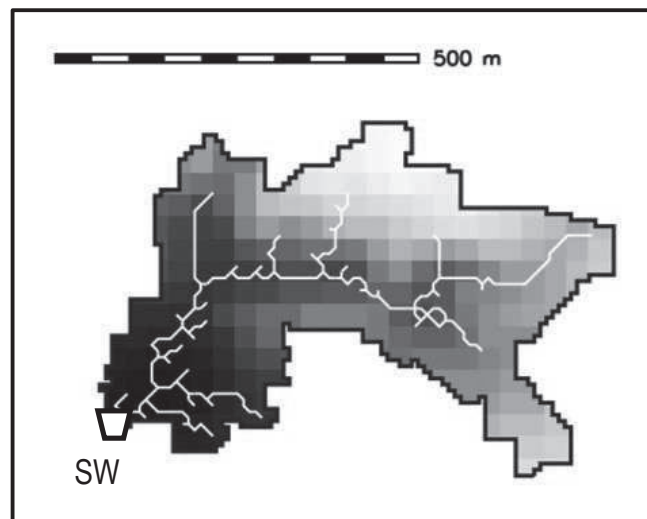


Figure 7.2 Catchment area and sampling design at the La Mesa Watershed site (Stream at Tower 1 Station)

SW indicates the stream water sampling point. Precipitation amount and wet/dry deposition are monitored at the PAGASA- Science Garden Station and the Metro Manila EANET site. Darker colors indicate lower altitudes.

7.2 Results of Monitoring

The list of the dataset submitted to the NC is shown in Table 7.5.

Table 7.5 List of the dataset submitted for Data Report 2023

Site	Items	Detailed items	Water year
Lake Ijira Catchment	Input ^{*1}	1. Precipitation amount (at 3 different slope positions)	2023-2024 ^{*2}
	Output	1. Water discharge 2. Stream water chemistry: biweekly 3. Chemical discharge	2023-2024 ^{*2}
La Mesa Watershed	Input ^{*1}	1. Precipitation amount (observed at PAGASA- Science Garden Station)	2024
	Output	1. Stream water chemistry: monthly	2024

Note. ^{*1}, The data of wet deposition and dry deposition (air concentration) in the EANET deposition monitoring site for the same period can be found in Data Reports 2023 and/or 2024; ^{*2}, The water year was defined as the period from November to October in the following year at Lake Ijira Catchment. Soil chemical properties, plant growth and understory-species composition were surveyed as a part of soil and vegetation monitoring in 2021 and 2010 at Lake Ijira Catchment and La Mesa Watershed, respectively.

The submitted data above are summarized in the following tables.

Table 7.6: Water balance in the catchment

Table 7.7: Stream water chemistry

Table 7.8: Periodic chemical discharges from the stream

Table 7.9: Annual chemical discharges from the stream

Table 7.6a Water balance in the catchment: Lake Ijira Catchment

Fluxes ^{*1}	Points	Water year ^{*2}
		2023-2024
Input by precipitation, mm y ⁻¹	Akatani (260 m)	3346
	Ijira monitoring site (140 m)	4764
	Lakeside (110 m)	3172
	Mean	3760
Output by the stream, mm y ⁻¹	Outlet of Kamagatani River	1941
Runoff rate, %		52

Note. ^{*1}, Fluxes were calculated based on the catchment area, 2.98 km², at the outlet of Kamagatani River; ^{*2}, The water year: from November to the next October.

Table 7.6b Water balance in the catchment: La Mesa Watershed

Fluxes ^{*1}	Points	Year
		2024
Input by precipitation, mm y ⁻¹	Science Garden	
Output by the stream, mm y ⁻¹	Outlet of Tower 1 Stream	
Runoff rate, %		

Note. ^{*1}, Fluxes were calculated based on the catchment area, at the outlet of Tower 1 Stream. ^{*2}, Average of flow measured during the monitoring activities in April and in December 2019 in the dry season: 0.0231 m³ s⁻¹

Table 7.7a Stream water chemistry: Lake Ijira Catchment (Water year 2023-2024)

Collection date	pH	EC	alkalinity											Al	TOC	SiO ₂	Water level
			pH4.8	Gran's ANC	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ^{+*1}	H ⁺				
mS m ⁻¹												mg L ⁻¹	mg-C L ⁻¹	mg-SiO ₂ L ⁻¹	m		
μmol L ⁻¹																	
2023/11/15	7.08	4.18	150	146	142	24.3	54.1	92	124	112	5.7	<3.0	0.08	<0.02	0.3	8.4	0.26
2023/11/30	7.00	4.30	154	150	153	19.4	58.5	95	127	115	6.1	<3.0	0.10	<0.02	0.3	8.2	0.25
2023/12/15	6.83	4.27	150	144	145	29.1	57.4	90	130	115	6.9	<3.0	0.15	<0.02	0.6	7.8	0.29
2023/12/25	6.99	4.12	144	134	147	23.7	54.9	90	119	109	5.6	<3.0	0.10	<0.02	0.3	8.0	0.26
2024/01/15	6.98	4.37	152	150	158	21.9	55.1	95	152	133	5.6	<3.0	0.10	<0.02	0.3	7.9	0.26
2024/01/31	6.84	4.26	148	143	151	23.3	53.3	92	149	131	5.5	<3.0	0.15	<0.02	0.3	7.9	0.28
2024/02/16	7.12	4.27	156	147	150	22.8	52.9	91	155	130	5.7	<3.0	0.08	<0.02	0.4	7.9	0.29
2024/02/29	6.95	3.78	148	129	126	18.1	53.0	86	134	115	5.6	<3.0	0.11	<0.02	0.3	8.3	0.29
2024/03/15	6.93	3.74	138	131	124	20.0	51.7	84	128	110	5.5	<3.0	0.12	<0.02	0.2	7.9	0.31
2024/03/27	6.94	3.63	134	117	117	23.9	49.6	84	127	109	5.8	<3.0	0.11	<0.02	1.5	7.6	0.35
2024/04/16	6.84	3.73	154	140	116	11.6	53.3	87	132	112	6.4	<3.0	0.20	<0.02	0.4	8.4	0.28
2024/04/30	6.80	3.87	162	149	122	11.3	48.0	86	139	117	6.8	<3.0	0.32	<0.02	1.0	8.6	0.29
2024/05/14	6.78	3.70	142	134	114	11.0	50.0	85	129	110	6.4	<3.0	0.35	<0.02	0.9	8.0	0.31
2024/05/31	6.84	3.23	130	119	95	11.6	49.9	81	116	99	6.5	<3.0	0.29	<0.02	0.5	8.2	0.39
2024/06/14	7.00	4.06	168	153	126	15.6	52.7	95	145	123	7.4	<3.0	0.13	<0.02	0.3	8.9	0.28
2024/06/28	6.85	3.37	136	125	103	19.8	42.6	77	122	103	6.5	<3.0	0.34	<0.02	0.7	7.5	0.40
2024/07/16	6.85	3.50	146	137	102	20.3	44.2	80	123	104	6.5	<3.0	0.14	<0.02	0.3	8.2	0.34
2024/07/31	6.70	3.94	168	153	120	17.0	51.3	92	140	117	7.5	<3.0	0.20	<0.02	0.3	9.2	0.23
2024/08/13	6.84	4.28	174	159	138	21.2	52.6	102	152	126	8.1	<3.0	0.14	<0.02	0.3	9.5	0.21
2024/08/30	6.63	3.87	142	127	107	52.7	44.0	84	139	115	7.7	<3.0	0.23	<0.02	0.5	8.4	0.31
2024/09/17	6.88	3.75	152	138	109	27.8	47.5	88	132	110	7.4	<3.0	0.13	<0.02	0.3	8.9	0.32
2024/09/30	6.85	4.06	168	155	126	21.2	50.9	93	146	121	7.4	<3.0	0.14	<0.02	0.3	9.1	0.29
2024/10/15	6.88	3.96	160	145	125	20.9	50.5	93	140	117	6.7	<3.0	0.13	<0.02	0.2	8.9	0.28
2024/10/31	6.82	3.90	156	141	119	27.5	46.9	88	140	117	6.5	<3.0	0.15	<0.02	0.4	8.6	0.31

Note. The water year was defined as the period from November to October in the following year. *1, The data were processed according to the determination limit decided by the data quality objectives (DQO) of EANET.

Table 7.7b Stream water chemistry: La Mesa Watershed (Year 2024)

Collection date	pH	EC	alkalinity pH4.8	PO ₄ ³⁻	NO ₂ ⁻	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ⁺	H ⁺
mS m ⁻¹			μmol L ⁻¹											
2024/01/16	7.52	27.8	3791	10.1	0.34	43.3	16.4	52.6	759	1348	905	50.3	10.0	0.03
2024/02/20	7.46	29.6	3312	16.1	2.05	43.3	16.3	52.3	659	1298	849	54.3	3.5	0.03
2024/03/13	7.28	32.3	3577	12.7	0.38	50.1	13.2	53.8	766	1525	979	47.6	3.0	0.05
2024/04/11	7.15	34.6	3872	15.0	0.13	36.3	8.4	49.9	933	1732	1184	64.3	3.2	0.07
2024/05/17	7.50	34.7	3580	16.0	0.40	34.8	7.4	63.0	724	1769	1219	73.8	7.6	0.03
2024/06/27	6.97	23.2	2364	20.7	0.22	64.9	20.6	63.8	596	1014	754	51.9	9.9	0.11
2024/07/16	7.33	25.0	2471	11.0	0.10	49.4	13.4	58.9	662	1266	871	51.6	30.0	0.05
2024/08/21	7.83	23.5	2395	12.1	0.10	51.0	12.6	48.4	610	1106	784	47.0	45.4	0.01
2024/09/17	7.55	17.5	1622	10.8	0.09	47.2	15.9	42.0	418	834	570	35.4	< 0.6	0.03
2024/10/15	7.95	18.2	1830	10.2	0.03	58.4	19.9	47.8	582	895	1101	35.2	< 0.6	0.01
2024/11/19	7.79	22.3	2229	11.6	0.90	44.8	10.6	50.8	572	1152	778	41.6	0.9	0.02
2024/12/23	7.56	24.0	2620	9.4	0.32	79.0	13.7	53.4	651	1115	811	39.3	4.6	0.03

Table 7.8 Periodic chemical discharges from the stream: Lake Ijira Catchment (Water year 2023-2024)

Start date	End date	alkalinity											Al	TOC	SiO ₂	Periodic discharge
		pH4.8	Gran's ANC	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ⁺	H ⁺				
kmol _e ha ⁻¹													kg ha ⁻¹	kg-C ha ⁻¹	kg-SiO ₂ ha ⁻¹	mm
2023/10/30	2023/11/15	0.05	0.05	0.05	0.01	0.02	0.03	0.04	0.04	0.002	ND	3.40E-05	ND	0.11	2.9	44
2023/11/15	2023/11/30	0.02	0.02	0.02	0.00	0.01	0.01	0.02	0.02	0.001	ND	1.33E-05	ND	0.05	1.2	22
2023/11/30	2023/12/15	0.03	0.03	0.03	0.00	0.01	0.02	0.02	0.02	0.001	ND	2.17E-05	ND	0.08	1.4	26
2023/12/15	2023/12/25	0.03	0.02	0.03	0.00	0.01	0.02	0.02	0.02	0.001	ND	2.20E-05	ND	0.08	1.4	25
2023/12/25	2024/01/15	0.03	0.03	0.03	0.00	0.01	0.02	0.03	0.02	0.001	ND	2.02E-05	ND	0.06	1.6	31
2024/01/15	2024/01/31	0.04	0.04	0.04	0.01	0.01	0.02	0.04	0.03	0.001	ND	3.29E-05	ND	0.08	2.1	38
2024/01/31	2024/02/16	0.04	0.04	0.04	0.01	0.01	0.03	0.04	0.04	0.002	ND	3.23E-05	ND	0.10	2.2	40
2024/02/16	2024/02/29	0.15	0.14	0.14	0.02	0.05	0.09	0.14	0.12	0.006	ND	9.37E-05	ND	0.34	8.0	114
2024/02/29	2024/03/15	0.06	0.06	0.05	0.01	0.02	0.04	0.06	0.05	0.002	ND	5.02E-05	ND	0.11	3.5	59
2024/03/15	2024/03/27	0.05	0.05	0.05	0.01	0.02	0.03	0.05	0.04	0.002	ND	4.42E-05	ND	0.33	3.0	50
2024/03/27	2024/04/16	0.35	0.31	0.28	0.04	0.12	0.21	0.31	0.27	0.015	ND	3.75E-04	ND	2.36	19.3	268
2024/04/16	2024/04/30	0.04	0.03	0.03	0.00	0.01	0.02	0.03	0.03	0.001	ND	5.86E-05	ND	0.16	1.9	32
2024/04/30	2024/05/14	0.08	0.07	0.06	0.01	0.02	0.04	0.07	0.06	0.003	ND	1.71E-04	ND	0.46	4.2	64
2024/05/14	2024/05/31	0.27	0.25	0.21	0.02	0.10	0.16	0.24	0.21	0.013	ND	6.32E-04	ND	1.35	16.0	208
2024/05/31	2024/06/14	0.07	0.07	0.05	0.01	0.02	0.04	0.06	0.05	0.003	ND	1.01E-04	ND	0.19	4.1	66
2024/06/14	2024/06/28	0.18	0.16	0.14	0.02	0.06	0.10	0.16	0.13	0.008	ND	2.79E-04	ND	0.56	9.8	132
2024/06/28	2024/07/16	0.33	0.31	0.24	0.05	0.10	0.19	0.29	0.24	0.015	ND	5.69E-04	ND	1.23	18.7	258
2024/07/16	2024/07/31	0.05	0.05	0.04	0.01	0.02	0.03	0.04	0.04	0.002	ND	5.71E-05	ND	0.10	2.9	47
2024/07/31	2024/08/13	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.000	ND	1.03E-05	ND	0.02	0.6	20
2024/08/13	2024/08/30	0.04	0.03	0.03	0.01	0.01	0.02	0.03	0.03	0.002	ND	4.18E-05	ND	0.08	2.0	45
2024/08/30	2024/09/17	0.21	0.19	0.15	0.06	0.06	0.12	0.19	0.16	0.011	ND	2.55E-04	ND	0.55	12.3	160
2024/09/17	2024/09/30	0.06	0.05	0.04	0.01	0.02	0.03	0.05	0.04	0.003	ND	4.93E-05	ND	0.11	3.3	51
2024/09/30	2024/10/15	0.12	0.11	0.10	0.02	0.04	0.07	0.11	0.09	0.005	ND	1.02E-04	ND	0.18	6.8	93
2024/10/15	2024/10/31	0.05	0.05	0.04	0.01	0.02	0.03	0.04	0.04	0.002	ND	4.44E-05	ND	0.09	2.8	46

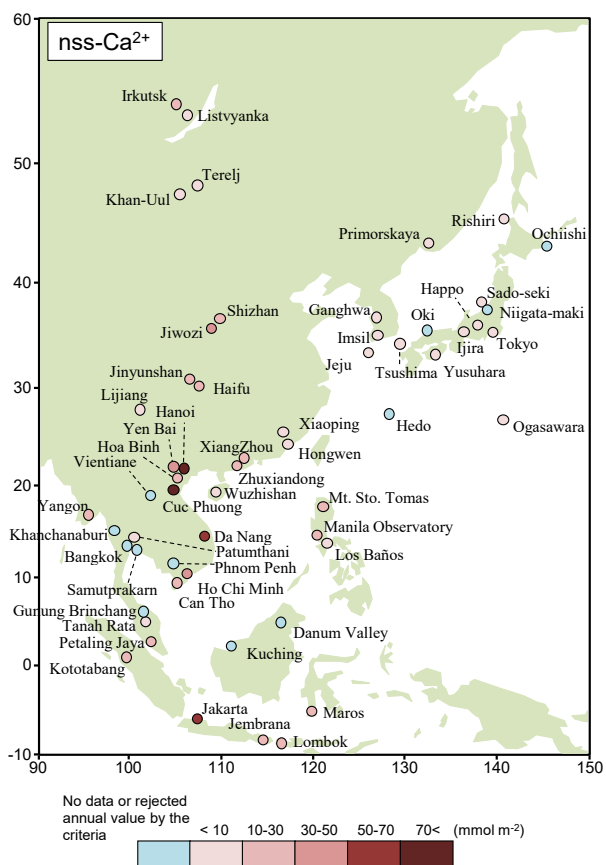
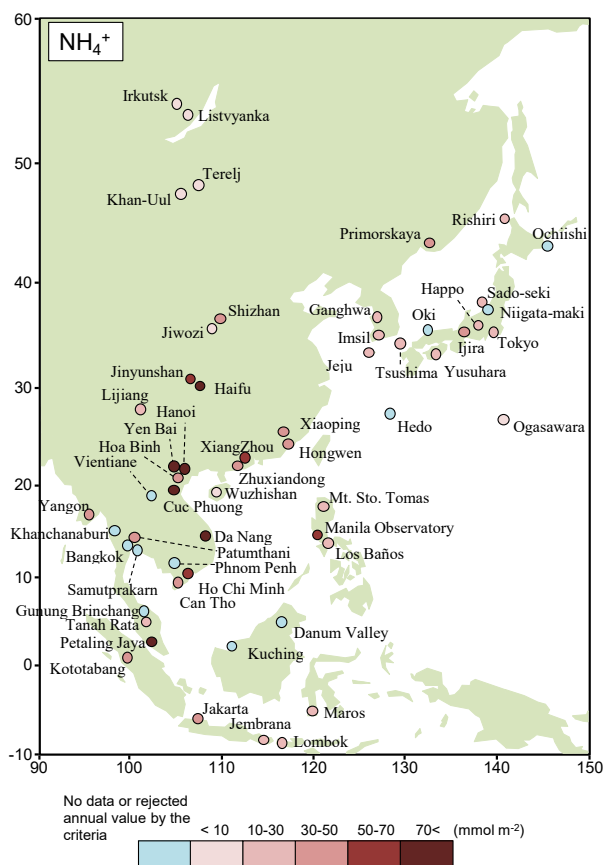
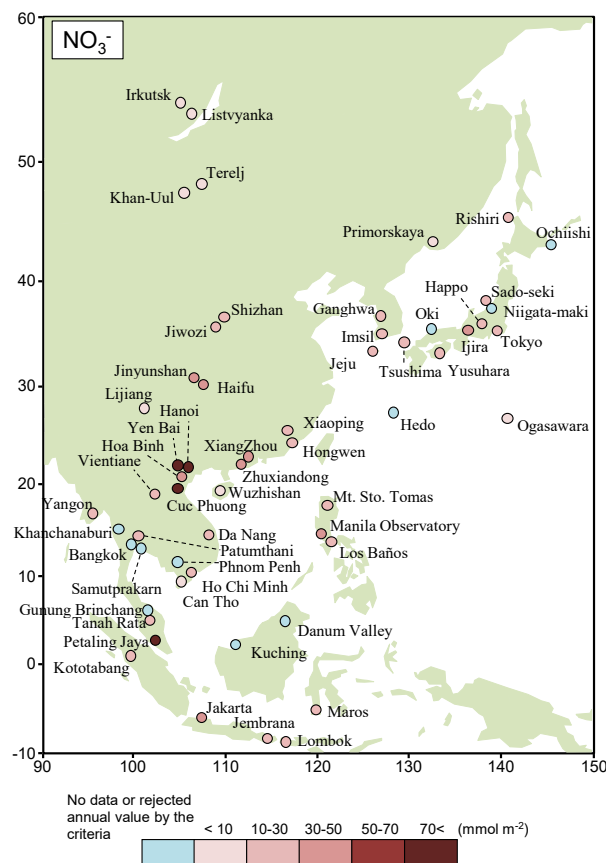
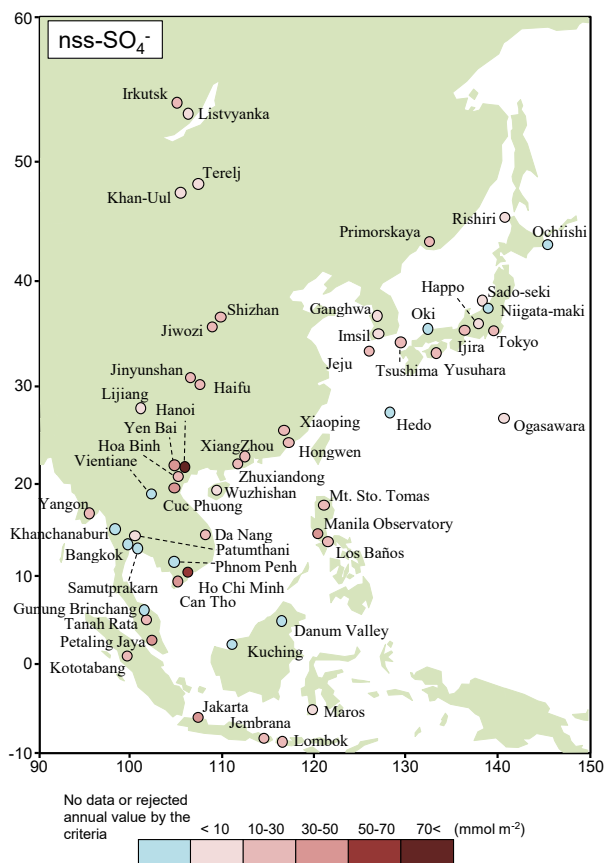
Note. Periodic chemical discharges were calculated based on the mean concentrations and the water discharge for the respective sampling intervals.

Table 7.9 Annual chemical discharges from the stream: Lake Ijira Catchment (Water year 2023-2024)

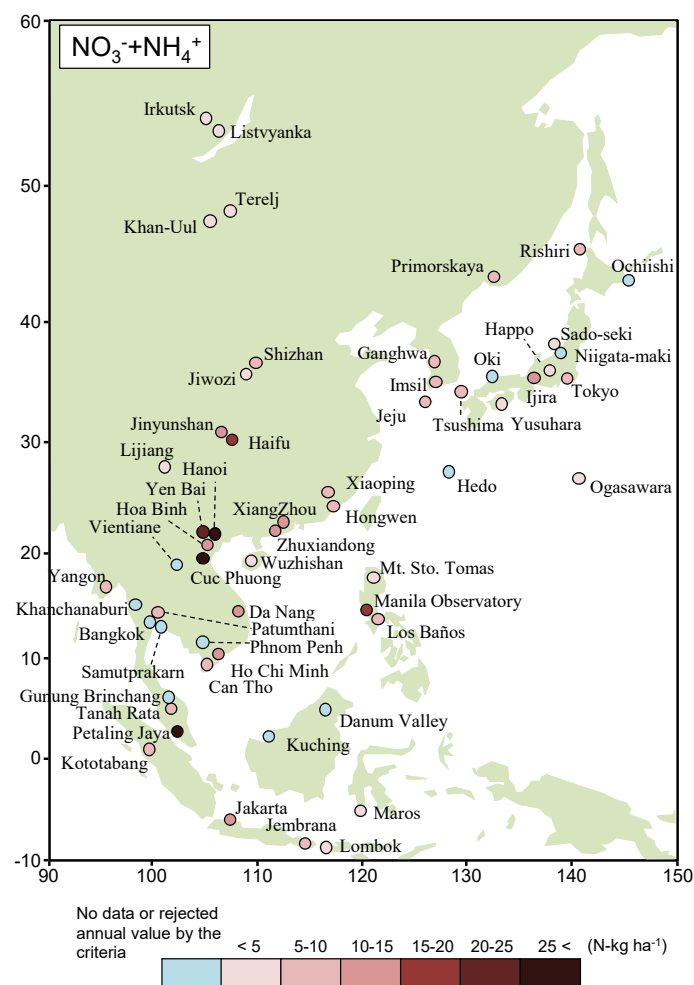
Water year	alkalinity											Al	TOC	SiO ₂
	pH4.8	Gran's ANC	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ⁺	H ⁺			
kmol ha ⁻¹												kg ha ⁻¹	kg-C ha ⁻¹	kg-SiO ₂ ha ⁻¹
2023 - 2024	2.9	2.6	2.3	0.4	1.0	1.7	2.6	2.2	0.1	ND	0.0	ND	10.3	160

Appendix 1

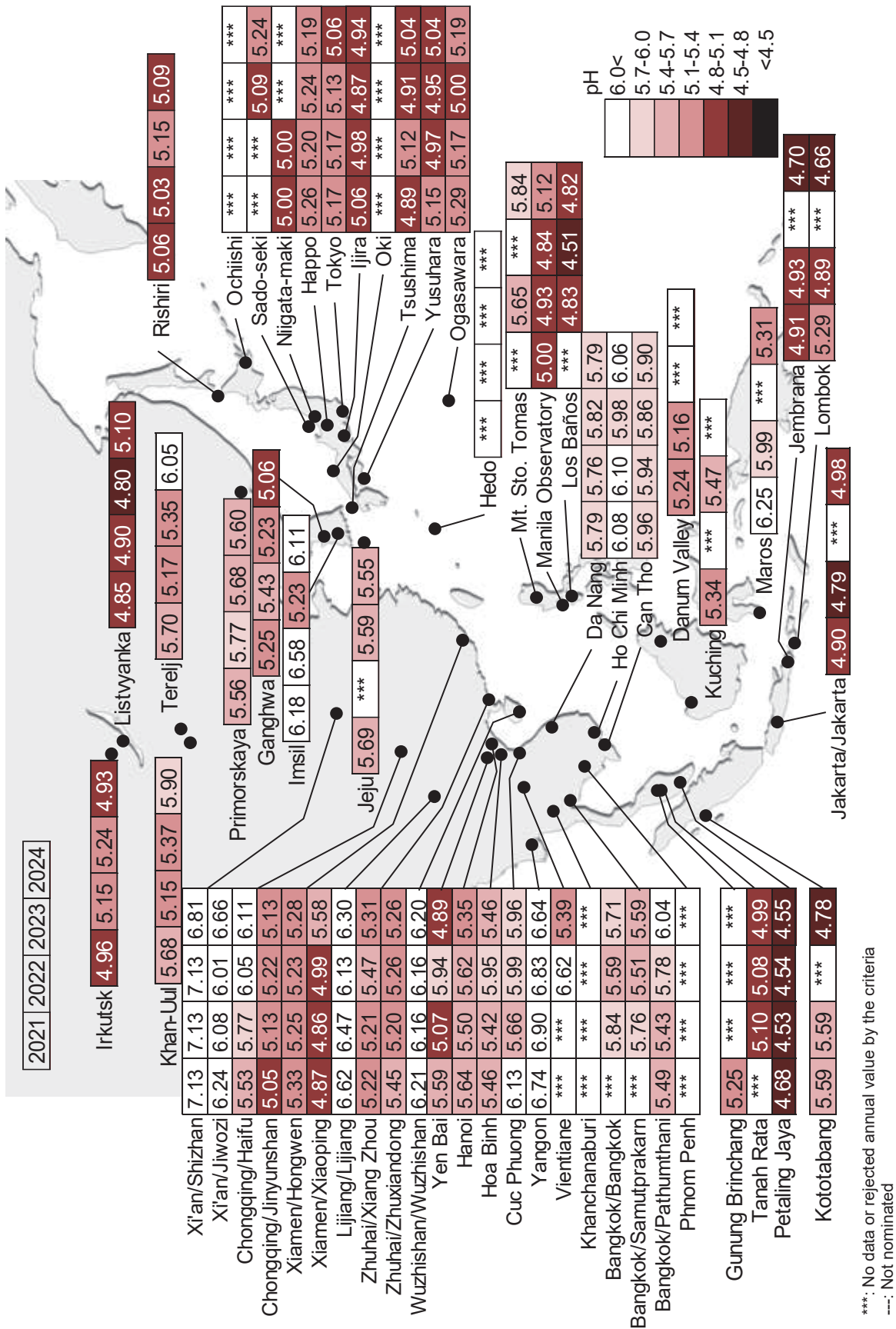
Overview of Data Report 2024



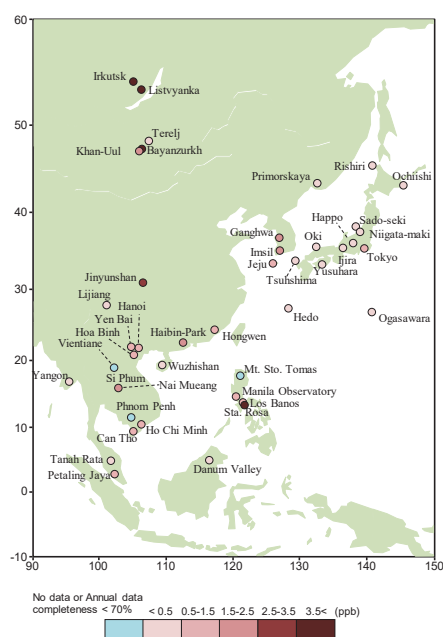
Appendix Fig. 1-1-1 Annual wet deposition levels of nss-SO₄²⁻, NO₃⁻, NH₄⁺ and nss-Ca²⁺ in 2024



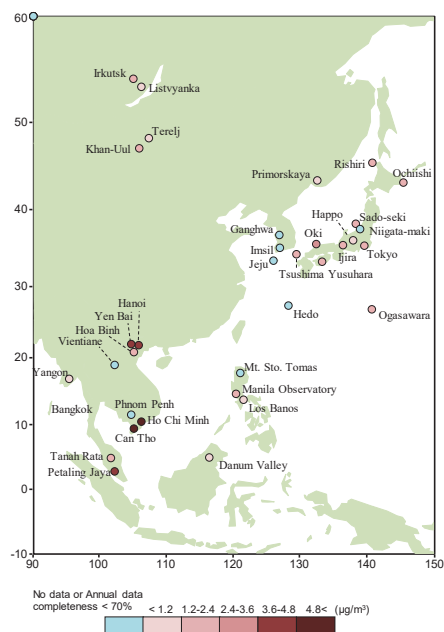
Appendix Fig. 1-1-2 Annual wet deposition levels of total nitrogen (NO₃⁻+ NH₄⁺) in 2024



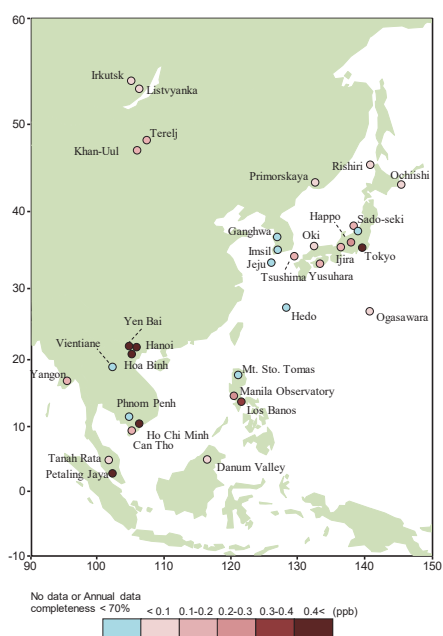
Appendix Fig. 1-2 Trends of pH in each EANET site from 2021 to 2024



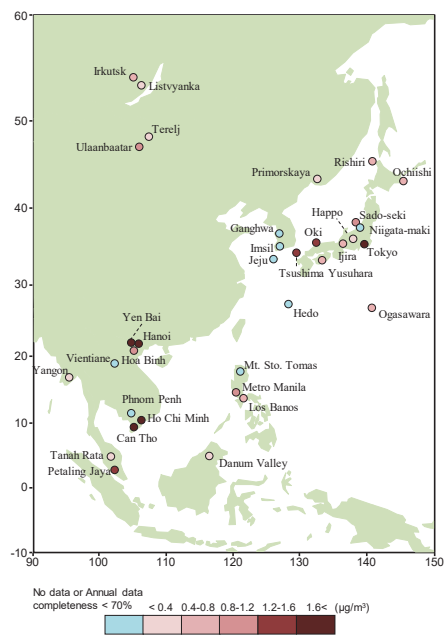
Appendix Fig. 1-3-1 Levels of annual SO_2 concentrations at EANET monitoring sites in 2024.



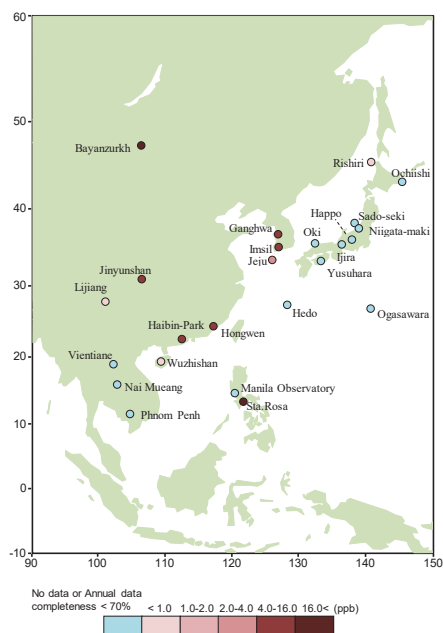
Appendix Fig. 1-3-2 Levels of annual particulate SO_4^{2-} concentrations at EANET monitoring sites in 2024.



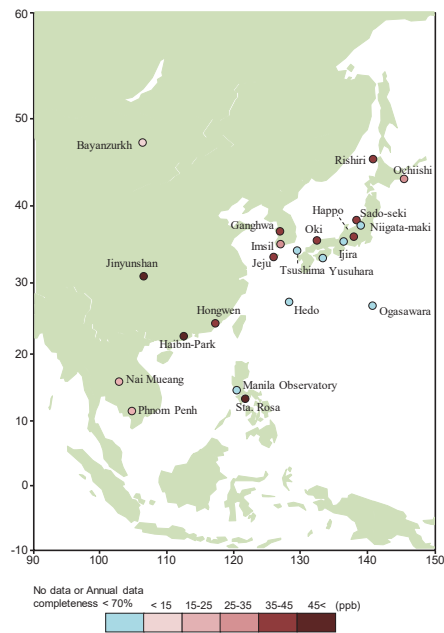
Appendix Fig. 1-3-3 Levels of annual HNO_3 concentrations at EANET monitoring sites in 2024.



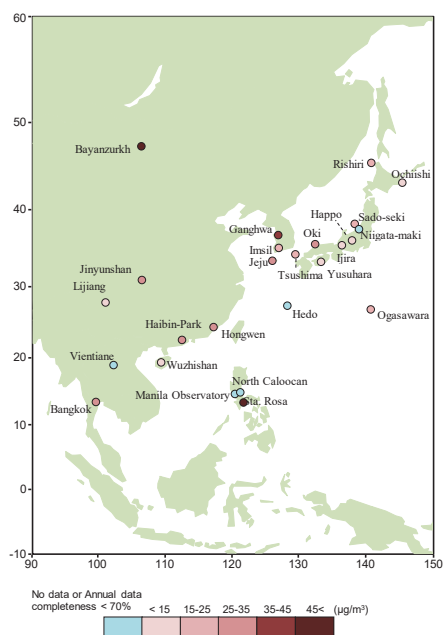
Appendix Fig. 1-3-4 Levels of annual particulate NO_3^- concentrations at EANET monitoring sites in 2024.



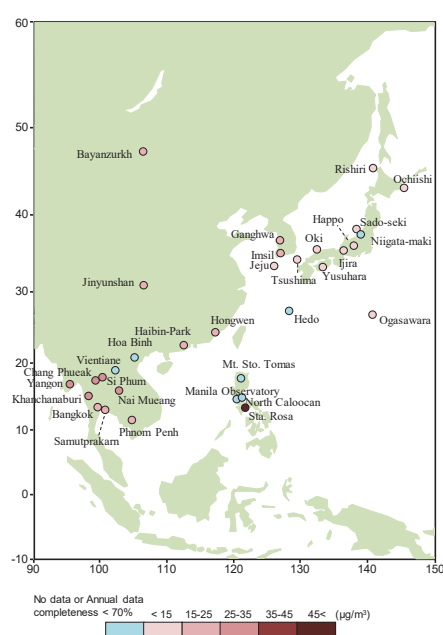
Appendix Fig. 1-3-5 Levels of annual NO_x or NO₂ concentrations at EANET monitoring sites in 2024.



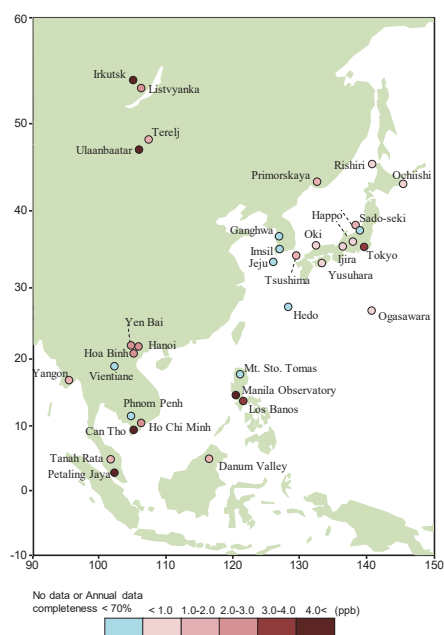
Appendix Fig. 1-3-6 Levels of annual O₃ concentrations at EANET monitoring sites in 2024.



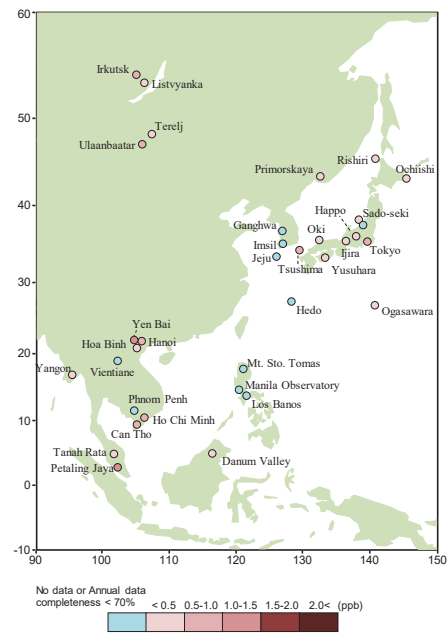
Appendix Fig. 1-3-7 Levels of annual PM₁₀ concentrations at EANET monitoring sites in 2024.



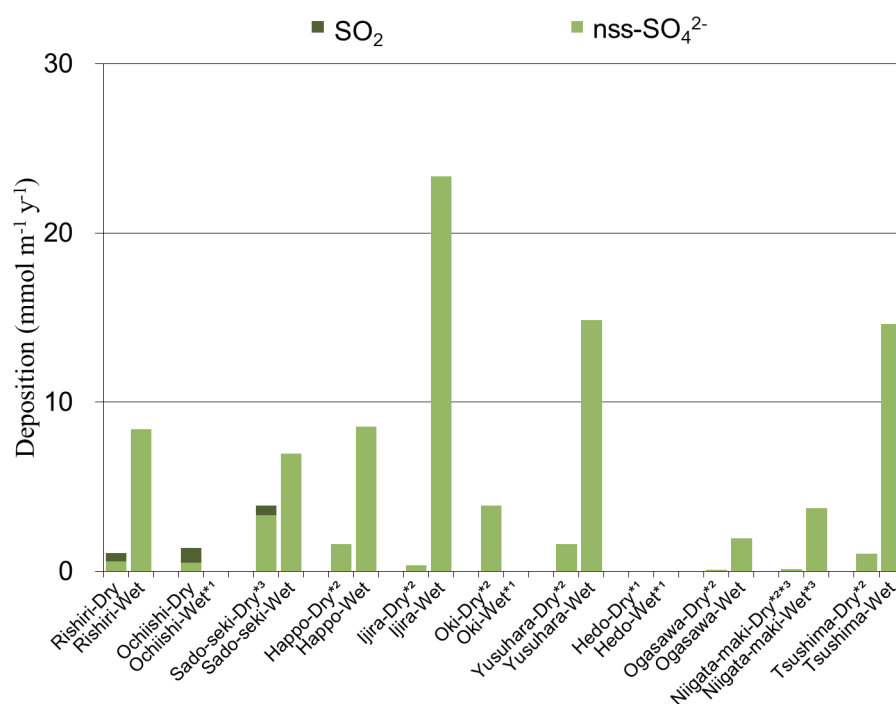
Appendix Fig. 1-3-8 Levels of annual PM_{2.5} concentrations at EANET monitoring sites in 2024.



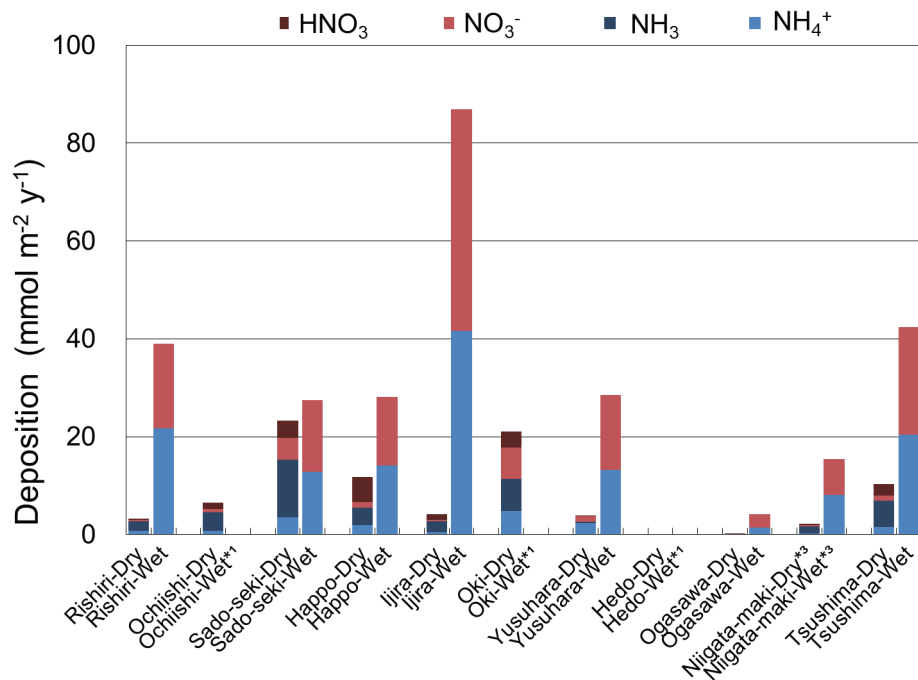
Appendix Fig. 1-3-9 Levels of annual NH_3 concentrations at EANET monitoring sites in 2024.



Appendix Fig. 1-3-10 Levels of annual NH_4^+ concentrations at EANET monitoring sites in 2024.



Appendix Fig. 1-4-1 Annual dry and wet deposition amount of sulfur compounds at EANET sites in 2024.
 (Note: SO₂ data from automatic monitoring sites are not available*² except for Rishiri, Ochiishi and Sado-Seki.
 The completeness rate of Sadoseki is below 70%)



Appendix Fig. 1-4-2 Annual dry and wet deposition amount of nitrogen compounds at EANET sites in 2024.

*1 Wet deposition data were entirely unavailable.

*2 Auto monitoring of SO₂ was terminated.

*3 Their completeness was less than 70%.

Appendix 2

Meteorological Statistics at the Monitoring Sites

Appendix Table 2-1 Meteorological statistics at the monitoring site
Site : Rishiri, Japan

2024													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	-3.8	-4.5	-0.9	6.5	9.1	14.2	19.1	20.6	16.9	12.1	3.7	-4.0
	max.daily mean	1.4	5.4	4.8	12.3	15.1	18.5	22.8	24.4	21.6	19.2	11.4	4.3
	min.daily mean	-9.2	-9.9	-5.5	1.9	3.6	8.8	15.0	16.5	10.2	5.4	-2.9	-7.4
Relative humidity (%)	monthly mean	77	71	68	79	83	90	92	91	81	76	76	73
	max.daily mean	90	94	87	98	97	99	99	99	96	96	95	82
	min.daily mean	59	52	49	57	61	62	81	75	67	55	61	56
Mean wind speed (m/s)	3.3	2.9	2.7	1.9	2.0	1.6	1.4	1.5	2.1	2.5	2.8	2.9	
Most frequent wind direction (bearings)	NNW	NNW	N	W	W	W	W	E	W	NW	NW	NNW	
Precipitation amount (mm/month)	119	45	45	17	127	91	90	168	143	92	177	69	
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--	
Solar radiation (MJ/m ² /month)	117	215	390	450	475	415	449	423	414	295	140	97	

Appendix Table 2-2 Meteorological statistics at the monitoring site
Site : Ochiishi, Japan

2024													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	-3.5	-5.1	-2.4	3.4	6.1	10.1	15.1	16.9	15.3	12.0	5.2	-2.6
	max.daily mean	0.0	1.6	2.7	7.3	8.7	13.3	17.8	19.4	17.9	16.7	11.0	6.9
	min.daily mean	-8.7	-9.4	-5.1	0.3	2.0	5.2	12.5	13.8	11.3	5.4	-1.5	-6.2
Relative humidity (%)	monthly mean	65	59	64	89	91	96	98	--	78	76	68	58
	max.daily mean	88	87	91	100	100	100	100	--	96	93	88	80
	min.daily mean	47	40	44	67	68	45	81	--	63	55	50	45
Mean wind speed (m/s)	7.9	7.5	7.6	5.3	6.3	4.8	4.3	3.5	5.3	6.8	7.6	8.1	
Most frequent wind direction (bearings)	NNW	NNW	NNE	WSW	WSW	ENE	WSW	SSW	SSE	ENE	NW,N	NW	
Precipitation amount (mm/month)	14	1	22	59	59	20	62	134	84	106	69	5	
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--	
Solar radiation (MJ/m ² /month)	199	313	487	434	514	584	548	430	422	314	201	196	

Appendix Table 2-3 Meteorological statistics at the monitoring site
Site : Sado-seki, Japan

2024													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	4.2	4.6	5.3	12.9	16.0	20.9	24.4	26.5	23.6	18.3	11.5	4.7
	max.daily mean	8.7	16.2	12.0	18.4	22.3	25.0	28.0	30.4	28.0	22.6	18.0	11.8
	min.daily mean	-0.3	0.6	-0.7	7.0	8.4	15.5	20.6	24.2	18.7	11.7	5.1	1.3
Relative humidity (%)	monthly mean	78	73	74	72	74	83	94	91	89	81	77	80
	max.daily mean	95	94	95	97	97	99	100	99	100	98	95	97
	min.daily mean	64	58	54	51	36	58	78	75	71	60	58	66
Mean wind speed (m/s)		--	--	5.4	2.9	2.9	2.3	3.7	2.1	2.5	2.8	4.0	6.2
Most frequent wind direction (bearings)		--	--	W	ENE	W	W	W	NE	ENE	ENE	WNW	WNW
Precipitation amount (mm/month)		87	47	113	651	1265	597	1392	35	296	127	132	134
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-4 Meteorological statistics at the monitoring site
Site : Happo, Japan

													2024
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-6.1	-4.3	-4.4	6.8	9.1	12.6	17.8	20.3	16.0	9.8	1.9	-6.3
	max.daily mean	-0.6	6.2	4.7	13.9	13.2	17.0	22.5	22.4	19.3	14.5	9.5	2.0
	min.daily mean	-14.3	-11.1	-12.6	-1.3	-0.3	6.4	14.5	17.3	9.7	1.6	-5.6	-10.6
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		4.9	3.7	6.4	2.7	2.4	2.1	2.7	1.6	2.0	2.1	2.5	5.3
Most frequent wind direction (bearings)		NNW	S	NW	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE
Precipitation amount (mm/month)		170	165	180	158	203	348	675	93	278	190	194	261
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		285	384	486	591	623	482	427	328	285	315	252	216

Appendix Table 2-5 Meteorological statistics at the monitoring site
Site : Ijira, Japan

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	2.5	5.5	5.7	14.6	16.4	20.3	24.8	26.9	24.2	17.9	11.1	3.4
	max.daily mean	8.6	13.5	14.2	18.6	20.2	23.1	27.4	30.1	26.5	22.4	16.8	8.4
	min.daily mean	-2.0	2.0	0.4	10.0	12.5	16.8	22.0	22.4	20.5	13.6	4.6	0.3
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		0.3	0.5	0.5	0.5	0.5	0.4	0.3	0.5	0.3	0.3	0.4	0.3
Most frequent wind direction (bearings)		Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm
Precipitation amount (mm/month)		217	369	624	404	757	616	494	325	248	291	160	156
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		238	327	520	666	826	799	678	491	366	234	158	133

Appendix Table 2-6 Meteorological statistics at the monitoring site
Site : Yusuvara, Japan

													2024
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	2.9	5.6	6.1	13.3	15.0	18.6	23.8	24.1	22.0	17.0	10.4	2.5
	max.daily mean	9.9	14.5	14.6	17.4	19.9	22.4	26.2	26.2	23.7	19.9	18.0	8.5
	min.daily mean	-6.4	1.0	-2.3	9.3	10.3	14.8	20.6	21.0	18.2	13.8	2.3	-1.4
Relative humidity (%)	monthly mean	84	89	78	89	86	93	94	95	96	96	93	88
	max.daily mean	99	99	99	99	99	99	99	99	99	99	99	98
	min.daily mean	49	62	39	44	48	72	83	88	87	86	75	65
Mean wind speed (m/s)		2.2	1.6	2.0	1.2	1.3	1.1	1.1	1.1	0.8	1.0	1.7	2.3
Most frequent wind direction (bearings)		N	NNW	N	SSE	NNW	NNW	NNW	NNW	S	NNW	NNW	N
Precipitation amount (mm/month)		56	168	216	225	336	301	249	548	182	146	167	20
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		315	290	447	406	560	484	609	562	472	302	300	274

Appendix Table 2-7 Meteorological statistics at the monitoring site
Site : Ogasawara, Japan

2024													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	15.9	17.6	17.1	21.1	23.1	25.3	27.1	26.5	25.8	25.5	22.7	17.2
	max.daily mean	18.9	20.2	21.0	24.3	26.3	27.1	28.4	28.0	26.6	26.2	24.8	21.9
	min.daily mean	12.3	14.7	13.9	16.9	19.2	20.9	25.6	24.9	23.6	24.3	18.9	13.5
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		1.6	1.8	1.8	1.7	2.0	1.7	1.0	1.7	1.5	1.4	1.4	1.2
Most frequent wind direction (bearings)		WSW	WSW	WSW	SSW	SSW	SSW	SW	SSW	NE	NE	WSW	WSW
Precipitation amount (mm/month)		30	66	27	34	14	201	24	259	155	81	169	157
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		372	416	520	485	577	566	715	534	552	469	327	256

Appendix Table 2-8 Meteorological statistics at the monitoring site
Site : Niigata-maki, Japan

2024												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	3.9	4.4	5.2	--	--	--	--	--	--	--	--
	max.daily mean	7.5	13.7	10.8	--	--	--	--	--	--	--	--
	min.daily mean	0.6	0.8	0.4	--	--	--	--	--	--	--	--
Relative humidity (%)	monthly mean	77	73	72	--	--	--	--	--	--	--	--
	max.daily mean	92	91	87	--	--	--	--	--	--	--	--
	min.daily mean	62	53	55	--	--	--	--	--	--	--	--
Mean wind speed (m/s)	5.9	4.3	5.7	--	--	--	--	--	--	--	--	--
Most frequent wind direction (bearings)	WNW	SSE	W	--	--	--	--	--	--	--	--	--
Precipitation amount (mm/month)	158	92	164	--	--	--	--	--	--	--	--	--
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	167	200	308	--	--	--	--	--	--	--	--	--

Appendix Table 2-9 Meteorological statistics at the monitoring site
Site : Tsushima, Japan

2024												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)	3.0	2.8	3.1	2.1	2.7	2.4	3.4	1.9	1.6	2.3	2.8	3.4
Most frequent wind direction (bearings)	WNW	ENE	WSW	ENE	WSW	WSW	SW	ENE	ENE	ENE	ENE	WNW
Precipitation amount (mm/month)	67	158	120	173	82	338	246	103	30	209	224	2
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-10 Meteorological statistics at the monitoring site
Site : Bayanzurkh, Mongolia

2024													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	-18.5	-18.2	-5.7	5.7	13.7	16.5	21.1	18.9	10.9	2.7	-4.2	-14.7
	max.daily mean	-9.1	-7.9	3.4	11.9	21.1	22.8	23.7	22.6	18.9	9.5	2.5	-11.4
	min.daily mean	-26.7	-28.2	-16.8	-1.7	4.2	6.2	16.0	15.1	-0.3	-4.1	-14.7	-18.2
Relative humidity (%)	monthly mean	62	58	53	43	41	52	54	62	54	52	49	59
	max.daily mean	68	66	63	69	73	81	76	76	74	71	62	68
	min.daily mean	53	44	40	26	24	31	36	48	39	28	39	44
Mean wind speed (m/s)	1	1	1	1	1	1	1	1	1	1	1	1	
Most frequent wind direction (bearings)	ENE	NW	SSE	SE	SE	NW	NW	SE	SE	SE	SSE	NW	
Precipitation amount (mm/month)	0	0	13	54	31	140	89	134	14	2	31	5	
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--	
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--	

Appendix Table 2-11 Meteorological statistics at the monitoring site
Site : Meteo Manila, Philippines

													2024
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	26.4	27.4	28.1	30.5	30.6	30.0	28.9	29.3	28.3	28.1	28.4	27.4
	max.daily mean	28.2	30.0	30.7	33.3	32.8	31.5	30.6	31.3	30.3	30.3	29.4	29.5
	min.daily mean	24.3	25.5	24.5	27.6	26.8	28.2	25.4	26.7	25.2	24.2	26.6	23.9
Relative humidity (%)	monthly mean	73	64	65	57	68	76	82	81	82	82	76	80
	max.daily mean	83	76	80	65	98	87	93	93	95	93	91	95
	min.daily mean	64	56	57	50	52	68	71	72	70	71	67	67
Mean wind speed (m/s)		1.1	1.4	1.3	1.4	1.4	1.1	1.2	1.2	1.1	1.2	1.2	1.2
Most frequent wind direction (bearings)		E	S	S	S	S	W,NW	W	W	S	E	E	NE,E
Precipitation amount (mm/month)		10	3	34	0	281	186	704	365	501	558	65	135
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

* location of the meteorological monitoring : the PAGASA Science Garden Station

(Latitude: 14°38'41"N Longitude: 121°02'40"E Altitude: 43 m)

Data Source: Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Department of Science and Technology (

Appendix Table 2-12 Meteorological statistics at the monitoring site
Site : Benguet, Philippines

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	18.7	19.6	20.3	22.0	21.8	21.7	20.6	20.9	19.7	20.2	20.2	20.3
	max.daily mean	21.1	21.5	23.4	23.3	23.4	22.7	22.2	22.4	22.4	21.9	21.5	21.2
	min.daily mean	15.9	17.0	18.3	20.0	19.9	20.6	18.2	18.6	17.5	17.3	17.7	18.7
Relative humidity (%)	monthly mean	80	77	78	78	83	86	88	90	93	89	88	85
	max.daily mean	90	87	85	89	93	94	98	96	98	98	98	95
	min.daily mean	68	67	67	63	19	71	80	77	80	72	76	76
Mean wind speed (m/s)		1	2	1	1	1	1	2	1	2	1	1	1
Most frequent wind direction (bearings)		E	SSE	ESE	SE	SE	ESE	ESE	NW	SW,N	SSE	SSE	SSE
Precipitation amount (mm/month)		0	0	38	39	351	165	1049	281	841	656	435	14
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-13 Meteorological statistics at the monitoring site
Site : Listvyanka, Russia

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-13.8	-16.9	-6.3	1.5	6.4	10.4	17.1	16.4	9.0	2.9	-2.7	-9.9
	max.daily mean	-5.7	-4.8	1.0	6.1	11.9	17.3	19.8	20.4	16.0	9.8	3.1	-4.7
	min.daily mean	-23.6	-24.9	-13.9	-2.4	1.1	6.6	13.3	13.0	2.8	-3.5	-13.0	-16.1
Relative humidity (%)	monthly mean	74	76	71	67	68	79	83	82	78	68	74	79
	max.daily mean	86	82	83	90	97	94	93	91	88	85	84	85
	min.daily mean	54	65	53	36	47	58	69	71	68	46	58	69
Mean wind speed (m/s)		3.1	3.2	2.8	3.1	2.9	2.1	2.2	2.9	3.5	3.2	3.4	4.6
Most frequent wind direction (bearings)		N	S	S	N	N, S	N, S	N	N	N	N	N	N
Precipitation amount (mm/month)		7	12	5	49	54	82	60	72	49	27	32	14
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-14 Meteorological statistics at the monitoring site
Site : Irkutsk, Russia

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-15.8	-16.4	-3.2	4.6	12.2	16.9	21.8	18.9	9.3	3.1	-3.4	-12.7
	max.daily mean	-6.8	0.4	3.9	12.1	19.1	24.0	24.6	22.2	16.0	11.8	3.3	-5.7
	min.daily mean	-26.3	-27.7	-12.5	0.0	3.2	11.0	16.1	14.2	2.5	-4.6	-15.7	-21.9
Relative humidity (%)	monthly mean	69	60	52	52	52	73	80	83	84	74	83	87
	max.daily mean	80	77	66	83	100	96	100	100	99	97	98	100
	min.daily mean	60	47	36	28	30	48	57	70	73	55	64	73
Mean wind speed (m/s)		1.7	1.8	1.6	2.0	2.1	1.6	1.4	1.5	1.5	1.8	1.7	1.3
Most frequent wind direction (bearings)		SE	SE	SE	SE	SE	SE	SE	SE	WNW, NW	SE	ENE, SE	NW
Precipitation amount (mm/month)		9	13	5	42	40	56	103	146	55	25	30	19
Sunshine duration (hours/month)		138	173	254	232	282	309	279	275	184	176	95	79
Solar radiation (MJ/m ² /month)		138	245	420	483	610	641	559	497	337	248	123	92

Appendix Table 2-15 Meteorological statistics at the monitoring site
Site : Primorskaya, Russia

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-14.8	-9.9	-2.3	8.3	11.8	16.8	22.0	22.1	14.7	8.5	-0.6	-11.3
	max.daily mean	-3.8	5.8	5.7	15.2	15.6	21.7	25.7	25.7	19.9	17.2	11.5	-0.8
	min.daily mean	-20.7	-19.5	-11.8	0.6	8.8	11.1	18.1	2.4	1.8	-0.5	-9.1	-17.4
Relative humidity (%)	monthly mean	72	68	66	70	77	85	87	87	84	77	77	71
	max.daily mean	83	90	89	93	97	99	100	95	95	96	96	81
	min.daily mean	60	49	52	48	63	72	72	82	75	49	45	55
Mean wind speed (m/s)		1.0	1.0	1.2	1.0	0.9	0.8	0.8	0.7	0.9	1.1	1.1	1.2
Most frequent wind direction (bearings)		NW	NW	WNW	SSE	SE	SE	SE	SSE	SSE	SSE	NW	WNW
Precipitation amount (mm/month)		6	6	68	46	90	97	174	96	70	83	63	8
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-16 Meteorological statistics at the monitoring site
Site : Bangkok, Thailand

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	28.4	29.4	30.5	32.1	30.4	30.0	28.3	29.2	28.2	28.0	28.4	26.9
	max.daily mean	29.7	30.4	31.9	33.3	33.5	31.7	30.1	31.3	30.3	30.4	29.8	29.3
	min.daily mean	25.1	26.9	25.5	31.2	27.0	25.5	26.3	26.8	25.8	25.8	25.7	24.1
Relative humidity (%)	monthly mean	58	74	76	73	79	71	85	80	85	86	67	56
	max.daily mean	76	85	97	83	98	99	98	97	99	95	97	75
	min.daily mean	47	49	68	63	64	59	67	67	68	73	54	48
Mean wind speed (m/s)		0.4	0.6	0.7	0.6	0.4	0.5	0.4	0.4	0.4	0.3	0.3	1.1
Most frequent wind direction (bearings)		NNE	WSW	WSW	WSW	WSW	WNW	WNW	WNW	WNW	NNE	NNE	W
Precipitation amount (mm/month)		0	5	42	2	217	142	182	245	207	279	46	4
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-17 Meteorological statistics at the monitoring site
Site : Samutprakarn, Thailand

2024												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)	1.2	1.8	2.2	2.5	1.6	1.6	1.4	1.4	1.3	--	--	--
Most frequent wind direction (bearings)	E	S	S	S	S	SSW	SSW	S	WNW	--	--	--
Precipitation amount (mm/month)	--	--	--	--	--	--	--	--	--	--	--	--
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-18 Meteorological statistics at the monitoring site
Site : Khanchanaburi, Thailand

2024												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	27.5	29.3	30.7	32.8	30.7	29.6	28.2	29.1	28.7	28.1	27.3
	max.daily mean	29.1	30.8	32.5	33.9	34.4	31.6	30.4	31.2	30.6	30.0	29.2
	min.daily mean	24.2	25.9	26.8	30.4	26.6	27.4	25.1	26.7	26.6	25.6	24.3
Relative humidity (%)	monthly mean	61	59	62	55	70	71	80	76	78	84	76
	max.daily mean	72	74	81	72	95	85	98	90	97	95	91
	min.daily mean	40	39	45	33	43	57	62	63	61	72	56
Mean wind speed (m/s)	0.7	1.0	1.1	1.3	1.0	1.2	1.1	1.1	1.0	0.7	0.6	0.7
Most frequent wind direction (bearings)	WSW	SE	SE	SW	SW	SW	SW	SW	SW	W	N	N
Precipitation amount (mm/month)	--	--	--	--	--	--	--	--	--	--	--	--
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-19 Meteorological statistics at the monitoring site
Site : Chang Phueak, Thailand

													2024
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	--	--	--	31.8	29.4	27.9	27.2	26.5	26.4	26.6	24.4	22.7
	max.daily mean	--	--	--	33.8	33.7	30.8	28.7	28.8	28.4	28.0	27.1	25.6
	min.daily mean	--	--	--	29.3	26.4	26.0	24.0	24.4	24.0	24.3	20.0	20.0
Relative humidity (%)	monthly mean	66	--	--	45	64	75	80	85	86	79	75	75
	max.daily mean	77	--	--	54	84	89	99	99	99	94	96	84
	min.daily mean	55	--	--	39	41	62	69	74	72	64	64	67
Mean wind speed (m/s)		0.6	0.5	0.5	0.5	0.6	0.6	0.4	0.4	0.3	0.4	0.5	0.4
Most frequent wind direction (bearings)		S	NNW	SSE	NW	S	S	S	S	NNW	NNW	NNW	NNW
Precipitation amount (mm/month)		7	--	--	22	84	142	125	210	240	117	30	12
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-20 Meteorological statistics at the monitoring site
Site : Si Phum, Thailand

													2024
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	26.4	28.6	32.0	35.3	32.6	31.1	30.4	29.4	29.5	30.0	27.9	26.7
	max.daily mean	28.3	32.4	34.2	37.5	37.1	34.2	31.9	32.0	32.1	32.0	31.0	29.5
	min.daily mean	23.7	26.0	29.0	32.2	29.0	28.6	26.2	26.5	26.3	26.8	22.5	23.7
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.2
Most frequent wind direction (bearings)		NE	NE	SE	SE	SE	WSW	SE	SE	NE	NE	NNE	NE
Precipitation amount (mm/month)		--	--	--	--	--	--	--	--	--	--	--	--
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-21 Meteorological statistics at the monitoring site

Site : Nai Mueang, Thailand

2024													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	25.4	28.6	29.2	32.6	29.8	29.8	27.9	28.4	27.6	26.9	26.0	23.6
	max.daily mean	28.0	30.7	32.0	34.5	34.0	32.1	29.6	30.3	29.8	28.6	29.1	26.6
	min.daily mean	20.7	22.4	23.8	28.5	26.1	26.0	25.3	26.4	24.6	24.6	22.1	20.3
Relative humidity (%)	monthly mean	55	51	60	49	66	63	72	72	77	76	65	58
	max.daily mean	62	59	82	70	85	87	91	86	93	94	82	64
	min.daily mean	46	40	39	37	45	49	62	61	61	66	57	52
Mean wind speed (m/s)		0.7	0.7	0.6	0.7	0.9	1.1	1.3	0.9	1.0	1.0	1.6	1.6
Most frequent wind direction (bearings)		E	E	SW	SW	W	W	W	W	W	E	E	ENE
Precipitation amount (mm/month)		0	1	163	49	148	165	190	182	177	155	7	0
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-22 Meteorological statistics at the monitoring site

Site : Hanoi, Vietnam

2024													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	18.1	19.4	21.7	28.1	28.4	30.4	29.8	29.9	28.7	26.7	24.4	19.0
	max.daily mean	23.6	25.8	28.1	33.1	32.6	33.8	33.5	33.9	32.1	29.3	27.6	24.0
	min.daily mean	10.2	12.6	14.6	22.8	24.8	26.5	27.0	25.8	25.1	21.8	19.8	15.9
Relative humidity (%)	monthly mean	83	84	84	82	82	80	83	80	83	72	70	69
	max.daily mean	98	96	98	94	91	96	96	95	97	90	81	88
	min.daily mean	62	64	64	61	70	58	65	64	70	57	50	56
Mean wind speed (m/s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.6	4.0	2.0	2.0	2.0
Most frequent wind direction (bearings)		NE, SE	NE, SE	NE, SE	NE, SE	NE, SE	SE	SE	NE, SE	NE, SE, SE,	NE,N NE	NE, SE	NE, SE
Precipitation amount (mm/month)		61	12	22	31	357	334	665	418	783	52	3	3
Sunshine duration (hours/month)		36	48	62	108	108	107	148	148	110	152	146	77
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-23 Meteorological statistics at the monitoring site
Site : Hoa Binh, Vietnam

Site 1: Hoa Binh, Vietnam

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	18.6	20.6	22.6	28.8	28.3	29.7	28.9	28.9	27.8	25.5	23.2	18.2
	max.daily mean	21.8	25.2	27.2	34.2	33.2	35.0	33.5	34.4	33.0	31.6	28.8	22.9
	min.daily mean	16.5	17.8	19.9	25.4	25.4	26.8	26.4	26.2	25.0	22.0	20.0	15.4
Relative humidity (%)	monthly mean	84	83	82	80	81	80	85	84	86	81	80	79
	max.daily mean	90	92	92	92	91	90	93	92	90	90	91	89
	min.daily mean	74	66	68	62	65	64	70	69	71	56	56	59
Mean wind speed (m/s)		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Most frequent wind direction (bearings)		N	N	E	N	N	E	SE	SE	SE	E	N	N
Precipitation amount (mm/month)		32	6	16	37	360	246	697	403	638	84	15	0
Sunshine duration (hours/month)		60	98	98	180	111	127	134	180	130	198	99	81
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-24 Meteorological statistics at the monitoring site
Site : Cuc Phuong, Vietnam

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	17.4	18.7	20.6	26.8	26.9	28.8	28.2	28.2	26.6	24.1	21.7	17.0
	max.daily mean	28.0	30.3	34.2	39.2	37.7	37.5	36.8	38.0	35.5	32.6	31.2	26.8
	min.daily mean	7.8	10.1	11.0	20.5	22.0	23.6	23.0	22.8	21.3	16.2	12.1	9.4
Relative humidity (%)	monthly mean	90	91	91	87	88	86	89	87	91	83	82	82
	max.daily mean	100	100	100	100	100	100	99	100	100	100	100	100
	min.daily mean	59	47	41	27	58	52	62	51	57	38	37	38
Mean wind speed (m/s)		1	1	1	1	1	1	1	1	1	1	1	1
Most frequent wind direction (bearings)		E	SW	SE	SW	S	SW	SW	SW	NW	NW	N	NE
Precipitation amount (mm/month)		57	32	80	31	226	167	574	210	753	80	27	8
Sunshine duration (hours/month)		38	53	63	127	83	115	114	158	115	198	157	78
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-25 Meteorological statistics at the monitoring site
Site : Da Nang, Vietnam

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	23.0	24.4	25.9	28.8	29.6	30.8	29.8	30.3	29.2	26.5	25.6	22.4
	max.daily mean	26.6	28.0	30.2	34.0	34.0	36.2	34.8	36.2	33.7	30.3	28.6	24.9
	min.daily mean	20.9	22.6	23.7	26.3	26.6	27.2	27.0	26.2	26.3	14.2	23.5	20.8
Relative humidity (%)	monthly mean	83	84	81	80	79	75	76	74	79	83	82	88
	max.daily mean	93	92	90	85	88	86	89	80	90	95	93	96
	min.daily mean	59	59	59	45	42	40	43	45	42	48	52	62
Mean wind speed (m/s)		1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Most frequent wind direction (bearings)		NNW	E	E	E	ESE	E	E	E	NNE	NW	ENE	NNE
Precipitation amount (mm/month)		37	8	1	4	207	26	160	61	370	727	564	440
Sunshine duration (hours/month)		52	131	183	185	268	106	265	231	169	126	103	88
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-26 Meteorological statistics at the monitoring site
Site : Can Tho, Vietnam

													2024
	Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
	Items												
Temperature (°C)	monthly mean	27.0	27.5	28.0	30.0	29.5	28.8	27.5	28.0	27.1	27.0	27.4	26.2
	max.daily mean	31.0	32.1	32.6	35.2	34.1	32.8	31.0	32.1	30.1	31.0	31.1	29.4
	min.daily mean	24.2	24.2	24.7	26.2	26.8	26.0	25.3	25.5	25.2	25.3	25.1	24.0
Relative humidity (%)	monthly mean	78	76	76	78	85	86	88	85	89	88	81	83
	max.daily mean	95	96	97	99	100	100	97	97	98	97	95	95
	min.daily mean	58	53	52	70	65	65	74	67	76	70	60	68
Mean wind speed (m/s)		1.6	1.7	1.8	1.6	1.7	1.8	1.9	1.8	1.9	1.7	1.7	1.7
Most frequent wind direction (bearings)		SE	SE	SE	SE	SE	SW	SW	SW	SW	NW	NE	NE
Precipitation amount (mm/month)		42	--	--	18	35	192	383	254	257	345	131	103
Sunshine duration (hours/month)		197	212	226	230	178	157	102	199	87	129	158	110
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-27 Meteorological statistics at the monitoring site
Site : Ho Chi Minh, Vietnam

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	27.1	28.4	28.8	29.9	29.4	29.2	28.6	29.6	28.8	28.3	27.4	27.1
	max.daily mean	32.7	34.3	34.3	34.7	34.5	34.8	33.1	34.2	33.3	32.1	32.3	32.1
	min.daily mean	23.5	25.6	25.7	26.3	26.8	26.2	25.8	26.4	25.5	25.0	24.7	23.9
Relative humidity (%)	monthly mean	73	71	72	79	78	77	81	79	81	78	74	76
	max.daily mean	84	83	82	84	85	85	86	86	87	84	86	85
	min.daily mean	45	41	47	47	42	48	49	47	50	51	55	53
Mean wind speed (m/s)		1.8	1.5	1.4	1.3	1.8	1.7	1.6	1.8	1.6	1.4	1.5	1.5
Most frequent wind direction (bearings)		SE	SE	SE	SE	SE	SW	SW	W	W	W	SE	SE
Precipitation amount (mm/month)		0	9	76	289	368	202	322	346	265	219	23	0
Sunshine duration (hours/month)		176	213	242	202	198	186	163	196	153	162	188	186
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-28 Meteorological statistics at the monitoring site
Site : Yen Bai, Vietnam

												2024	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	18.0	19.2	21.5	26.9	27.0	29.0	29.2	28.5	27.9	25.5	23.3	17.7
	max.daily mean	20.2	22.7	24.7	30.4	30.9	32.9	33.5	32.9	32.5	30.4	28.3	20.9
	min.daily mean	16.2	17.0	18.8	24.3	24.4	26.2	26.6	25.7	25.1	22.3	20.1	15.5
Relative humidity (%)	monthly mean	9	90	88	88	87	87	89	88	88	85	84	87
	max.daily mean	98	97	95	96	95	94	99	96	93	95	92	98
	min.daily mean	8	76	73	76	76	74	76	74	72	53	60	70
Mean wind speed (m/s)		1.6	1.5	1.3	1.6	1.3	1.4	1.4	1.2	1.7	1.1	1.1	1.0
Most frequent wind direction (bearings)		SE	ESE	SE	SE	NW	SE	SSE	SE	NW	SSE	NNW	NW
Precipitation amount (mm/month)		54	12	52	36	290	326	562	453	667	162	0	14
Sunshine duration (hours/month)		19	49	49	46	91	107	140	138	139	172	158	47
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix 3

Description of trees: Pasoh, Malaysia

Appendix 3.1 Description of trees: Pasoh TEAM Plot 1 (Area: Petaling Jaya, Malaysia) MYS201

Plot name: Hutan Simpan Pasoh-1

Date: 24 July 2022

Surveyor: SPF Pasoh Staff

Survey area: 1 ha plot

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10001	<i>Castanopsis megacarpa</i>	18.1		
10002	<i>Dipterocarpus cornutus</i>	40.7		
10003	<i>Oncosperma horridum</i>	19.1		
10004	<i>Shorea lepidota</i>	44.1		
10005	<i>Quercus argentata</i>	24.3		
10006	<i>Shorea bracteolata</i>	19.0		
10007	<i>Parishia insignis</i>	38.7		
10008	<i>Alphonsea maingayi</i>	13.3		
10009	<i>Canarium littorale</i>	18.0		
10010	<i>Lithocarpus curtisii</i>			Dead
10011	<i>Pentaspadon motleyi</i>			Dead
10012	<i>Shorea bracteolata</i>			Dead
10013	<i>Dacryodes rugosa</i>			Dead
10014	<i>Knema conferta</i>	18.6		
10015	<i>Scaphium macropodium</i>	21.4		
10016	<i>Shorea maxwelliana</i>	28.9		
10017	<i>Dipterocarpus cornutus</i>	56.2		
10018	<i>Dipterocarpus cornutus</i>	28.5		
10019	<i>Dipterocarpus costulatus</i>	42.3		
10020	<i>Psydrax</i> sp. 10	15.7		
10021	<i>Canarium littorale</i>	-		Not stated
10022	<i>Barringtonia macrostachya</i>	10.7		
10023	<i>Calophyllum macrocarpum</i>	16.3		
10024	<i>Koiledepa longifolium</i>	14.4		
10738	Not specified	11.3		New recruit
10741	<i>Barringtonia racemosa</i>	10.6		
10764	Not specified	10.4		New recruit
10025	<i>Quercus argentata</i>	18.8		
10026	<i>Adenanthura malayana</i>	14.4		
10027	<i>Shorea ochrophloia</i>	-		Not stated
10028	<i>Dacryodes rugosa</i>	17.3		
10029	<i>Shorea maxwelliana</i>	14.2		
10030	<i>Castanopsis megacarpa</i>	-		Not stated
10031	<i>Shorea macroptera</i>	38.2		
10032	<i>Barringtonia macrostachya</i>			Dead
10033	<i>Quercus argentata</i>	22.6		
10034	<i>Dipterocarpus sublamellatus</i>	41.6		
10035	<i>Willughbeia oblonga</i>	12.2		
10036	<i>Cryptocarya rugulosa</i>	14.6		Inclined
10037	<i>Syzygium duthieanum</i>	11.2		
10038	<i>Intsia palembanica</i>	15.4		
10039	<i>Castanopsis megacarpa</i>	13.3		
10040	<i>Quercus gemelliflora</i>	18.4		
10041	<i>Lithocarpus curtisii</i>	-		Not stated
10042	<i>Cynometra malaccensis</i>	26.7		
10043	<i>Shorea maxwelliana</i>	12.9		
10044	<i>Neonauclea</i> sp. 1	25.9		
10045	<i>Garcinia rostrata</i>			Dead
10046	<i>Pentaspadon motleyi</i>	20.0		
10047	<i>Castanopsis inermis</i>	-		Not stated
10048	<i>Shorea macroptera</i>	24.0		
10049	<i>Shorea macroptera</i>	14.8		
10050	<i>Shorea macroptera</i>	-		Not stated
10051	<i>Archidendron bubalinum</i>	-		Not stated
10665	<i>Myristica cinnamomea</i>			Dead
10721	<i>Shorea maxwelliana</i>	-		Not stated
10052	<i>Shorea macroptera</i>	16.0		
10053	<i>Syzygium chloranthum</i>	27.8		
10054	<i>Shorea macroptera</i>	12.5		
10055	<i>Oncosperma horridum</i>	18.8		
10056	<i>Oncosperma horridum</i>	20.5		
10057	<i>Shorea maxwelliana</i>	16.5		
10058	<i>Shorea macroptera</i>	16.1		
10059	<i>Castanopsis megacarpa</i>	45.9		Buttresses
10060	<i>Syzygium</i> sp. 16	12.6		
10061	<i>Shorea ovalis</i>	29.3		
10062	<i>Quercus argentata</i>	22.9		
10063	<i>Xylopiya magna</i>	14.8		
10064	<i>Neobalanocarpus heimii</i>	15.4		
10065	<i>Ryparosa kunstleri</i>	-		Not stated
10066	<i>Hopea dryobalanoides</i>	14.4		
10067	<i>Hopea dryobalanoides</i>	24.6		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10068	<i>Barringtonia macrostachya</i>	14.5		
10069	<i>Castanopsis megacarpa</i>	-		Not stated
10070	<i>Quercus argentata</i>	27.5		
10071	<i>Aquilaria malaccensis</i>	13.6		
10072	<i>Dipterocarpus cornutus</i>	31.8		
10073	<i>Aporosa nervosa</i>	12.3		
10074	<i>Shorea macroptera</i>	22.2		
10075	<i>Castanopsis schefferiana</i>	13.6		
10076	<i>Aporosa microstachya</i>	-		Not stated
10666	<i>Dipterocarpus crinitus</i>	11.7		
10709	<i>Shorea macroptera</i>	10.8		
10710	<i>Dialium platysepalum</i>	13.4		
10077	<i>Urophyllum glabrum</i>	14.3		
10078	<i>Scaphium macropodum</i>	25.0		
10079	<i>Callerya atropurpurea</i>	14.0		
10080	<i>Shorea macroptera</i>	13.2		
10081	<i>Dacryodes costata</i>			Dead
10082	<i>Shorea macroptera</i>			Dead
10083	<i>Dipterocarpus cornutus</i>	46.6		
10084	<i>Homalium longifolium</i>	20.6		
10085	<i>Shorea parvifolia</i>	36.7		
10086	<i>Shorea parvifolia</i>	-		Not stated
10087	<i>Shorea macroptera</i>	15.2		
10088	<i>Neobalanocarpus heimii</i>	22.4		
10089	<i>Dacryodes laxa</i>	21.6		
10090	<i>Palaequium stellatum</i>	17.4		
10091	<i>Kibatalia maingayi</i>	15.4		
10092	<i>Payena lucida</i>	15.2		
10093	<i>Dacryodes incurvata</i>	39.6		
10094	<i>Mesua ferrea</i>	17.5		
10095	<i>Paropsia vareciformis</i>	24.5		
10096	<i>Dipterocarpus cornutus</i>	35.0		
10097	<i>Horsfieldia superba</i>	28.4		
10098	<i>Santiria apiculata</i>	11.8		
10099	<i>Shorea macroptera</i>	32.4		
10100	<i>Castanopsis schefferiana</i>	20.3		Stilt roots, Fluted
10101	<i>Ctenolophon parvifolius</i>	22.3		Stilt roots, Fluted
10102	<i>Lithocarpus curtisii</i>	-		Not stated
10109	<i>Payena lucida</i>	17.7		
10679	<i>Syzygium ridleyi</i>	10.1		
10103	<i>Dipterocarpus cornutus</i>	25.3		
10104	<i>Canarium littorale</i>	28.7		
10105	<i>Memecylon oleifolium</i>	17.7		
10106	<i>Polyalthia sumatrana</i>			
10107	<i>Mesua ferrea</i>	13.4		
10108	<i>Calophyllum depressinervosum</i>			Dead
10109	Not specified	12.0		New recruit
10110	<i>Homalium longifolium</i>	15.3		
10111	<i>Mesua racemosa</i>	16.0		
10112	<i>Mesua racemosa</i>	14.6		
10113	<i>Homalium dictyoneurum</i>	23.9		
10114	<i>Sarcotheca monophylla</i>	23.1		
10115	<i>Scaphium macropodum</i>	42.3		
10116	<i>Knema hookeriana</i>	30.5		
10117	<i>Dipterocarpus cornutus</i>	61.4		
10118	<i>Shorea ovalis</i>	31.9		
10119	<i>Scaphium macropodum</i>	13.6		
10120	<i>Blumeodendron subrotundifolium</i>	-		Not stated
10121	<i>Calophyllum wallichiana</i>			Dead
10122	<i>Pimelodendron griffithianum</i>	13.3		
10123	<i>Pentaspadon motleyi</i>	22.6		
10124	<i>Adenanthera malayana</i>	17.6		
10125	<i>Porterandia anisophylla</i>	22.4		
10126	<i>Shorea parvifolia</i>	-		Not stated
10127	<i>Croton argyratus</i>	-		Not stated
10128	<i>Shorea parvifolia</i>	34.5		
10129	<i>Croton argyratus</i>			
10130	<i>Pimelodendron griffithianum</i>	14.4		
10131	<i>Canarium littorale</i>			
10132	<i>Quercus argentata</i>	41.8		
10133	<i>Shorea leprosula</i>	25.5		
10680	<i>Pentaspadon motleyi</i>	12.1		
10773	Not specified	11.5		New recruit
10134	<i>Heritiera simplicifolia</i>			
10135	<i>Heliciopsis velutina</i>	20.3		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10136	<i>Xanthophyllum rufum</i>	12.1		
10137	<i>Cynometra malaccensis</i>	16.0		
10138	<i>Hopea dryobalanoides</i>	21.6		
10139.01	<i>Hopea dryobalanoides</i>	25.5		
10139.02	<i>Hopea dryobalanoides</i>	14.3		
10140.01	<i>Oncosperma horridum</i>	15.3		
10140.02	<i>Oncosperma horridum</i>	17.7		
10141	<i>Hopea dryobalanoides</i>	17.5		
10142	<i>Shorea ovalis</i>	25.9		
10143	<i>Prunus grisea</i>	-		Not stated
10144	<i>Hopea dryobalanoides</i>	28.3		
10145	<i>Hopea dryobalanoides</i>	16.2		
10146	<i>Lithocarpus lucidus</i>			
10147	<i>Hopea dryobalanoides</i>	19.2		
10148	<i>Kingstonia nervosa</i>	21.8		
10149	<i>Dipterocarpus costulatus</i>	11.0		
10150	<i>Melanochyla auriculata</i>	20.5		
10151	<i>Iringia malayana</i>	23.2		
10152	<i>Heritiera elata</i>	12.3		Fluted
10153	<i>Licania splendens</i>	-		Not stated
10154	<i>Nothaphoebe umbelliflora</i>	17.8		
10155	<i>Prunus grisea</i>	18.8		
10156	<i>Homalium longifolium</i>	17.6		
10157	<i>Oncosperma horridum</i>	17.0		
10158	<i>Oncosperma horridum</i>	19.2		
10159	<i>Castanopsis schefferiana</i>	36.5		
10160	<i>Syzygium nigricans</i>	24.2		
10161	<i>Castanopsis nephelioides</i>	23.7		
10162	<i>Horsfieldia polyspherula</i>	-		Not stated
10163	<i>Neobalanocarpus heimii</i>	15.2		
10164	<i>Castanopsis schefferiana</i>	-		Not stated
10165	<i>Syzygium syzygioides</i>	17.6		
10166	<i>Xanthophyllum ellipticum</i>	13.7		
10167	<i>Hopea dryobalanoides</i>	31.8		
10656	<i>Neobalanocarpus heimii</i>	15.0		
10657	<i>Santiria tomentosa</i>	-		Not stated
10691	<i>Dacryodes laxa</i>	10.6		
10168	<i>Hopea dryobalanoides</i>	15.0		
10169	<i>Hopea dryobalanoides</i>	30.4		
10170	<i>Shorea parvifolia</i>	-		Not stated
10171	<i>Syzygium nigricans</i>	22.1		
10172	<i>Shorea parvifolia</i>	-		Not stated
10173	<i>Shorea parvifolia</i>	40.4		
10174	<i>Shorea lepidota</i>	61.2		
10175	<i>Sterculia parviflora</i>	16.1		
10176	<i>Pimelodendron griffithianum</i>	17.0		
10177	<i>Myristica maingayi</i>	14.5		
10178	<i>Sarcotheca monophylla</i>	79.3		
10179	<i>Shorea pauciflora</i>	16.4		
10180	<i>Syzygium pycnanthum</i>	-		Not stated
10181	<i>Shorea bracteolata</i>	24.0		
10182	<i>Litsea wrayi</i>	18.8		
10183	<i>Hopea dryobalanoides</i>	19.7		
10184	<i>Hopea dryobalanoides</i>	18.2		
10185	<i>Syzygium nigricans</i>	13.5		Fluted
10186	<i>Hopea dryobalanoides</i>	-		Not stated
10187	<i>Hopea dryobalanoides</i>	-		Not stated
10188	<i>Syzygium nigricans</i>	19.2		
10189	<i>Hopea dryobalanoides</i>	17.0		
10658	<i>Xerospermum noronhianum</i>	16.7		
10659	<i>Archidendron bubalinum</i>	12.8		
10667	<i>Alangium ridleyi</i>	11.0		
10668	<i>Parashorea stellata</i>	12.6		
10681	<i>Sindora velutina</i>	10.4		
10682	<i>Hopea dryobalanoides</i>	16.8		
10711	<i>Hopea dryobalanoides</i>	11.4		
10712	<i>Hopea dryobalanoides</i>	12.6		
10191	<i>Pimelodendron griffithianum</i>	15.8		
10192	<i>Syzygium griffithii</i>	13.6		Stilt roots
10193	<i>Archidendron bubalinum</i>	24.7		
10194	<i>Lithocarpus ewyckii</i>	-		Not stated
10195	<i>Quercus argentata</i>	48.3		
10196	<i>Syzygium chloranthum</i>	23.0		
10197	<i>Shorea macroptera</i>	-		Not stated
10198	<i>Hopea dryobalanoides</i>	15.5		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10199	<i>Shorea parvifolia</i>	24.2		
10200	<i>Alstonia angustiloba</i>	27.0		
10201	<i>Hopea dryobalanoides</i>	15.1		
10202	<i>Elaeocarpus ferrugineus</i>	14.6		
10203	<i>Artocarpus maingayi</i>	22.1		
10204	<i>Hopea dryobalanoides</i>	22.0		
10205	<i>Pimelodendron griffithianum</i>	-		Not stated
10206	<i>Shorea macroptera</i>	-		Not stated
10207	<i>Shorea parvifolia</i>	17.3		
10208	<i>Quercus argentata</i>	-		Not stated
10209	<i>Paropsia vareciformis</i>	19.8		
10210	<i>Shorea ovalis</i>	59.2		
10211	<i>Quercus gemelliflora</i>	-		Not stated
10212	<i>Dipterocarpus cornutus</i>	20.0		
10213	<i>Canarium littorale</i>	13.1		
10214	<i>Xerospermum noronhianum</i>	17.1		
10215	<i>Quercus argentata</i>	30.5		
10669	<i>Hopea dryobalanoides</i>	18.6		
10670	<i>Mesua ferrea</i>	13.8		
10671	<i>Garcinia nervosa</i>	11.5		
10683	<i>Buchanania sessifolia</i>	-		Not stated
10739	Not specified	10.9		New recruit
10774	Not specified	10.6		New recruit
10217	<i>Calophyllum dioscurii</i>	23.2		
10218	<i>Sindora wallichii</i>	30.1		
10219	<i>Ixonanthes icosandra</i>	19.8		Fluted, Stilt roots
10220	<i>Vatica odorata</i>	13.1		Partial crown loss
10221	<i>Garcinia nervosa</i>	-		Not stated
10222.01	<i>Castanopsis schefferiana</i>	25.2		
10222.02	<i>Castanopsis schefferiana</i>	-		Not stated
10223	<i>Lithocarpus curtisii</i>	-		Not stated
10224	<i>Castanopsis schefferiana</i>	-		Not stated
10225	<i>Knema furfuracea</i>	11.9		
10226	<i>Dipterocarpus cornutus</i>	24.1		
10227	<i>Nauclea officinalis</i>	14.5		
10228	<i>Kingstonia nervosa</i>	20.4		
10229	<i>Parkia speciosa</i>	17.1		
10230	<i>Dipterocarpus cornutus</i>	36.3		
10231	<i>Syzygium pustulatum</i>	17.0		Stilt roots
10232	<i>Intsia palembanica</i>	22.0		
10233	<i>Archidendron bubalinum</i>	30.4		
10234	<i>Lithocarpus curtisii</i>	-		Not stated
10235	<i>Archidendron bubalinum</i>	19.1		
10236	<i>Pentaspadon motleyi</i>	24.9		Fluted
10237	<i>Myristica gigantea</i>	-		Not stated
10238	<i>Tabernaemontana corymbosa</i>	21.8		
10239	<i>Payena lucida</i>	12.3		
10240	<i>Atuna excelsa</i>	22.7		
10672	<i>Scolopia spinosa</i>	12.8		
10684	<i>Blumeodendron subrotundifolium</i>			Dead
10713	<i>Sarcotheca monophylla</i>	15.0		Fluted
10722	<i>Shorea maxwelliana</i>	12.9		
10723	<i>Shorea maxwelliana</i>	11.9		
10241	<i>Xylopia fusca</i>	15.6		
10242	<i>Polyalthia rumphii</i>	19.4		
10243	<i>Diplospora malaccensis</i>	-		Not stated
10244	<i>Baccaurea reticulata</i>	-		Not stated
10245	<i>Payena lucida</i>	14.9		
10246	<i>Microcos laurifolia</i>	15.0		
10247	<i>Hopea dryobalanoides</i>	53.9		
10248	<i>Neobalanocarpus heimii</i>	30.0		Fluted
10249	<i>Syzygium duthieanum</i>	25.2		
10250	<i>Shorea maxwelliana</i>	13.2		
10251	<i>Castanopsis megacarpa</i>	-		Not stated
10252	<i>Aporosa aurea</i>	11.8		
10253	<i>Pimelodendron griffithianum</i>	12.5		
10254	<i>Syzygium singaporense</i>	11.8		
10255	<i>Shorea bracteolata</i>	40.4		
10256	<i>Psychodax sp. 10</i>	15.5		
10257	<i>Payena lucida</i>	18.6		
10258	<i>Pimelodendron griffithianum</i>	13.6		
10259	<i>Heritiera javanica</i>	14.6		
10260	<i>Lithocarpus curtisii</i>	14.1		
10261	<i>Scleropyrum pentandrum</i>	12.3		
10262	<i>Syzygium duthieanum</i>	12.8		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10660	<i>Syzygium inophyllum</i> var. <i>bernardii</i>	12.8		Fluted
10661	<i>Aquilaria malaccensis</i>	-		Not stated
10673	<i>Hopea dryobalanoides</i>	15.9		
10674	<i>Aidia densiflora</i>	12.5		
10685	<i>Shorea maxwelliana</i>	11.8		
10740	<i>Santiria laevigata</i>	11.0		
10742	Not specified	10.9		new recruit
10770	Not specified	11.0		new recruit
10771	Not specified	10.5		new recruit
10263	<i>Hopea dryobalanoides</i>	38.3		
10264	<i>Hopea dryobalanoides</i>	11.3		
10265	<i>Cynometra malaccensis</i>	59.6		
10266	<i>Shorea acuminata</i>	26.1		
10267	<i>Palaquium obovatum</i>	33.8		
10268	<i>Pimelodendron griffithianum</i>	15.5		
10269	<i>Shorea maxwelliana</i>	16.1		
10270	<i>Aquilaria malaccensis</i>	15.0		
10271	<i>Porterandia anisophylla</i>	15.3		
10272	<i>Pseuderia macrophylla</i>	10.3		
10273	<i>Shorea parvifolia</i>	25.6		
10274	<i>Hopea dryobalanoides</i>	17.6		
10275	<i>Knema furfuracea</i>	13.9		
10276	<i>Myristica gigantea</i>	-		Not stated
10277	<i>Hopea dryobalanoides</i>	18.9		
10278	<i>Kokoona reflexa</i>	11.1		
10279	<i>Shorea acuminata</i>	-		Not stated
10280	<i>Scaphium macropodum</i>	36.8		
10281	<i>Polyalthia rumphii</i>	31.0		
10282	<i>Santiria laevigata</i>	15.9		
10283	<i>Shorea ovalis</i>	43.8		
10662	<i>Irvingia malayana</i>	18.7		
10663	<i>Hopea dryobalanoides</i>	22.9		
10675	<i>Memecylon minutiflorum</i>	10.4		
10686	<i>Hopea dryobalanoides</i>	11.9		
10687	<i>Shorea ovalis</i>	12.8		
10708	<i>Xerospermum noronhianum</i>	11.4		
10714	<i>Styrax benzoïn</i>	11.9		
10715	<i>Lithocarpus curtisii</i>	10.7		
10724	<i>Hopea dryobalanoides</i>	12.6		
10725	<i>Hopea dryobalanoides</i>	14.0		
10758	Not specified	10.8		new recruit
10780	Not specified	10.8		new recruit
10216	<i>Drypetes polyneura</i>	12.5		
10284	<i>Atuna excelsa</i>	19.4		
10285	<i>Dillenia sumatrana</i>	11.0		
10286	<i>Knema scortechinii</i>	20.7		
10287	<i>Lithocarpus curtisii</i>	25.0		
10288	<i>Aidia densiflora</i>	13.8		
10289	<i>Castanopsis megacarpa</i>	24.8		
10290	<i>Shorea ovalis</i>	39.4		
10291	<i>Santiria laevigata</i>	13.3		
10292	<i>Aglaia forbesii</i>	12.1		
10293	<i>Hopea dryobalanoides</i>	21.4		
10294	<i>Shorea ovalis</i>	-		Not stated
10295	<i>Payena lucida</i>			Dead
10296	<i>Hopea dryobalanoides</i>	23.7		
10297	<i>Alphonsea elliptica</i>	20.1		
10298	<i>Hopea dryobalanoides</i>	31.6		
10299	<i>Heritiera elata</i>	11.6		
10300	<i>Shorea parvifolia</i>	25.3		
10301	<i>Xerospermum noronhianum</i>	14.4		
10302	<i>Trionma malaccensis</i>	14.5		
10303	<i>Lithocarpus curtisii</i>	-		Not stated
10304	<i>Trionma malaccensis</i>	-		Not stated
10305	<i>Canarium littorale</i>	30.8		
10306	<i>Calophyllum depressinervosum</i>	18.4		
10307	<i>Heritiera simplicifolia</i>	58.1		
10676	<i>Castanopsis megacarpa</i>	-		Not stated
10688	<i>Hopea dryobalanoides</i>	13.5		
10718	<i>Prunus grisea</i>	12.0		
10726	<i>Lithocarpus curtisii</i>	11.3		
10190	<i>Baccaurea reticulata</i>	10.7		
10308	<i>Shorea ovalis</i>	60.7		
10309	<i>Lithocarpus curtisii</i>	14.7		
10310	<i>Lithocarpus wallichianus</i>	-		Not stated

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10311	<i>Hopea dryobalanoides</i>	32.7		
10312	<i>Porterandia anisophylla</i>	15.4		
10313	<i>Dracaena brachystachys</i>	10.3		
10314	<i>Castanopsis curtisii</i>	-		Not stated
10315	<i>Fagraea racemosa</i>	13.4		
10316	<i>Pimelodendron griffithianum</i>	10.3		
10317	<i>Mesua ferrea</i>	14.1		
10318.01	<i>Lithocarpus curtisii</i>	19.7		
10318.02	<i>Lithocarpus curtisii</i>	18.6		
10319	<i>Xerospermum noronhianum</i>	23.7		
10320	<i>Palaquium stellatum</i>	11.2		
10321	<i>Shorea ovalis</i>	22.7		
10322	<i>Shorea ovalis</i>	-		Not stated
10323	<i>Hopea dryobalanoides</i>	12.7		
10324	<i>Hopea dryobalanoides</i>	26.7		
10325	<i>Hopea dryobalanoides</i>	14.2		
10326	<i>Castanopsis curtisii</i>	35.2		
10327	<i>Homalium longifolium</i>	16.9		
10328	<i>Prunus grisea</i>	-		Not stated
10329	<i>Shorea lepidota</i>	22.2		
10330	<i>Cryptocarya rugulosa</i>	18.3		
10331	<i>Syzygium inophyllum</i> var. <i>bernardii</i>	-		Not stated
10332	<i>Callerya atropurpurea</i>	23.2		
10689	<i>Ochanostachys amentacea</i>	11.6		
10727	<i>Hopea dryobalanoides</i>	11.6		
10333	<i>Parkia speciosa</i>	39.0		
10334	<i>Shorea ovalis</i>	13.8		
10335	<i>Syzygium napiforme</i>	15.8		
10336	<i>Hopea dryobalanoides</i>	25.5		
10337	<i>Shorea parvifolia</i>	46.3		
10338	<i>Pentaspadon motleyi</i>	16.3		
10339	<i>Syzygium pustulatum</i>	12.8		
10340	<i>Cynometra malaccensis</i>	35.2		Fluted
10341	<i>Dacryodes macrocarpa</i>	13.6		
10342	<i>Mesua</i> sp. 1	20.6		
10343	<i>Payena lucida</i>	16.0		
10344	<i>Pentaspadon motleyi</i>	16.2		
10345	<i>Hopea dryobalanoides</i>	30.6		
10346	<i>Pentaspadon motleyi</i>	30.4		
10347	<i>Dialium platysepalum</i>	18.7		
10348	<i>Syzygium rugosum</i>	19.6		
10349	<i>Ochanostachys amentacea</i>	13.1		
10350	<i>Payena lucida</i>	17.3		
10351	<i>Cynometra malaccensis</i>	29.6		Fluted
10352	<i>Castanopsis megacarpa</i>	-		Not stated
10353	<i>Hopea dryobalanoides</i>	-		Not stated
10354	<i>Prainea limpatto</i>	14.6		
10355	<i>Pentaspadon motleyi</i>	14.1		
10700	<i>Garcinia parvifolia</i>	17.9		
10716	<i>Hopea dryobalanoides</i>	11.6		
10743	<i>Hopea dryobalanoides</i>	11.7		
10744	Not specified	11.3		new recruit
10745	<i>Porterandia anisophylla</i>	12.4		Fluted
10764	<i>Hopea dryobalanoides</i>	10.1		new recruit
10356	<i>Lithocarpus wallichianus</i>	11.2		
10357	<i>Hopea dryobalanoides</i>	16.3		
10358	<i>Hopea dryobalanoides</i>	16.4		
10359	<i>Prunus grisea</i>			Dead
10360	<i>Scaphium linearicarpum</i>	-		Not stated
10361	<i>Castanopsis megacarpa</i>	-		Not stated
10362	<i>Syzygium griffithii</i>	13.4		
10363	<i>Xerospermum noronhianum</i>	-		Not stated
10364	<i>Hopea dryobalanoides</i>	19.1		
10365	<i>Sarcotheca monophylla</i>	160.4		
10366	<i>Hopea dryobalanoides</i>	-		Not stated
10367	<i>Hopea dryobalanoides</i>	-		Not stated
10368	<i>Knema hookeriana</i>	35.3		
10369	<i>Shorea guiso</i>	16.7		
10370	<i>Knema furfuracea</i>	17.1		
10371	<i>Castanopsis megacarpa</i>			Dead
10372	<i>Paropsia vareciformis</i>	13.4		
10373	<i>Nephelium cuspidatum</i> var. <i>ophiodes</i>			Dead
10374	<i>Litsea resinosa</i>	-		Not stated
10375	<i>Xerospermum noronhianum</i>	-		Not stated
10376	<i>Shorea bracteolata</i>	19.5		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10377	<i>Polyalthia clavigera</i>	10.7		
10388	<i>Barringtonia macrostachya</i>	14.1		
10677	<i>Rhodamnia cinerea</i>	10.8		
10690	<i>Baccaurea racemosa</i>			
10746	<i>Mesua ferrea</i>	12.0		
10759	<i>Heritiera simplicifolia</i>	-		Not stated
10378	<i>Shorea macroptera</i>	-		Not stated
10379	<i>Pentaspadon motleyi</i>	48.3		
10380	<i>Castanopsis curtisii</i>	-		Not stated
10381	<i>Garcinia nervosa</i>	13.5		
10382	<i>Mesua racemosa</i>	19.1		
10383	<i>Microcos laurifolia</i>	-		Not stated
10384	<i>Microcos laurifolia</i>	-		Not stated
10385	<i>Pometia pinnata</i>			Dead
10386	<i>Homalium dictyoneurum</i>	13.4		
10387	<i>Ixonanthes icosandra</i>	19.1		
10389	<i>Xerospermum noronhianum</i>	-		Not stated
10390	<i>Pentaspadon motleyi</i>	26.8		
10391	<i>Castanopsis schefferiana</i>	-		Not stated
10392	<i>Hopea dryobalanoides</i>	16.7		
10393	<i>Callerya atropurpurea</i>	40.5		
10394	<i>Neobalanocarpus heimii</i>	23.9		
10395	<i>Xerospermum noronhianum</i>	12.6		
10396	<i>Shorea acuminata</i>	18.8		
10397	<i>Cynometra malaccensis</i>	31.2		
10398	<i>Syzygium griffithii</i>	26.6		
10399	<i>Shorea macroptera</i>	33.8		
10400	<i>Drypetes laevis</i>	18.6		
10401	<i>Pometia pinnata</i>	23.0		
10402	<i>Diospyros buxifolia</i>	18.6		
10692	<i>Dillenia sumatrana</i>			Dead
10693	<i>Ixonanthes icosandra</i>	12.3		
10694	<i>Shorea acuminata</i>	14.4		
10695	<i>Parashorea densiflora</i>	11.4		
10747	<i>Mesua ferrea</i>	10.2		
10778	Not specified	10.2		new recruit
10403	<i>Dracaena brachystachys</i>	10.8		
10404	<i>Nephelium cuspidatum</i>			Dead
10405	<i>Hopea dryobalanoides</i>	22.9		
10406	<i>Microcos laurifolia</i>	16.1		
10407	<i>Hopea dryobalanoides</i>	17.4		
10408	<i>Hopea dryobalanoides</i>	19.3		
10409	<i>Nephelium costatum</i>			
10410	<i>Pimelodendron griffithianum</i>	12.1		Stilt roots
10411	<i>Quercus argentata</i>	-		Not stated
10412	<i>Aglaiola oligophylla</i>	-		Not stated
10413	<i>Lithocarpus wrayi</i>	-		Not stated
10414	<i>Quercus argentata</i>	-		Not stated
10415	<i>Aquilaria malaccensis</i>	38.7		
10417	<i>Syzygium griffithii</i>	38.7		
10418	<i>Lithocarpus rassa</i>	20.3		
10664	<i>Knema furfuracea</i>	14.3		
10696	<i>Neobalanocarpus heimii</i>	13.1		
10697	<i>Hopea dryobalanoides</i>	10.3		
10698	<i>Hopea dryobalanoides</i>	13.4		
10699	<i>Nephelium cuspidatum</i> var. <i>eripetalum</i>	14.2		
10728	<i>Ochanostachys amentacea</i>	13.1		
10729	<i>Chisocheton tomentosus</i>	10.7		
10730	<i>Lithocarpus curtisii</i>	13.2		
10731	<i>Shorea bracteolata</i>	12.6		
10748	<i>Girardinia nervosa</i>	12.7		
10416	<i>Hopea dryobalanoides</i>	16.3		
10419	<i>Mesua ferrea</i>	15.2		
10420	<i>Pentaspadon motleyi</i>	22.4		
10421	<i>Mangifera gracilipes</i>	-		Not stated
10422	<i>Paropsis vireciformis</i>	16.2		
10423	<i>Quercus argentata</i>	-		Not stated
10424	<i>Lithocarpus sundauicus</i>	-		Not stated
10425	<i>Shorea parvifolia</i>	-		Not stated
10426	<i>Hopea dryobalanoides</i>	27.8		
10427	<i>Hopea dryobalanoides</i>	21.0		
10428	<i>Shorea parvifolia</i>	-		Not stated
10429	<i>Castanopsis megacarpa</i>	17.0		
10430	<i>Shorea ovalis</i>	18.2		
10431	<i>Hopea dryobalanoides</i>	23.2		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10432.01	<i>Castanopsis megacarpa</i>			Dead
10432.02	<i>Castanopsis megacarpa</i>	22.8		
10433	<i>Barringtonia pendula</i>	11.3		
10434	<i>Shorea ovalis</i>	33.6		
10435	<i>Melanochyla</i> sp. 1	13.1		
10436	<i>Shorea leprosula</i>	14.9		
10437	<i>Shorea parvifolia</i>	37.0		
10438	<i>Lithocarpus sundaicus</i>	-		Not stated
10439	<i>Canarium littorale</i>	17.6		
10440	<i>Shorea macroptera</i>	13.8		
10441	<i>Lithocarpus sundaicus</i>	17.0		
10442	<i>Shorea parvifolia</i>	-		Not stated
10443	<i>Canarium littorale</i>	13.6		
10444	<i>Shorea macroptera</i>	-		Not stated
10445	<i>Elaeocarpus ferrugineus</i>	-		Not stated
10446	<i>Shorea parvifolia</i>	-		Not stated
10447	<i>Dacryodes kingii</i>	24.7		
10701	<i>Mesua ferrea</i>	-		Not stated
10717	<i>Shorea macroptera</i>	12.3		
10732	<i>Canarium littorale</i>	12.4		
10749	<i>Shorea ovalis</i>	14.9		
10750	<i>Tabernaemontana corymbosa</i>	10.6		
10751	<i>Pimelodendron griffithianum</i>	11.6		
10752	<i>Hopea dryobalanoides</i>	12.4		
10760	<i>Lithocarpus curtisii</i>	10.6		
10779	<i>Neobalanocarpus heimii</i>	10.6		new recruit
10448	<i>Shorea bracteolata</i>	23.4		
10449	<i>Dacryodes laxa</i>	15.3		
10450	<i>Mesua ferrea</i>	15.5		
10451	<i>Syzygium napiforme</i>	26.6		
10452	<i>Syzygium chloranthum</i>	19.1		
10453	<i>Drypetes polyneura</i>	11.1		
10454	<i>Pometia pinnata</i>	24.8		
10455	<i>Girardinia nervosa</i>	16.8		
10456	<i>Hopea dryobalanoides</i>	21.5		
10457	<i>Shorea guiso</i>	15.3		
10458	<i>Horsfieldia superba</i>	-		Not stated
10459	<i>Hopea dryobalanoides</i>	40.9		
10460	<i>Mesua grandis</i>	-		Not stated
10461	<i>Santiria oblongifolia</i>	11.8		
10462	<i>Shorea ovalis</i>	-		Not stated
10463	<i>Flacourtia rukam</i>	11.9		
10464	<i>Hopea dryobalanoides</i>	16.8		
10465	<i>Ormosia venosa</i>	20.5		Stilt roots
10466	<i>Ochanostachys amentacea</i>	14.3		
10467	<i>Santiria apiculata</i>	-		Not stated
10468	<i>Lithocarpus wrayi</i>	17.3		
10469	<i>Shorea parvifolia</i>	27.0		
10470	<i>Hopea dryobalanoides</i>	17.5		
10471	<i>Syzygium politum</i>	13.2		
10472	<i>Tabernaemontana corymbosa</i>	10.1		
10473	<i>Ryparosa kunstleri</i>	-		Not stated
10474	<i>Paropsia vareciformis</i>	22.3		
10475	<i>Dacryodes laxa</i>	11.5		
10476	<i>Hopea dryobalanoides</i>	35.7		
10477	<i>Xanthophyllum rufum</i>	12.7		
10478	<i>Santiria tomentosa</i>	-		Not stated
10678	<i>Gluta malayana</i>	-		Not stated
10702	<i>Hopea dryobalanoides</i>	12.9		
10753	<i>Mesua ferrea</i>	13.2		
10765	<i>Pimelodendron griffithianum</i>	11.0		
10766	<i>Xerospermum noronhianum</i>	10.2		
10767	<i>Hopea dryobalanoides</i>	10.0		
10768	<i>Hopea dryobalanoides</i>	11.7		
10479	<i>Quercus argentata</i>	25.0		
10480	<i>Homalium dictyonurum</i>	18.7		
10481	<i>Dacryodes rugosa</i>	11.8		
10482	<i>Mesua ferrea</i>	14.6		
10483	<i>Paropsia vareciformis</i>	10.1		
10484	<i>Dacryodes puberula</i>	19.8		
10485	<i>Syzygium cinereum</i>	25.8		
10486	<i>Neobalanocarpus heimii</i>	62.5		
10487	<i>Lithocarpus cyclophorus</i>	16.5		
10488	<i>Aquilaria malaccensis</i>	34.2		
10489	<i>Shorea ovalis</i>	22.7		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10490	<i>Lithocarpus wallichianus</i>	-		Not stated
10491	<i>Shorea macroptera</i>	-		Not stated
10492	<i>Gironniera nervosa</i>			Dead
10493	<i>Syzygium</i> sp. 10			Dead
10494	<i>Pimelodendron griffithianum</i>	17.3		
10495	<i>Santiria oblongifolia</i>	12.4		
10496	<i>Pimelodendron griffithianum</i>	22.2		
10497	<i>Diospyros apiculata</i>	11.8		
10498	<i>Xerospermum noronhianum</i>	12.4		
10499	<i>Syzygium chloranthum</i>	-		Not stated
10500	<i>Porterandia anisophylla</i>	-		Not stated
10501	<i>Shorea parvifolia</i>	14.9		
10502	<i>Hopea dryobalanoides</i>	20.4		
10503	<i>Shorea leprosula</i>	39.1		
10504	<i>Dacryodes laxa</i>	12.2		
10505	<i>Dacryodes rugosa</i>			Dead
10506	<i>Blumeodendron subrotundifolium</i>	15.1		
10507	<i>Dialium platysepalum</i>	15.6		
10508	<i>Dacryodes macrocarpa</i>	-		Not stated
10719	<i>Xerospermum noronhianum</i>	12.1		
10733	<i>Hopea dryobalanoides</i>	12.3		
10734	<i>Xerospermum noronhianum</i>	10.4		
10735	<i>Mesua ferrea</i>	13.6		
10754	<i>Diospyros sangal</i>	10.3		Scientific name not identified
10755	<i>Shorea acuminata</i>	14.2		
10509	<i>Sindora coriacea</i>	12.1		
10510	<i>Ficus sundaica</i>	-		Not stated
10511	<i>Flacourtia rukam</i>	13.0		
10512	<i>Shorea parvifolia</i>	35.8		
10513	<i>Quercus argentata</i>			Dead
10514	<i>Intsia palembanica</i>	31.3		
10515	<i>Quercus argentata</i>	15.1		
10516	<i>Parinari oblongifolia</i>	14.9		
10517	<i>Shorea parvifolia</i>	29.8		
10518	<i>Lithocarpus curtisii</i>	11.0		
10519	<i>Hopea dryobalanoides</i>	33.1		
10520	<i>Mesua ferrea</i>	26.9		
10521	<i>Shorea acuminata</i>	33.4		
10522	<i>Castanopsis megacarpa</i>			Dead
10523	<i>Ixonanthes icosandra</i>	17.9		Fluted
10524	<i>Pometia pinnata</i>	20.3		
10525	<i>Hopea dryobalanoides</i>	36.4		
10526	<i>Artocarpus rigidus</i>	31.0		
10527	<i>Diospyros areolata</i>	13.9		
10528	<i>Shorea parvifolia</i>	27.9		
10529	<i>Lithocarpus lucidus</i>			Dead
10530	<i>Durio griffithii</i>	14.0		
10531	<i>Hopea dryobalanoides</i>	15.0		
10532	<i>Hopea dryobalanoides</i>	-		Not stated
10533	<i>Hopea dryobalanoides</i>	-		Not stated
10534	<i>Syzygium chloranthum</i>	20.4		
10535	<i>Shorea parvifolia</i>	-		Not stated
10536	<i>Canarium littorale</i>	14.2		
10537	<i>Shorea leprosula</i>	19.1		
10538	<i>Shorea parvifolia</i>	17.0		
10539.01	<i>Lithocarpus curtisii</i>	14.8		
10539.02	<i>Lithocarpus curtisii</i>	16.0		
10540	<i>Quercus argentata</i>	-		Not stated
10703	<i>Archidendron bubalinum</i>	13.8		
10704	<i>Mesua ferrea</i>	13.1		
10735	<i>Mesua ferrea</i>	-		Not stated
10761	<i>Shorea lepidota</i>	10.6		
10762	<i>Hopea dryobalanoides</i>	11.6		
10541	<i>Shorea acuminata</i>	20.5		
10542	<i>Hopea dryobalanoides</i>	28.5		
10543	<i>Neobalanocarpus heimii</i>	12.8		
10544	<i>Shorea macroptera</i>	13.4		
10545	<i>Lithocarpus lucidus</i>	48.0		Fluted
10546	<i>Shorea macroptera</i>	-		Not stated
10547	<i>Oncosperma horridum</i>	21.8		
10548	<i>Syzygium variolosum</i>	29.9		Fluted
10549	<i>Pometia pinnata</i>	41.7		
10550	<i>Durio griffithii</i>	15.3		
10551	<i>Xerospermum noronhianum</i>	19.6		
10552	<i>Homalium longifolium</i>	14.7		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10553	<i>Alphonsea maingayi</i>	13.1		
10554	<i>Aglaia lawii</i> ssp. <i>oligocarpa</i>	16.2		
10555	<i>Polyalthia jenkinsii</i>	11.7		
10556	<i>Polyalthia jenkinsii</i>	53.9		
10557	<i>Xylopia magna</i>	20.2		
10558	<i>Lithocarpus sundaicus</i>	-		Not stated
10559	<i>Hopea dryobalanoides</i>			Dead
10560	<i>Syzygium polyanthum</i>	23.7		
10561	<i>Dacryodes costata</i>	20.3		
10562	<i>Ixonanthes icosandra</i>	16.0		Fluted
10563	<i>Canarium littorale</i>	-		Not stated
10564	<i>Sterculia parviflora</i>	15.9		
10720	<i>Pimelodendron griffithianum</i>	14.3		
10781	Not specified	11.6		new recruit
10565	<i>Hopea dryobalanoides</i>	17.5		
10566	<i>Diospyros venosa</i>	17.0		
10567	<i>Dacryodes rostrata</i>	14.6		
10568	<i>Xanthophyllum griffithii</i>	14.8		
10569	<i>Archidendron bubalinum</i>	14.7		
10570	<i>Shorea leprosula</i>	56.1		
10571	<i>Xanthophyllum affine</i>	31.4		Fluted, Buttresses
10572	<i>Aidia densiflora</i>	12.0		
10573	<i>Shorea parvifolia</i>			Dead
10574	<i>Aidia densiflora</i>	12.6		
10575	<i>Knema conferta</i>	10.9		
10576	<i>Neoscortechinia kingii</i>	-		Not stated
10577	<i>Schoutenia accrescens</i>	24.9		
10578	<i>Pimelodendron griffithianum</i>	23.1		
10579	<i>Mesua ferrea</i>	-		Not stated
10580	<i>Oncosperma horridum</i>	19.8		
10581	<i>Xerospermum noronhianum</i>	13.0		
10582	<i>Hopea dryobalanoides</i>	17.0		
10583	<i>Barringtonia macrostachya</i>	14.0		
10584	<i>Shorea parvifolia</i>	42.0		
10585	<i>Shorea parvifolia</i>	-		Not stated
10586	<i>Ixonanthes icosandra</i>	15.9		Fluted
10587	<i>Xerospermum noronhianum</i>	13.8		
10588	<i>Shorea macroptera</i>	20.5		
10589	<i>Atuna excelsa</i>	62.7		
10590	<i>Santiria laevigata</i>	16.3		
10591	<i>Barringtonia macrostachya</i>	11.8		
10592	<i>Shorea macroptera</i>	-		Not stated
10593	<i>Shorea maxwelliana</i>	-		Not stated
10594	<i>Shorea leprosula</i>	13.8		
10595	<i>Ixonanthes icosandra</i>	23.5		
10705	<i>Prunus grisea</i>	11.9		
10736	<i>Mesua ferrea</i>	11.3		
10756	<i>Ixonanthes icosandra</i>	11.6		
10769	<i>Aidia wallichiana</i>	11.0		
10596	<i>Artocarpus kemando</i>	32.5		
10597	<i>Dipterocarpus crinitus</i>	41.8		
10598	<i>Shorea parvifolia</i>			Dead
10599	<i>Hopea dryobalanoides</i>	21.9		
10600	<i>Heritiera elata</i>	38.9		
10601	<i>Ampelocissus spicigera</i>	15.5		Fluted
10602	<i>Paropsia vareciformis</i>	14.4		
10603	<i>Dracaena brachystachys</i>	14.5		
10604	<i>Sarcotheca monophylla</i>	15.7		
10605	<i>Shorea macroptera</i>	23.0		
10606	<i>Shorea macroptera</i>	14.3		
10607	<i>Shorea macroptera</i>	46.1		
10608	<i>Heritiera elata</i>	28.0		
10609	<i>Shorea maxwelliana</i>	-		Not stated
10610	<i>Adenanthera malayana</i>	27.0		
10611	<i>Shorea lepidota</i>	59.5		
10612	<i>Sarcotheca monophylla</i>	18.4		
10613	<i>Barringtonia macrostachya</i>	13.9		
10614	<i>Shorea macroptera</i>	13.1		
10615	<i>Syzygium griffithii</i>	13.7		
10616	<i>Aquilaria malaccensis</i>	15.5		
10617	<i>Garcinia parvifolia</i>	15.0		
10618	<i>Pimelodendron griffithianum</i>	25.5		
10619	<i>Aporosa nigricans</i>	11.3		
10620	<i>Lansium domesticum</i>	13.2		
10621	<i>Girardinia nervosa</i>	-		Not stated

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
10622	<i>Mesua assamica</i>	13.0		
10623	<i>Symplocos cerasifolia</i>	-		Not stated
10706	<i>Lithocarpus curtisii</i>	12.8		
10757	<i>Xanthophyllum</i> sp.	10.5		
10782	Not specified	10.9		new recruit
10624	<i>Mesua ferrea</i>	16.1		
10625	<i>Monocarpia marginalis</i>	15.2		
10626	<i>Horsfieldia polyspherula</i>	-		Not stated
10627	<i>Memecylon cantleyi</i>	14.3		
10628	<i>Pentaspadon motleyi</i>	38.8		
10629	<i>Neoscortechinia kingii</i>	19.8		
10630	<i>Parishia insignis</i>	-		Not stated
10631	<i>Artocarpus rigidus</i>	41.1		
10632	<i>Mangifera indica</i>			Dead
10633	<i>Heritiera simplicifolia</i>	23.1		Fluted
10634	<i>Syzygium politum</i>			Dead
10635	<i>Shorea macroptera</i>	12.6		
10636	<i>Diospyros buxifolia</i>	-		Not stated
10637	<i>Lithocarpus lucidus</i>	-		Not stated
10638	<i>Artocarpus elasticus</i>	14.6		
10639	<i>Aidia densiflora</i>	17.0		
10640	<i>Dacryodes macrocarpa</i>	12.0		
10641	<i>Heritiera simplicifolia</i>	33.5		
10642	<i>Monocarpia marginalis</i>	18.0		
10643	<i>Syzygium chloranthum</i>	14.7		
10644	<i>Chisocheton tomentosus</i>	11.3		
10645	<i>Parashorea densiflora</i>	17.6		
10646	<i>Pimelodendron griffithianum</i>	21.1		
10647	<i>Payena lucida</i>	11.4		
10648	<i>Polyalthia jenkinsii</i>	16.2		
10649	<i>Polyalthia jenkinsii</i>	35.5		
10650	<i>Shorea maxwelliana</i>	14.8		
10651	<i>Knema laurina</i>	-		Not stated
10652	<i>Dacryodes laxa</i>	17.0		
10653	<i>Dillenia sumatrana</i>	-		Not stated
10654	<i>Sindora coriacea</i>	66.7		
10655	<i>Syzygium griffithii</i>	-		Not stated
10707	<i>Syzygium subdecussatum</i>	14.6		
10737	<i>Buchanania sessifolia</i>			Dead
10763		12.2		new recruit
10783		12.7		new recruit

Appendix 3.2 Description of trees: Pasoh TEAM Plot 8 (Area: Petaling Jaya, Malaysia) MYS202

Plot name: Hutan Simpan Pasoh-2

Date: 24 July 2022

Surveyor: SPF Pasoh Staff

Survey area: 1 ha plot

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80001	<i>Castanopsis megacarpa</i>	22.3		
80002	<i>Oncosperma horridum</i>	24.0		
80003	<i>Sapium baccatum</i>	-		Not stated
80004	<i>Sindora wallichii</i>	16.3		
80005	<i>Canarium pseudodecumanum</i>	34.4		
80006	<i>Ficus vasculosa</i>	25.0		
80007	<i>Millettia atropurpurea</i>	39.2		Buttresses
80008	<i>Archidendron globosum</i>	18.0		
80009	<i>Lithocarpus wallichianus</i>	-		Not stated
80010	<i>Quercus argentata</i>	32.8		
80011	<i>Lithocarpus rassa</i>	19.4		
80011	<i>Lithocarpus rassa</i>	12.1		
80012	<i>Sapium discolor</i>	-		Not stated
80013	<i>Dacryodes rugosa</i>	13.9		Fluted
80014	<i>Quercus argentata</i>	19.6		
80015	<i>Shorea bracteolata</i>	54.3		
80016	<i>Lithocarpus curtisii</i>	-		Not stated
80625	<i>Pterocymbium javanicum</i>	11.6		
80649	<i>Archidendron bubalinum</i>	13.1		
80017	<i>Ixonanthes icosandra</i>	30.0		
80018	<i>Aidia densiflora</i>	-		Dead
80019	<i>Oncosperma horridum</i>	21.0		
80020	<i>Oncosperma horridum</i>	16.5		
80021	<i>Oncosperma horridum</i>	19.6		
80022	<i>Xanthophyllum rufum</i>	17.2		
80023	<i>Madhuca malaccensis</i>	15.4		
80024	<i>Knema pseudolaurina</i>	-		Dead
80025	<i>Aidia densiflora</i>	29.6		
80026	<i>Aporosa microstachya</i>	11.6		
80027	<i>Palaquium hexandrum</i>	17.0		
80028	<i>Knema furfuracea</i>	19.5		
80029	<i>Timonius wallichianus</i>	-		Not stated
80030	<i>Shorea leprosula</i>	-		Not stated
80031	<i>Quercus argentata</i>	14.2		
80032	<i>Trigonopleura malayana</i>	-		Not stated
80033	<i>Castanopsis megacarpa</i>	32.2		
80034	<i>Garcinia rostrata</i>	34.1		
80035	<i>Artocarpus scortechinii</i>	28.9		Buttresses
80036	<i>Ptychopyxis caput-medusae</i>	24.6		
80037	<i>Dacryodes rugosa</i>	17.1		
80038	<i>Aporosa nervosa</i>	16.3		
80039	<i>Shorea macroptera</i>	30.6		
80040	<i>Nephelium costatum</i>	20.5		
80041	<i>Sapium discolor</i>	26.8		
80042	<i>Aidia densiflora</i>	14.3		
80043	<i>Shorea macroptera</i>	34.5		
80044	<i>Santiria laevigata</i>	11.6		
80045	<i>Elaeocarpus macrocerus</i>	16.0		
80046	<i>Macaranga gigantea</i>	41.5		
80047	<i>Melicope glabra</i>	20.9		
80048	<i>Pentace triptera</i>	17.6		
80049	<i>Payena lucida</i>	11.2		
80050	<i>Homalium dictyoneurum</i>	18.3		
80626	<i>Cynometra malaccensis</i>	12.1		
80627	<i>Koompassia malaccensis</i>	12.1		
80662	<i>Mesua racemosa</i>	11.4		
80051	<i>Sapium discolor</i>	28.5		
80052	<i>Sapium discolor</i>	25.8		
80053	<i>Millettia atropurpurea</i>	20.7		
80054	<i>Sapium discolor</i>	22.7		
80055	<i>Shorea macroptera</i>	45.6		
80056	<i>Ficus lamponga</i>	32.6		
80057	<i>Sindora coriacea</i>	28.4		
80058	<i>Sapium discolor</i>	28.6		
80059	<i>Vitex gamosepala</i>	40.5		
80060	<i>Canarium littorale</i>	28.0		
80061	<i>Sapium discolor</i>	36.7		
80062	<i>Heliciopsis velutina</i>	11.5		Fluted
80063	<i>Melicope glabra</i>	12.7		
80064	<i>Melicope glabra</i>	34.4		
80065	<i>Sapium discolor</i>	12.0		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80066	<i>Sapium discolor</i>	-		Dead
80067	<i>Payena lucida</i>	22.9		
80068	<i>Melicope glabra</i>	40.7		
80628	<i>Pternandra echinata</i>	13.1		
80629	<i>Heliciopsis whitmorei</i>	13.7		
80650	<i>Memecylon minutiflorum</i>	11.4		
80671	<i>Archidendron bubalinum</i>	10.8		new recruit
80671	<i>Arcubu</i>	-		Scientific name not identified
80672	Not specified	10.9		new recruit
80069	<i>Sapium discolor</i>	46.9		
80070	<i>Macaranga hypoleuca</i>	-		
80071	<i>Saraca declinata</i>	35.2		
80072	<i>Neolamarckia cadamba</i>	54.8		
80073	<i>Oncosperma horridum</i>	22.3		
80074	<i>Sapium baccatum</i>	37.0		
80075	<i>Streblus elongatus</i>	14.6		
80076	<i>Ixonanthes icosandra</i>	12.0		
80077	<i>Elaeocarpus palembanicus</i>	15.8		Inclined
80078	<i>Macaranga hypoleuca</i>	36.9		
80079	<i>Sapium discolor</i>	40.3		
80665	<i>Cratoxylum formosum</i>	12.1		
80080	<i>Melicope glabra</i>	37.2		
80081	<i>Syzygium</i> sp.	29.6		
80082	<i>Cratoxylum formosum</i>	18.6		
80083	<i>Macaranga hypoleuca</i>	40.8		
80084	<i>Shorea hopeifolia</i>	17.7		
80085	<i>Pometia pinnata</i> var. <i>alnifolia</i>	32.0		
80086	<i>Pometia pinnata</i> var. <i>alnifolia</i>	13.1		
80087	<i>Pometia pinnata</i> var. <i>alnifolia</i>	13.8		
80088	<i>Pometia pinnata</i>	12.3		
80089	<i>Glochidion sericeum</i>	15.9		Fluted
80090	<i>Sapium discolor</i>	23.8		
80091	<i>Xanthophyllum affine</i>	-		Dead
80092	<i>Strombosia ceylanica</i>	25.4		
80093	<i>Pometia pinnata</i>	16.1		
80094	<i>Sapium discolor</i>	-		Not stated
80095	<i>Shorea macroptera</i>	35.4		
80096	<i>Shorea macroptera</i>	17.6		
80097	<i>Shorea macroptera</i>	26.4		
80098	<i>Quercus argentata</i>	25.1		
80099	<i>Gironniera parvifolia</i>	15.8		
80110	<i>Madhuca malaccensis</i>	11.0		
80610	<i>Goniothalamus macrophyllus</i>	14.0		
80100	<i>Santiria apiculata</i>	14.9		
80101	<i>Sapium baccatum</i>	41.0		
80102	<i>Sapium baccatum</i>	34.1		
80103	<i>Macaranga gigantea</i>	-		Not stated
80104	<i>Macaranga gigantea</i>	-		Not stated
80105	<i>Sapium baccatum</i>	45.3		
80106	<i>Mangifera quadrifida</i>	13.3		
80107	<i>Ryparosa wallichii</i>	19.3		
80108	<i>Macaranga gigantea</i>	-		Not stated
80109	<i>Macaranga hypoleuca</i>	-		Not stated
80111	<i>Macaranga hosei</i>	34.9		
80112	<i>Shorea parvifolia</i>	44.0		
80113	<i>Payena lucida</i>	14.3		
80114	<i>Garcinia pyrifera</i>	13.3		
80115	<i>Pimelodendron griffithianum</i>	20.0		
80116	<i>Parkia speciosa</i>	17.4		
80117	<i>Oncosperma horridum</i>	21.3		
80118	<i>Diospyros apiculata</i>	-		Not stated
80119	<i>Knema laurina</i>	32.0		
80120	<i>Archidendron bubalinum</i>	15.0		
80121	<i>Gaertnera oblanceolata</i>	17.2		
80122	<i>Cinnamomum javanicum</i>	10.6		
80123	<i>Barringtonia pendula</i>	16.4		
80124	<i>Shorea leprosula</i>	16.8		
80125	<i>Gironniera parvifolia</i>	12.7		
80126	<i>Melicope glabra</i>	23.5		
80132	<i>Dracontomelon dao</i>	13.2		
80133	<i>Ryparosa hulletii</i>	26.0		
80611	<i>Myristica cinnamomea</i>	12.8		
80612	<i>Scaphocalyx spathacea</i>	11.0		
80613	<i>Payena lucida</i>	11.3		
80630	<i>Pimelodendron griffithianum</i>	10.5		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80661	Not specified	10.8		new recruit
80664	Not specified	11.8		new recruit
80127	<i>Ryparosa wallichii</i>	22.5		
80128	<i>Sapium discolor</i>	20.3		
80129	<i>Saraca declinata</i>	14.6		
80130	<i>Elateriospermum tapos</i>	11.6		
80131	<i>Shorea leprosula</i>	19.5		
80134	<i>Santiria oblongifolia</i>	32.9		
80135	<i>Artocarpus maingayi</i>	11.3		
80136	<i>Artocarpus maingayi</i>	17.2		
80137	<i>Macaranga hosei</i>	32.1		
80138	<i>Syzygium napiforme</i>	13.8		
80139	<i>Sapium discolor</i>	26.4		
80140	<i>Shorea leprosula</i>	40.3		
80141	<i>Diospyros sumatrana</i>	12.3		
80142	<i>Barringtonia macrostachya</i>	12.5		
80143	<i>Canarium littorale</i>	13.8		
80144	<i>Shorea megacarpa</i>	13.8		Scientific name not identified
80145	<i>Canarium littorale</i>	14.5		
80146	<i>Artocarpus rigidus</i>	18.4		
80147	<i>Payena dasyphylla</i>	23.4		
80148	<i>Canarium littorale</i>	11.8		
80149	<i>Sapium baccatum</i>	44.2		
80150	<i>Melicope glabra</i>	17.6		
80151	<i>Shorea leprosula</i>	21.9		
80152	<i>Shorea malaccense</i>	15.7		Scientific name not identified
80153	<i>Syzygium polyanthum</i>	23.4		
80154	<i>Castanopsis megacarpa</i>	13.4		
80155	<i>Oncosperma horridum</i>	16.3		
80156	<i>Oncosperma horridum</i>	23.4		
80157	<i>Lithocarpus maingayi</i>	27.4		
80158	<i>Lithocarpus maingayi</i>	-		Not stated
80159	<i>Xerospermum noronhianum</i>	-		Not stated
80160	<i>Ryparosa wallichii</i>	-		Not stated
80614	<i>Archidendron bubalinum</i>	17.1		
80161	<i>Lithocarpus ewyckii</i>	-		Not stated
80162	<i>Sapium discolor</i>	-		Not stated
80163	<i>Sapium discolor</i>	-		Not stated
80164	<i>Santiria oblongifolia</i>	11.5		
80165	<i>Syzygium nigricans</i>	13.3		
80166	<i>Vitex gamosepala</i>	-		Not stated
80167	<i>Sapium discolor</i>	-		Not stated
80168	<i>Melicope glabra</i>	-		Not stated
80169	<i>Melicope glabra</i>	13.2		
80170	<i>Castanopsis megacarpa</i>	22.5		
80171	<i>Melicope glabra</i>	14.9		
80172	<i>Melicope glabra</i>	38.3		
80173	<i>Shorea megacarpa</i>	35.1		Scientific name not identified
80174	<i>Sapium discolor</i>	37.1		
80175	<i>Melicope glabra</i>	33.0		
80176	<i>Sapium baccatum</i>	43.8		
80177	<i>Melicope glabra</i>	30.7		
80178	<i>Sapium discolor</i>	18.8		
80179	<i>Payena lucida</i>	-		Not stated
80615	<i>Vitex gamosepala</i>	11.2		
80635	<i>Goniothalamus macrophyllus</i>	12.7		
80636	<i>Palaquium hexandrum</i>	12.3		
80651	<i>Lepisanthes</i>	15.7		Scientific name not identified
80652	<i>Syzygium chloranthum</i>	13.4		
80180	<i>Melicope glabra</i>	-		Not stated
80181	<i>Melicope glabra</i>	25.0		
80182	<i>Pimelodendron griffithianum</i>	16.2		
80183	<i>Santiria oblongifolia</i>	10.7		
80184	<i>Sapium discolor</i>	-		Not stated
80185	<i>Canarium littorale</i>	15.5		
80186	<i>Sapium baccatum</i>	-		Not stated
80187	<i>Sapium baccatum</i>	-		Not stated
80188	<i>Oncosperma horridum</i>	19.3		
80189	<i>Elaeocarpus stipularis</i>	33.4		
80190	<i>Cryptocarya ferrea</i> var. <i>erectinervia</i>			Not stated
80191	<i>Shorea macroptera</i>	14.2		
80192	<i>Sindora coriacea</i>	14.3		
80193	<i>Litsea grandis</i>	38.5		
80194	<i>Nauclea officinalis</i>	25.3		
80195	<i>Palaquium hexandrum</i>	24.4		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80196	<i>Quercus argentata</i>	-		Not stated
80197	<i>Quercus argentata</i>	33.4		
80198	<i>Homalium longifolium</i>	33.4		
80199	<i>Shorea macroptera</i>	-		Not stated
80200	<i>Sapium baccatum</i>	34.2		
80201	<i>Sapium discolor</i>	-		Not stated
80202	<i>Cynometra malaccensis</i>	31.8		
80203	<i>Sarcotheca monophylla</i>	112.7		
80204	<i>Calophyllum pulcherrimum</i>	62.8		
80205	<i>Melicope glabra</i>	17.3		
80206	<i>Cinnamomum porrectum</i>	25.5		
80207	<i>Calophyllum depressinervosum</i>	12.6		
80208	<i>Aidia densiflora</i>	12.8		
80211	<i>Santiria oblongifolia</i>	-		Not stated
80631	<i>Nephelium cuspidatum</i> var. <i>eripetalum</i>	10.8		
80209	<i>Sapium baccatum</i>	-		Not stated
80210	<i>Aidia densiflora</i>	-		Not stated
80212	<i>Castanopsis schefferiana</i>	41.2		
80213	<i>Cinnamomum porrectum</i>	16.3		
80214	<i>Alangium ebenaceum</i>	16.7		
80215	<i>Sapium baccatum</i>	40.3		
80216	<i>Shorea dasyphylla</i>	13.6		
80217	<i>Pometia pinnata</i>	15.5		
80218	<i>Sapium discolor</i>	-		Not stated
80219	<i>Melicope glabra</i>	30.4		
80220	<i>Sapium discolor</i>	-		Not stated
80221	<i>Sapium discolor</i>	-		Not stated
80222.01	<i>Archidendron bubalinum</i>	21.7		
80222.02	<i>Archidendron bubalinum</i>	16.4		
80223	<i>Sapium discolor</i>	-		Not stated
80224	<i>Shorea leprosula</i>	43.5		
80225	<i>Syzygium gracile</i>	15.3		
80226	<i>Sapium discolor</i>	-		Not stated
80227	<i>Melicope glabra</i>	37.6		
80228	<i>Ficus vasculosa</i>	12.6		
80616	<i>Quercus argentata</i>	1.4		
80647	<i>Cratoxylum formosum</i>	11.8		
80648	<i>Pimelodendron griffithianum</i>	11.9		
80229	<i>Sapium baccatum</i>	-		Not stated
80230	<i>Nephelium cuspidatum</i> var. <i>eripetalum</i>	13.5		
80231	<i>Parkia speciosa</i>	33.7		
80232	<i>Canarium patentinervium</i>	12.8		
80233	<i>Shorea dasyphylla</i>	19.4		
80234	<i>Ficus vasculosa</i>	24.0		
80235	<i>Sapium baccatum</i>	-		Not stated
80236	<i>Horsfieldia sucosa</i>	10.5		
80237	<i>Sapium baccatum</i>	-		Dead
80238	<i>Dacryodes macrocarpa</i>	15.5		
80239	<i>Shorea leprosula</i>	38.0		
80240	<i>Dyera costulata</i>	21.0		
80241	<i>Shorea macroptera</i>	-		Not stated
80242	<i>Sapium discolor</i>	27.1		
80243	<i>Nephelium cuspidatum</i> var. <i>eripetalum</i>	16.9		
80244	<i>Artocarpus lanceifolius</i>	15.6		
80245	<i>Dipterocarpus sublamellatus</i>	32.1		
80246	<i>Sapium baccatum</i>	-		Dead
80247	<i>Chisocheton erythrocarpus</i>	13.6		
80248	<i>Melicope glabra</i>	21.7		
80249	<i>Aporosa aurea</i>	12.4		
80250	<i>Shorea maxwelliana</i>	16.6		
80251	<i>Sapium discolor</i>	27.6		
80252	<i>Sapium discolor</i>	-		Not stated
80253	<i>Sapium baccatum</i>	-		Not stated
80254	<i>Pternandra echinata</i>	18.2		
80255	<i>Sapium baccatum</i>	39.5		
80256	<i>Sapium baccatum</i>	32.7		
80257	<i>Sapium baccatum</i>	-		Not stated
80619	<i>Callerya atropurpurea</i>	11.5		
80637	<i>Dacryodes macrocarpa</i>	10.8		
80656	<i>Millettia atropurpurea</i>	13.5		
80258	<i>Melicope glabra</i>	15.9		
80259	<i>Quercus argentata</i>	36.0		
80260	<i>Shorea leprosula</i>	38.0		
80261	<i>Shorea leprosula</i>	21.0		
80262	<i>Melicope glabra</i>	-		Not stated

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80263	<i>Sapium discolor</i>	-		Not stated
80264	<i>Sapium discolor</i>	-		Not stated
80265	<i>Macaranga hypoleuca</i>	-		Not stated
80266	<i>Mussaendopsis beccariana</i>	-		Not stated
80267	<i>Millettia atropurpurea</i>	13.7		
80268	<i>Eurycoma longifolia</i>	11.4		
80269	<i>Xerospermum noronhianum</i>	-		Not stated
80270	<i>Macaranga hypoleuca</i>	-		Not stated
80271	<i>Vitex gamosepala</i>	-		Not stated
80272	<i>Sapium discolor</i>	32.4		
80273	<i>Shorea leprosula</i>	19.8		
80274	<i>Artocarpus lanceifolius</i>	16.0		
80275	<i>Dacryodes laxa</i>	20.1		
80276	<i>Pouteria malaccensis</i>	11.1		
80277	<i>Endospermum diadenum</i>	35.0		
80278	<i>Shorea parvifolia</i>	31.6		
80279	<i>Streblus elongatus</i>	14.5		
80280	<i>Shorea maxwelliana</i>	25.6		
80281	<i>Quercus argentata</i>	21.4		
80282	<i>Dacryodes rugosa</i>	20.9		
80283	<i>Sapium baccatum</i>	24.8		
80284	<i>Quercus argentata</i>	28.0		
80285	<i>Lithocarpus lucidus</i>	27.3		
80286	<i>Callicarpa maingayi</i>	-		Not stated
80291	<i>Canarium littorale</i>	10.6		
80617	<i>Quercus argentata</i>	13.1		
80618	<i>Heritiera simplicifolia</i>	11.1		
80620	<i>Koompassia malaccensis</i>	12.5		
80638	Not specified	11.6		New recruit
80287	<i>Homalium longifolium</i>	19.6		
80288	<i>Aidia densiflora</i>	15.4		
80289	<i>Millettia atropurpurea</i>	15.3		
80290	<i>Quercus gemelliflora</i>	11.9		
80292	<i>Archidendron bubalinum</i>	10.8		
80293	<i>Ficus lamponga</i>	25.9		
80294	<i>Pternandra echinata</i>	12.5		
80295	<i>Calophyllum depressinervosum</i>	12.7		
80296	<i>Payena lucida</i>	21.5		
80297	<i>Endospermum diadenum</i>	33.0		
80298	<i>Endospermum diadenum</i>	28.1		
80299	<i>Sapium baccatum</i>	-		Not stated
80300	Not specified	24.2		New recruit
80301	<i>Shorea macroptera</i>	11.2		
80302	<i>Endospermum diadenum</i>	14.8		
80303	<i>Shorea parvifolia</i>	57.2		
80304	<i>Quercus argentata</i>	16.4		
80305	<i>Shorea parvifolia</i>	23.3		
80306	<i>Quercus argentata</i>	-		Not stated
80307	<i>Quercus argentata</i>	19.3		
80308	<i>Shorea leprosula</i>	-		Not stated
80309	<i>Sapium baccatum</i>	-		Not stated
80621	<i>Quercus argentata</i>	15.3		
80639	<i>Aidia densiflora</i>	11.6		
80310	<i>Quercus argentata</i>	18.1		
80311	<i>Sapium baccatum</i>	-		Not stated
80312	<i>Castanopsis megacarpa</i>	-		Not stated
80313	<i>Macaranga hypoleuca</i>	-		Not stated
80314	<i>Melicope glabra</i>	24.6		
80315	<i>Sapium discolor</i>	22.4		
80316	<i>Shorea leprosula</i>	29.7		
80317	<i>Santiria apiculata</i>	11.5		
80318	<i>Shorea leprosula</i>	36.2		
80319	<i>Shorea megacarpa</i>	15.0		Scientific name not identified
80320	<i>Ficus lamponga</i>	45.2		
80321	<i>Melicope glabra</i>	12.6		
80322	<i>Melicope glabra</i>	13.3		
80323	<i>Sapium discolor</i>	31.4		
80324	<i>Sapium discolor</i>	13.4		
80325	<i>Sapium discolor</i>	-		Not stated
80326	<i>Endospermum diadenum</i>	41.1		
80327	<i>Endospermum diadenum</i>	17.4		
80329	<i>Shorea parvifolia</i>	36.4		
80330	<i>Pouteria maingayi</i>	13.5		
80331	<i>Sapium discolor</i>	24.5		
80332	<i>Archidendron bubalinum</i>	11.4		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80333	<i>Sapium discolor</i>	17.0		
80334	<i>Shorea megacarpa</i>	16.0		Scientific name not identified
80335	<i>Castanopsis megacarpa</i>	-		Not stated
80336	<i>Sapium discolor</i>	-		Not stated
80337	<i>Ficus lamponga</i>	29.9		
80338	<i>Sapium discolor</i>	37.5		
80339	<i>Alangium ebenaceum</i>	16.3		
80340	<i>Syzygium koordersianum</i>	11.6		
80341	<i>Shorea bracteolata</i>	12.6		
80342	<i>Shorea parvifolia</i>	15.2		
80343	<i>Sapium baccatum</i>	12.6		
80640	<i>Shorea maxwelliana</i>	11.8		
80344	<i>Macaranga gigantea</i>	42.9		
80345	<i>Archidendron bubalinum</i>	19.7		
80346	<i>Barringtonia macrostachya</i>	11.8		
80347	<i>Pometia pinnata</i>	11.6		
80348	<i>Shorea macroptera</i>	32.5		
80349	<i>Macaranga hypoleuca</i>	44.5		
80350	<i>Xanthophyllum affine</i>	18.2		
80351	<i>Shorea leprosula</i>	23.6		
80352	<i>Alseodaphne</i> sp.	-		Not stated
80353	<i>Melicope glabra</i>	19.0		
80354	<i>Sapium discolor</i>	-		Not stated
80355	<i>Pternandra echinata</i>	16.0		
80356	<i>Melicope glabra</i>	22.8		
80357	<i>Macaranga hypoleuca</i>	-		Not stated
80358	<i>Melicope glabra</i>	-		Not stated
80359	<i>Sapium baccatum</i>	54.1		
80360	<i>Sapium discolor</i>	-		Not stated
80361	<i>Sapium discolor</i>	11.7		
80362	<i>Porterandia anisophylla</i>	15.2		
80363	<i>Melicope glabra</i>	-		Not stated
80606	<i>Artocarpus nitidus</i> ssp. <i>griffithii</i>	13.7		
80653	<i>Oncosperma horridum</i>	11.9		
80654	<i>Ochanostachys amentacea</i>	11.6		
80670	<i>Sarcotheca monophylla</i>	11.2		
80364	<i>Alseodaphne nigrescens</i>	37.3		
80365	<i>Mischocarpus pentapetalus</i>	21.3		
80366	<i>Gluta malayana</i>	-		Not stated
80367	<i>Sapium baccatum</i>	-		Not stated
80368	<i>Shorea megacarpa</i>	16.1		Scientific name not identified
80369	<i>Parashorea densiflora</i>	26.0		
80370	<i>Melicope glabra</i>	18.3		
80371	<i>Melicope glabra</i>	13.5		
80372	<i>Paropsis vareciformis</i>	12.1		
80373	<i>Endiandra maingayi</i>	13.7		
80374	<i>Cynometra malaccensis</i>	21.0		
80375	<i>Hopea dryobalanoides</i>	17.7		
80376	<i>Shorea megacarpa</i>	-		Not stated, Scientific name not identified
80377	<i>Sindora coriacea</i>	14.9		
80378	<i>Ficus lamponga</i>	47.2		
80379	<i>Millettia atropurpurea</i>	136.4		
80380	<i>Horsfieldia crassifolia</i>	12.3		
80381	<i>Sapium baccatum</i>	-		Not stated
80382	<i>Shorea megacarpa</i>	-		Not stated, Scientific name not identified
80383	<i>Terminalia subspatulata</i>	49.3		
80384	<i>Artocarpus maingayi</i>	14.7		
80385	<i>Pimelodendron griffithianum</i>	14.5		
80386	<i>Artocarpus maingayi</i>	25.9		
80401	<i>Endospermum diadenum</i>	-		Not stated
80622	<i>Shorea leprosula</i>	14.5		
80641	<i>Dacryodes macrocarpa</i>	10.7		
80387	<i>Ficus lamponga</i>	30.1		
80388	<i>Saraca declinata</i>	26.3		Buttresses
80389	<i>Myristica elliptica</i>	-		Not stated
80390	<i>Shorea bracteolata</i>	17.5		Fluted
80391	<i>Shorea bracteolata</i>	26.0		
80392	<i>Meliosma lanceolata</i>	10.8		
80393	<i>Santiria laevigata</i>	13.8		
80394	<i>Diospyros sumatrana</i>	13.3		
80395	<i>Quercus argentata</i>	19.3		
80396	<i>Heliciopsis velutina</i>	21.0		
80397	<i>Syzygium maingayi</i>	19.7		
80398	<i>Lithocarpus ewyckii</i>	-		Not stated
80399	<i>Castanopsis megacarpa</i>	21.0		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80400	<i>Cinnamomum porrectum</i>	26.4		
80402	<i>Shorea megacarpa</i>	20.0		Inclined, Scientific name not identified
80403	<i>Canarium littorale</i>	12.4		
80404	<i>Shorea maxima</i>	12.8		
80405	<i>Syzygium nigricans</i>	18.5		
80406	<i>Macaranga hosei</i>	21.1		
80407	<i>Pertusadina eurhyncha</i>	13.5		
80655	<i>Porterandia anisophylla</i>	-		Not stated
80300	<i>Endospermum diadenum</i>	24.4		
80328	<i>Sapium baccatum</i>	57.3		
80408	<i>Lithocarpus ewyckii</i>	23.9		
80409	<i>Drypetes kikir</i>	67.1		
80410	<i>Endospermum diadenum</i>	41.7		
80410	<i>Vitex gamosepala</i>	-		Not stated
80411	<i>Sapium discolor</i>	23.1		
80412	<i>Melicope glabra</i>	15.7		
80413	<i>Endospermum diadenum</i>	12.8		Partial crown loss
80414	<i>Microcos latifolia</i>	15.1		
80415	<i>Macaranga hypoleuca</i>	-		Not stated
80416	<i>Sapium discolor</i>	-		Not stated
80417	<i>Vitex gamosepala</i>	11.2		
80418	<i>Sindora coriacea</i>	24.6		
80419	<i>Sapium discolor</i>	29.7		
80420	<i>Macaranga hypoleuca</i>	-		Not stated
80421	<i>Melicope glabra</i>	20.7		
80422	<i>Sapium baccatum</i>	42.6		
80423	<i>Pouteria maingayi</i>	16.5		
80424	<i>Sapium discolor</i>	-		Not stated
80425	<i>Shorea parvifolia</i>	32.6		
80426	<i>Shorea hopeifolia</i>	25.3		
80427	<i>Sapium discolor</i>	-		Not stated
80428	<i>Melicope glabra</i>	16.7		
80429	<i>Melicope glabra</i>	30.7		Fluted
80430	<i>Cynometra malaccensis</i>	14.5		
80642	<i>Pometia pinnata</i>	12.4		
80431	<i>Artocarpus lanceifolius</i>	17.4		
80432	<i>Melicope glabra</i>	18.4		
80433	<i>Endospermum diadenum</i>	33.2		
80434	<i>Shorea parvifolia</i>	20.9		
80435	<i>Shorea leprosula</i>	31.0		
80436	<i>Madhuca malaccensis</i>	21.5		
80437	<i>Shorea parvifolia</i>	35.0		
80438	<i>Madhuca malaccensis</i>	11.4		
80439	<i>Pometia pinnata</i> var. <i>alnifolia</i>	11.6		Scientific name not identified
80440	<i>Dyera costulata</i>	14.8		
80441	<i>Shorea parvifolia</i>	13.6		
80442	<i>Quercus argentata</i>	33.7		
80443	<i>Shorea parvifolia</i>	30.2		
80444	<i>Castanopsis schefferiana</i>	15.7		
80445	<i>Horsfieldia sucosa</i>	23.1		
80446	<i>Enicosanthum fuscum</i>	12.9		
80447	<i>Sapium baccatum</i>	40.7		
80448	<i>Shorea leprosula</i>	33.2		
80449	<i>Ochanostachys amentacea</i>	28.8		
80450	<i>Aporosa aurea</i>	-		Not stated
80451	<i>Shorea leprosula</i>	46.6		
80452	<i>Sapium discolor</i>	18.2		
80453	<i>Shorea megacarpa</i>	30.1		Scientific name not identified
80454	<i>Dialium platysepalum</i>	14.3		
80455	<i>Sapium baccatum</i>	-		Not stated
80456	<i>Sapium baccatum</i>	-		Not stated
80457	<i>Sapium baccatum</i>	-		Not stated
80458	<i>Sapium baccatum</i>	-		Not stated
80460	<i>Shorea leprosula</i>	19.5		
80461	<i>Payena lucida</i>	24.0		
80462	<i>Artocarpus elasticus</i>	13.3		
80463	<i>Diospyros sumatrana</i>	10.4		
80464	<i>Sapium baccatum</i>	28.8		
80465	<i>Anaxagorea javanica</i>	25.2		
80643	Not specified	11.5		New recruit
80459	<i>Sapium baccatum</i>	-		Not stated
80466	<i>Sapium discolor</i>	-		Not stated
80467	<i>Shorea bracteolata</i>	19.3		
80468	<i>Sapium baccatum</i>	-		Dead
80469	<i>Shorea leprosula</i>	26.9		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80470	<i>Strombosia ceylanica</i>	45.9		
80471	<i>Shorea hopeifolia</i>	16.3		
80472	<i>Sapium baccatum</i>	50.6		
80473	<i>Sapium baccatum</i>	27.8		
80474	<i>Sapium baccatum</i>	-		Not stated
80475	<i>Madhuca curtisii</i>	12.0		
80476	<i>Cinnamomum iners</i>	25.7		Fluted
80477	<i>Sapium baccatum</i>	-		Not stated
80478	<i>Knema scortechinii</i>	13.0		
80479	<i>Quercus argentata</i>	19.8		
80480	<i>Pouteria malaccensis</i>	15.4		
80481	<i>Goniothalamus tapis</i>	11.2		
80482	<i>Polyalthia hypoleuca</i>	19.8		
80483	<i>Sapium discolor</i>	-		Not stated
80484	<i>Dipterocarpus sublamellatus</i>	35.1		
80485	<i>Schefflera</i> sp.	19.4		
80486	<i>Oncosperma horridum</i>	25.3		
80487	<i>Oncosperma horridum</i>	22.6		
80488	<i>Sapium discolor</i>	31.7		
80489	<i>Ficus lamponga</i>	-		Not stated
80490	<i>Cratoxylum formosum</i>	15.1		
80491	<i>Erythroxylum kochummenii</i>	17.6		
80492	<i>Barringtonia macrostachya</i>	12.0		
80493	<i>Sapium discolor</i>	33.3		
80494	<i>Vitex gamosepala</i>	-		Not stated
80495	<i>Sapium discolor</i>	-		Not stated
80496	<i>Lithocarpus cyclophorus</i>	26.8		
80497	<i>Calophyllum depressinervosum</i>	16.7		
80498	<i>Cratoxylum formosum</i>	13.6		
80632	<i>Palaquium hexandrum</i>	11.1		
80633	<i>Monocarpia marginalis</i>	13.6		
80644	<i>Mesua racemosa</i>	12.9		
80499	<i>Aidia densiflora</i>	14.3		
80500	<i>Cratoxylum formosum</i>	23.3		
80501	<i>Aidia densiflora</i>	12.7		
80502	<i>Melicope glabra</i>	33.7		
80503	<i>Quercus argentata</i>	31.9		
80504	<i>Sapium discolor</i>	-		Not stated
80505	<i>Canarium littorale</i>	13.8		
80506	<i>Endospermum diadenum</i>	43.5		
80507	<i>Melicope glabra</i>	15.6		
80508	<i>Artocarpus lanceifolius</i>	21.7		
80509	<i>Pimelodendron griffithianum</i>	13.7		
80510	<i>Shorea leprosula</i>	36.8		
80511	<i>Archidendron bubalinum</i>	16.4		
80512	<i>Artocarpus kemando</i>	12.5		
80513	<i>Ixonanthes icosandra</i>	17.8		
80514	<i>Calophyllum depressinervosum</i>	14.4		
80515	<i>Erythroxylum kochummenii</i>	-		Not stated
80516	<i>Calophyllum depressinervosum</i>	18.6		
80657	<i>Aidia densiflora</i>	11.3		
80517	<i>Sapium baccatum</i>	43.3		
80518	<i>Sapium baccatum</i>	-		Not stated
80519	<i>Sapium baccatum</i>	-		Not stated
80520	<i>Koompassia malaccensis</i>	15.2		
80521	<i>Chionanthus macrocarpus</i>	14.8		
80522	<i>Sapium baccatum</i>	38.1		
80523	<i>Sapium discolor</i>	17.8		
80524	<i>Endospermum diadenum</i>	42.0		
80525	<i>Sapium baccatum</i>	48.2		
80526	<i>Cinnamomum porrectum</i>	13.3		
80527	<i>Sapium baccatum</i>	32.7		
80528	<i>Artocarpus elasticus</i>	10.4		
80529	<i>Sapium discolor</i>	20.0		
80530	<i>Durio griffithii</i>	16.6		
80531	<i>Prunus grisea</i> var. <i>tomentosa</i>	21.2		
80532	<i>Licania splendens</i>	44.8		
80533	<i>Shorea parvifolia</i>	24.5		
80534	<i>Mesua</i> aff. <i>assamica</i>	15.2		
80535	<i>Cynometra malaccensis</i>	68.6		
80536	<i>Microcos latifolia</i>	12.9		
80537	<i>Shorea lepidota</i>	19.6		
80538	<i>Mallotus penangensis</i>	15.9		
80539	<i>Sapium baccatum</i>	18.3		
80540	<i>Sapium baccatum</i>	-		Not stated

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80541	<i>Vitex gamosepala</i>	11.6		
80542	<i>Syzygium chloranthum</i>	24.3		
80548	<i>Santiria oblongifolia</i>	18.1		
80634	<i>Mallotus kingii</i>	13.7		
80645	<i>Sapium bicolor</i>	12.0		Scientific name not identified
80658	<i>Aidia densiflora</i>	11.1		
80543	<i>Sapium baccatum</i>	27.3		
80544	<i>Sapium discolor</i>	21.6		
80545	<i>Sapium discolor</i>	-		Not stated
80546	<i>Croton laevifolius</i>	16.2		
80547	<i>Porterandia anisophylla</i>	11.8		
80549	<i>Syzygium chloranthum</i>	31.8		
80550	<i>Croton laevifolius</i>	-		Not stated
80551	<i>Pometia pinnata</i>	14.8		
80552	<i>Palaquium hexandrum</i>	16.8		
80553	<i>Sapium baccatum</i>	-		Not stated
80554	<i>Artocarpus elasticus</i>	17.6		
80555	<i>Sapium baccatum</i>	-		Not stated
80556	<i>Ochreinauclea maingayi</i>	20.1		
80557	<i>Xerospermum noronhianum</i>	11.5		
80558	<i>Shorea macroptera</i>	22.4		
80559	<i>Castanopsis inermis</i>	20.5		
80560	<i>Canarium pseudodecumanum</i>	11.2		
80561	<i>Oncosperma horridum</i>	20.2		
80562	<i>Macaranga hosei</i>	35.1		
80563	<i>Vitex gamosepala</i>	-		Not stated
80564	<i>Sapium discolor</i>	40.0		
80565	<i>Glochidion superbum</i>	-		Not stated
80566	<i>Monocarpia marginalis</i>	13.4		
80567	<i>Artocarpus nitidus</i>	11.0		
80568	<i>Xanthophyllum griffithii</i>	-		Not stated
80569	<i>Mangifera gracilipes</i>	31.3		
80570	<i>Shorea leprosula</i>	3.1		
80571	<i>Castanopsis schefferiana</i>	28.1		
80572	<i>Artocarpus rigidus</i>	11.4		
80573	<i>Sapium discolor</i>	-		Not stated
80574	<i>Melicope glabra</i>	19.4		
80575	<i>Endospermum diadenum</i>	36.9		
80576	<i>Nephelium maingayi</i>	12.8		
80577	<i>Sapium discolor</i>	-		Not stated
80578	<i>Sapium discolor</i>	20.9		
80579	<i>Lithocarpus wallichianus</i>	42.9		
80580	<i>Macaranga hosei</i>	-		Not stated
80581	<i>Neolamarckia cadamba</i>	60.3		
80582	<i>Syzygium</i> sp.	20.7		
80583	<i>Sapium discolor</i>	12.6		
80584	<i>Dialium platysepalum</i>	54.7		
80585	<i>Melicope glabra</i>	26.1		
80586	<i>Lithocarpus rassa</i>	19.3		
80587	<i>Ochanostachys amentacea</i>	12.6		
80587.2	<i>Ochanostachys amentacea</i>	11.5		
80623	<i>Pellacalyx saccardianus</i>	12.6		
80624	<i>Cratoxylum formosum</i>	14.5		
80646	<i>Litsea umbellata</i>	11.8		
80659	<i>Melicope glabra</i>	11.1		
80588	<i>Radermachera glandulosa</i>	11.8		
80589	<i>Ficus lamponga</i>	27.1		
80590	<i>Cynometra malaccensis</i>	-		Not stated
80591	<i>Millettia atropurpurea</i>	26.9		
80592	<i>Drypetes microphylla</i>	17.5		
80593	<i>Millettia atropurpurea</i>	15.8		
80594	<i>Ficus lamponga</i>	26.7		
80595	<i>Ficus lamponga</i>	15.7		
80596	<i>Melicope glabra</i>	-		Not stated
80597	<i>Shorea leprosula</i>	-		Not stated
80598	<i>Artocarpus elasticus</i>	31.6		
80599	<i>Prunus arborea</i>	-		Not stated
80600	<i>Shorea leprosula</i>	14.8		
80601	<i>Shorea bracteolata</i>	17.5		
80602	<i>Artocarpus nitidus</i>	15.8		
80603	<i>Shorea maxwelliana</i>	69.2		
80604	<i>Sapium baccatum</i>	-		Not stated
80605	<i>Prunus polystachya</i>	-		Not stated
80607	<i>Shorea dasyphylla</i>	12.0		
80608	<i>Canarium pilosum</i>	11.5		

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
80609	<i>Nephelium malaccensis</i>	11.9		Scientific name not identified
80660	<i>Hancea subpeltata</i>	11.4		

Appendix 4

Corrigenda of Wet Deposition Monitoring

Table 3.43 Monthly results

Site: Khan-Uul

Country: Mongolia

Code: MNA004

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	29.9	28.7	35.7	7.16	76.1	20.2	1.74	49.3	48.9	3.70	0.359	6.45	2.05	30.4
July	43.1	35.3	67.8	4.61	44.1	167	1.99	46.3	43.4	3.26	0.364	6.44	2.28	62.6
Aug	27.5	26.7	19.5	2.63	41.4	13.2	1.18	35.9	35.6	2.30	1.18	5.93	1.52	59.3
Sept	113	108	61.0	8.73	50.6	80.4	1.83	95.8	94.0	7.81	8.49	5.07	4.53	9.2
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	38.8	35.0	43.5	4.60	49.6	77.7	1.64	45.9	44.4	3.25	1.12	5.95	2.09	161
Max.	125	119	254	24.0	126	498	11.8	332	331	15.6	12.9	6.91	7.76	
Min.	12.1	<0.3	2.74	0.560	<0.8	0.870	<0.3	8.48	<0.2	0.410	0.123	4.89	0.810	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	0.909	0.872	1.09	0.218	2.32	0.615	0.0531	1.50	1.49	0.113	0.0109
July	2.70	2.21	4.24	0.289	2.76	10.5	0.124	2.90	2.71	0.204	0.0227
Aug	1.63	1.58	1.16	0.156	2.46	0.781	0.0700	2.13	2.11	0.136	0.0701
Sept	1.04	0.993	0.559	0.0801	0.464	0.737	0.0168	0.878	0.862	0.0716	0.0779
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	6.27	5.65	7.03	0.743	8.00	12.5	0.264	7.40	7.17	0.524	0.182

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	--	--	--	--	--	--	--	--	--	--	--	--	--	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.43 Monthly results

Site: Khan-Uul

Country: Mongolia

Code: MNA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2021	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	19.6	19.3	18.7	4.02	36.2	4.26	0.684	30.4	30.3	2.14	1.10	5.96	1.14	26.1
June	28.9	28.6	44.5	6.22	66.3	5.22	1.01	40.9	40.8	2.95	1.38	5.86	1.56	68.2
July	39.8	39.5	39.4	5.95	57.1	5.20	2.42	82.8	82.7	4.23	1.42	5.85	2.25	31.5
Aug	310	308	79.0	11.3	83.3	34.8	2.84	55.2	54.5	4.14	4.56	5.34	3.74	26.4
Sept	219	215	23.7	6.95	64.1	61.2	1.59	42.7	41.4	3.61	3.22	5.49	2.64	25.3
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	98.4	97.3	42.0	6.71	62.5	17.4	1.57	49.2	48.8	3.33	2.08	5.68	2.10	178
Max.	842	823	226	30.8	238	317	8.97	249	249	10.7	19.1	7.50	6.14	
Min.	6.77	6.72	<0.5	1.41	1.70	0.870	<0.3	11.5	11.2	1.23	0.0316	4.72	0.664	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2021	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.510	0.504	0.488	0.105	0.945	0.111	0.0179	0.793	0.790	0.0558	0.0287
June	1.97	1.95	3.03	0.425	4.52	0.356	0.0688	2.79	2.78	0.201	0.0941
July	1.25	1.24	1.24	0.188	1.80	0.164	0.0763	2.61	2.61	0.133	0.0447
Aug	8.19	8.14	2.09	0.298	2.20	0.920	0.0750	1.46	1.44	0.109	0.120
Sept	5.53	5.44	0.599	0.176	1.62	1.55	0.0401	1.08	1.05	0.0912	0.0813
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	17.5	17.3	7.45	1.19	11.1	3.10	0.278	8.73	8.66	0.591	0.369

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2021	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.44 Monthly results

Site: Khan-Uul

Country: Mongolia

Code: MNA004

Precipitation amount-weighted average concentration/ Precipitation amount

2022	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	*	*	*	*	*	*	*	*	*	*	1.36	5.87	5.48	10.9
June	*	*	*	*	*	*	*	*	*	*	2.11	5.68	1.88	31.0
July	*	*	*	*	*	*	*	*	*	*	8.96	5.05	7.38	35.7
Aug	*	*	*	*	*	*	*	*	*	*	6.63	5.18	2.71	31.6
Sept	*	*	*	*	*	*	*	*	*	*	27.3	4.56	3.77	8.0
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	*	*	*	*	*	*	*	*	*	*	7.06	5.15	4.24	117
Max.	*	*	*	*	*	*	*	*	*	*	33.9	6.52	18.2	
Min.	*	*	*	*	*	*	*	*	*	*	0.302	4.47	0.488	

Wet deposition amount

2022	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	*	*	*	*	*	*	*	*	*	*	0.0148
June	*	*	*	*	*	*	*	*	*	*	0.0653
July	*	*	*	*	*	*	*	*	*	*	0.320
Aug	*	*	*	*	*	*	*	*	*	*	0.210
Sept	*	*	*	*	*	*	*	*	*	*	0.219
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	*	*	*	*	*	*	*	*	*	*	0.829

Data completeness

2022	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	0	0	0	0	0	0	0	0	0	0	100	100	100	100
June	0	0	0	0	0	0	0	0	0	0	100	100	100	100
July	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Aug	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Sept	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	0	0	0	0	0	0	0	0	0	0	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.42 Monthly results

Site: Khan-Uul

Country: Mongolia

Code: MNA004

Precipitation amount-weighted average concentration/ Precipitation amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2023	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹	μmol L ⁻¹		mS m ⁻¹	mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	41.4	40.8	21.0	8.59	28.5	9.31	6.78	39.3	39.1	5.75	2.20	5.66	1.97	18.5
June	73.5	72.1	58.0	10.7	35.6	24.6	4.25	89.9	89.4	7.90	1.40	5.85	3.48	7.1
July	17.7	17.5	9.06	2.47	22.8	2.70	1.08	28.5	28.4	2.74	3.49	5.46	0.980	73.2
Aug	13.6	13.5	9.51	1.83	25.0	2.03	0.730	9.95	9.91	1.18	6.97	5.16	0.745	53.7
Sept	35.5	35.3	8.53	3.65	40.0	2.47	0.940	37.0	36.9	4.67	1.87	5.73	1.35	15.9
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	22.9	22.7	12.4	3.38	26.3	4.11	1.71	27.1	27.0	2.97	4.22	5.37	1.15	168
Max.	120	118	144	34.1	92.6	47.8	12.0	271	270	21.4	13.2	6.41	7.43	
Min.	5.50	5.40	1.60	0.850	<0.8	0.900	<0.3	3.99	3.95	0.800	0.389	4.88	0.390	

Wet deposition amount

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
2023	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²	mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.766	0.755	0.389	0.159	0.527	0.172	0.126	0.727	0.723	0.106	0.0408
June	0.519	0.509	0.409	0.0756	0.251	0.174	0.0300	0.635	0.631	0.0558	<0.01
July	1.30	1.28	0.664	0.181	1.67	0.198	0.0789	2.08	2.08	0.200	0.255
Aug	0.733	0.726	0.511	0.0983	1.35	0.109	0.0392	0.535	0.532	0.0634	0.375
Sept	0.565	0.563	0.136	0.0582	0.638	0.0393	0.0150	0.589	0.588	0.0743	0.0298
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	3.86	3.82	2.09	0.569	4.43	0.692	0.289	4.57	4.55	0.500	0.711

Data completeness

	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺	pH	EC	Precip.
2023	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%TP	%PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	93.8	93.8	93.8	93.8	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	99.7	99.7	99.7	99.7	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Appendix 5

Corrigenda of Air Concentration and Dry Deposition Monitoring

Appendix 5 Corrigena of Air Concentration and Dry Deposition Monitoring

Appendix 5-1 Corrigena of Data Report 2023

Refer to page 170 of Data Report 2023.

Table 4.12 PM_{2.5} - Measured by AT (continued)

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	48	50	67	***	***	***	***	15	13	23	32	40	38
		%	65	100	65	***	***	***	***	55	37	94	30	58	42
		Max-d	98	110	104	***	***	***	***	21	21	38	40	83	110
		Min-d	24	22	42	***	***	***	***	10	6	8	23	13	6

The PM_{2.5} monitoring data were submitted after publication.

Appendix 5-2 Corrigena of Data Report 2022

Refer to page 173 of Data Report 2022.

Table 4.12 PM_{2.5} - Measured by AT

Unit : µg/m³

Country	Site		2022												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	41	35	42	37	18	13	11	12	15	28	32	41	27
		%	100	100	100	73	100	100	100	100	100	100	97	100	98
		Max-d	60	98	75	73	30	18	19	21	27	50	53	88	98
		Min-d	15	8	18	10	8	6	<1	5	7	12	15	14	<1

The PM_{2.5} monitoring data were submitted after publication.

Appendix 5-3 Corrigena of Data Report 2021

Refer to page 171 of Data Report 2021.

Table 4.12 PM_{2.5} - Measured by AT

Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	51	44	54	32	19	11	11	13	11	18	26	40	27
		%	97	82	100	100	100	100	97	100	100	97	100	100	98
		Max-d	94	68	108	97	31	19	25	23	16	31	42	74	108
		Min-d	18	12	17	9	9	4	4	8	7	10	9	9	4

The PM_{2.5} monitoring data were submitted after publication.

Appendix 5-4 Corrigena of Data Report 2020

Refer to page 171 of Data Report 2020.

Table 4.12 PM_{2.5} - Measured by AT

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	44	51	38	38	24	11	15	9	***	***	***	***	31
		%	100	100	100	100	100	100	100	3	***	***	***	***	58
		Max-d	72	88	100	100	53	26	26	9	***	***	***	***	100
		Min-d	14	20	5	14	7	6	5	9	***	***	***	***	5



Table 4.12 PM_{2.5} - Measured by AT

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	44	51	38	38	24	11	15	9	14	19	29	37	29
		%	100	100	100	100	100	100	100	3	90	100	77	94	88
		Max-d	72	88	100	100	53	26	26	9	23	47	61	69	100
		Min-d	14	20	5	14	7	6	5	9	5	6	17	13	5

The PM_{2.5} monitoring data from September onwards arrived in 2025.

Appendix 5-5-1 Corrigena of Data Report 2020

Refer to page 151 of Data Report 2020.

Table 4.3.2 SO₂ -Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	11.4	11.2	5.4	2.5	0.7	0.7	1.2	1.8	1.3	4.6	5.7	14.5	5.0
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	25.6	16.6	7.2	3.7	1.2	1.0	1.8	2.6	1.9	6.8	12.6	20.1	25.6
		Min-w	0.3	7.5	3.4	1.5	0.2	0.4	0.8	1.1	0.4	2.9	1.5	7.8	0.2



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	11.4	11.2	5.4	2.5	0.7	0.5	***	***	***	***	***	***	5.8
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	25.6	16.6	7.2	3.7	1.2	0.7	***	***	***	***	***	***	25.6
		Min-w	0.3	7.5	3.4	1.5	0.2	0.4	***	***	***	***	***	***	0.2
	Khan-Uul	Mean						0.9	1.2	1.8	1.3	4.6	5.7	14.5	4.1
		%						50	100	100	75	100	100	60	49
		Max-w						1.0	1.8	2.6	1.9	6.8	12.6	20.1	20.1
		Min-w						0.7	0.8	1.1	0.4	2.9	1.5	7.8	0.4

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-2 Corrigenda of Data Report 2020

Refer to page 154 of Data Report 2020.

Table 4.4.1 HNO₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	<0.1	<0.1	<0.1	<0.1	0.3	0.2	0.3	0.2	0.2	0.3	0.3	<0.1	0.3
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	***	***	***	***	***	***	<0.1
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	***	***	***	***	***	***	0.3
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***	***	***	***	***	<0.1
	Khan-Uul	Mean						0.1	0.1	0.1	0.1	0.1	0.2	<0.1	0.1
		%						50	100	100	75	100	100	60	49
		Max-w						0.2	0.3	0.2	0.2	0.3	0.3	<0.1	0.3
		Min-w						<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-3 Corrigenda of Data Report 2020

Refer to page 157 of Data Report 2020.

Table 4.5.1 HCl - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.6	0.8	1.0	0.5	0.6	0.5	0.5	0.7	0.3	0.8	1.3	0.2	0.7
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	1.1	1.0	2.1	0.8	0.6	0.6	0.8	1.6	0.5	2.0	4.7	0.3	4.7
		Min-w	0.1	0.5	0.6	<0.1	0.5	0.3	0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.6	0.8	1.0	0.5	0.6	0.5	***	***	***	***	***	***	0.7
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	1.1	1.0	2.1	0.8	0.6	0.6	***	***	***	***	***	***	2.1
		Min-w	0.1	0.5	0.6	<0.1	0.5	0.3	***	***	***	***	***	***	<0.1
	Khan-Uul	Mean						0.9	1.2	1.8	1.3	4.6	5.7	14.5	4.1
		%						50	100	100	75	100	100	60	49
		Max-w						1.0	1.8	2.6	1.9	6.8	12.6	20.1	20.1
		Min-w						0.7	0.8	1.1	0.4	2.9	1.5	7.8	0.4

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-4 Corrigenda of Data Report 2020

Refer to page 160 of Data Report 2020.

Table 4.6.1 NH₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	3.6	4.0	3.9	5.6	5.7	7.5	9.6	7.2	6.8	5.2	6.0	3.3	5.8
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	4.9	5.2	4.6	7.0	7.1	8.4	14.6	9.6	9.7	7.1	6.5	3.8	14.6
		Min-w	2.0	3.0	3.1	4.7	4.4	6.2	7.6	5.8	4.2	3.9	5.4	2.9	2.0



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	3.6	4.0	3.9	5.6	5.7	7.1	***	***	***	***	***	***	4.8
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	4.9	5.2	4.6	7.0	7.1	8.0	***	***	***	***	***	***	8.0
		Min-w	2.0	3.0	3.1	4.7	4.4	6.2	***	***	***	***	***	***	2.0
	Khan-Uul	Mean						7.9	9.6	7.2	6.8	5.2	6.0	3.3	6.7
		%						50	100	100	75	100	100	60	49
		Max-w						8.4	14.6	9.6	9.7	7.1	6.5	3.8	14.6
		Min-w						7.5	7.6	5.8	4.2	3.9	5.4	2.9	2.9

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-5 Corrigenda of Data Report 2020

Refer to page 174 of Data Report 2020.

Table 4.13.1 Particulate matter component: SO₄²⁻ Measured by FP

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	2.53	1.52	0.89	0.51	0.16	0.18	2.01	0.23	0.16	0.22	0.19	2.67	0.95
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	7.53	3.59	1.82	0.68	0.38	0.43	9.19	0.59	0.31	0.35	0.64	6.43	9.19
		Min-w	0.14	0.21	0.25	0.17	0.06	0.02	0.09	0.08	0.06	0.14	<0.01	0.46	<0.01



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	2.53	1.52	0.89	0.51	0.16	0.07	***	***	***	***	***	***	1.07
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	7.53	3.59	1.82	0.68	0.38	0.12	***	***	***	***	***	***	7.53
		Min-w	0.14	0.21	0.25	0.17	0.06	0.02	***	***	***	***	***	***	0.02
	Khan-Uul	Mean						0.30	2.01	0.23	0.16	0.22	0.19	2.67	0.84
		%						50	100	100	75	100	100	60	49
		Max-w						0.43	9.19	0.59	0.31	0.35	0.64	6.43	9.19
		Min-w						0.16	0.09	0.08	0.06	0.14	<0.01	0.46	<0.01

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-6 Corrigenda of Data Report 2020

Refer to page 177 of Data Report 2020.

Table 4.14.1 Particulate matter component: NO₃⁻ (continued)

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.16	0.02	0.05	0.08	<0.01	0.20	0.41	0.21	0.04	0.18	0.05	0.22	0.14
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.54	0.08	0.16	0.14	<0.01	0.56	1.79	0.56	0.07	0.58	0.07	0.58	1.79
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	0.03	<0.01	<0.01	0.03	<0.01



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.16	0.02	0.05	0.08	<0.01	0.32	***	***	***	***	***	***	0.09
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	0.54	0.08	0.16	0.14	<0.01	0.56	***	***	***	***	***	***	0.56
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	***	***	***	***	***	***	<0.01
	Khan-Uul	Mean						0.07	0.41	0.21	0.04	0.18	0.05	0.22	0.19
		%						50	100	100	75	100	100	60	49
		Max-w						0.07	1.79	0.56	0.07	0.58	0.07	0.58	1.79
		Min-w						0.07	<0.01	<0.01	0.03	<0.01	<0.01	0.03	<0.01

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-7 Corrigenda of Data Report 2020

Refer to page 180 of Data Report 2020.

Table 4.15 Particulate matter component: Cl⁻ (continued)

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.11	0.08	0.14	0.07	0.03	0.13	0.46	0.10	0.04	0.03	0.03	0.09	0.12
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.16	0.13	0.30	0.10	0.06	0.27	1.89	0.24	0.06	0.08	0.06	0.20	1.89
		Min-w	0.04	0.02	0.06	0.02	<0.01	0.02	<0.01	0.03	<0.01	<0.01	<0.01	0.02	<0.01



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.11	0.08	0.14	0.07	0.03	0.03	***	***	***	***	***	***	0.08
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	0.16	0.13	0.30	0.10	0.06	0.04	***	***	***	***	***	***	0.30
		Min-w	0.04	0.02	0.06	0.02	<0.01	0.02	***	***	***	***	***	***	<0.01
	Khan-Uul	Mean						0.23	0.46	0.10	0.04	0.03	0.03	0.09	0.15
		%						50	100	100	75	100	100	60	49
		Max-w						0.27	1.89	0.24	0.06	0.08	0.06	0.20	1.89
		Min-w						0.18	<0.01	0.03	<0.01	<0.01	<0.01	0.02	<0.01

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-8 Corrigenda of Data Report 2020

Refer to page 183 of Data Report 2020.

Table 4.16.1 Particulate matter component: NH₄⁺ (continued)

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.45	0.23	0.06	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.04	0.76	0.12
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	1.32	0.60	0.12	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	0.18	2.05	2.05
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.11	<0.01



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.45	0.23	0.06	<0.01	<0.01	<0.01	***	***	***	***	***	***	0.14
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	1.32	0.60	0.12	<0.01	<0.01	<0.01	***	***	***	***	***	***	1.32
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	***	***	***	***	***	***	<0.01
	Khan-Uul	Mean						0.04	<0.01	<0.01	<0.01	<0.01	0.04	0.76	0.10
		%						50	100	100	75	100	100	60	49
		Max-w						0.07	<0.01	<0.01	<0.01	<0.01	0.18	2.05	2.05
		Min-w						0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.11	<0.01

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-9 Corrigenda of Data Report 2020

Refer to page 186 of Data Report 2020.

Table 4.17.1 Particulate matter component: Na⁺ (continued)

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.44	0.23	0.27	0.13	0.06	0.12	0.48	0.04	0.03	0.02	0.02	0.10	0.17
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	1.38	0.46	0.45	0.19	0.06	0.23	2.02	0.06	0.04	0.02	0.02	0.24	2.02
		Min-w	0.08	0.07	0.11	0.06	0.06	0.06	0.08	0.02	0.02	0.02	0.02	0.02	0.02



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.44	0.23	0.27	0.13	0.06	0.07	***	***	***	***	***	***	0.22
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	1.38	0.46	0.45	0.19	0.06	0.08	***	***	***	***	***	***	1.38
		Min-w	0.08	0.07	0.11	0.06	0.06	0.06	***	***	***	***	***	***	0.06
	Khan-Uul	Mean						0.17	0.48	0.04	0.03	0.02	0.02	0.10	0.13
		%						50	100	100	75	100	100	60	49
		Max-w						0.23	2.02	0.06	0.04	0.02	0.02	0.24	2.02
		Min-w						0.12	0.08	0.02	0.02	0.02	0.02	0.02	0.02

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-10 Corrigenda of Data Report 2020

Refer to page 189 of Data Report 2020.

Table 4.18.1 Particulate matter component: K⁺ (continued)

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.12	0.02	0.04	0.04	0.03	0.08	0.19	0.03	0.01	<0.01	<0.01	0.03	0.06
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.20	0.05	0.09	0.07	0.05	0.13	0.71	0.09	0.03	<0.01	<0.01	0.06	0.71
		Min-w	<0.01	<0.01	<0.01	0.03	0.03	0.05	0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.01



Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.12	0.02	0.04	0.04	0.03	0.07	***	***	***	***	***	***	0.06
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	0.20	0.05	0.09	0.07	0.05	0.09	***	***	***	***	***	***	0.20
		Min-w	<0.01	<0.01	<0.01	0.03	0.03	0.05	***	***	***	***	***	***	<0.01
	Khan-Uul	Mean						0.09	0.19	0.03	0.01	<0.01	<0.01	0.03	0.06
		%						50	100	100	75	100	100	60	49
		Max-w						0.13	0.71	0.09	0.03	<0.01	<0.01	0.06	0.71
		Min-w						0.05	0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-11 Corrigenda of Data Report 2020

Refer to page 192 of Data Report 2020.

Table 4.19.1 Particulate matter component: Mg²⁺ (continued)

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	0.01	<0.01
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.03	0.02	<0.01	0.06	0.02	<0.01	0.04	0.06	0.02	0.02	<0.01	0.03	0.06
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	<0.01	<0.01	<0.01	0.0	<0.01	<0.01	***	***	***	***	***	***	<0.01
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	0.03	0.02	<0.01	0.06	0.02	<0.01	***	***	***	***	***	***	0.06
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	***	***	***	***	***	***	<0.01
	Khan-Uul	Mean						<0.01	0.0	0.0	<0.01	<0.01	<0.01	0.0	<0.01
		%						50	100	100	75	100	100	60	49
		Max-w						<0.01	0.04	0.06	0.02	0.02	<0.01	0.03	0.06
		Min-w						<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-5-12 Corrigenda of Data Report 2020

Refer to page 195 of Data Report 2020.

Table 4.20.1 Particulate matter component: Ca²⁺ (continued)

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.25	0.39	0.36	0.91	0.28	0.38	1.34	0.53	0.23	0.35	0.10	0.68	0.50
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.89	0.87	0.88	1.25	0.58	1.11	4.68	1.40	0.44	0.65	0.17	1.81	4.68
		Min-w	<0.01	0.12	<0.01	0.30	0.08	<0.01	0.25	0.14	0.12	0.10	0.06	0.07	<0.01

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	0.24	0.39	0.36	0.91	0.28	0.07	***	***	***	***	***	***	0.42
		%	100	100	100	100	100	50	***	***	***	***	***	***	45
		Max-w	0.89	0.87	0.88	1.25	0.58	0.13	***	***	***	***	***	***	1.25
		Min-w	<0.01	0.12	<0.01	0.30	0.08	<0.01	***	***	***	***	***	***	<0.01
	Khan-Uul	Mean						0.68	1.33	0.53	0.22	0.35	0.10	0.67	0.58
		%						50	100	100	75	100	100	60	49
		Max-w						1.11	4.67	1.40	0.44	0.65	0.17	1.80	4.67
		Min-w						0.26	0.25	0.14	0.12	0.10	0.06	0.07	0.06

FP sampling at the Ulaanbaatar site was relocated to the Khan-Uul site and started on June 15, 2020.

Appendix 5-6 Corrigenda of Data Report 2015

Refer to page 160 of Data Report 2015.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2015												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	104	72	44	27	33	29	23	28	24	37	67	99	50
		%	97	100	95	95	100	100	91	66	99	99	100	100	95
		Max-d	197	154	125	69	78	86	82	76	73	73	114	254	254
		Min-d	23	11	15	11	11	7	8	14	12	13	24	25	7

Until Oct. 14, the data from the Bayanzurkh site were used, and after Oct. 14, the Ulaanbaatar data were used and disclosed as Ulaanbaatar.

Country	Site		2015												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean										33	67	99	72
		%										56	100	100	21
		Max-d										80	114	254	254
		Min-d										13	24	25	13
	Bayanzurkh	Mean	104	72	44	27	33	29	23	28	24	46	81	109	53
		%	97	100	95	95	100	100	91	66	99	99	99	99	95
		Max-d	197	154	125	69	78	86	82	76	73	101	163	284	284
		Min-d	23	11	15	11	11	7	8	14	12	16	27	17	7

A decision was later made to disclose the two sites separately.

Appendix 5-7 Corrigenda of Data Report 2016

Refer to page 160 of Data Report 2016.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2016												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	148	110	40	19	16	15	24	9	17	28	89	121	53
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	387	241	75	46	28	27	122	19	58	54	245	244	387
		Min-d	24	34	10	12	9	6	5	4	7	12	11	48	4
	Bayanzurkh	Mean	170	122	49	20	17	21	32	10	26	34	94	129	58
		%	80	100	99	100	100	100	92	100	100	99	86	100	96
		Max-d	499	293	96	33	29	80	145	23	68	74	290	226	499
		Min-d	25	36	14	12	9	9	8	7	7	12	19	46	7

Appendix 5-8 Corrigenda of Data Report 2017

Refer to page 168 of Data Report 2017.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2017												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	125	78	33	21	14	13	27	9	17	28	89	121	48
		%	100	100	100	100	100	100	83	100	100	100	100	100	99
		Max-d	308	152	60	37	25	25	122	19	58	54	245	244	308
		Min-d	31	23	11	11	6	5	5	4	7	12	11	48	4
	Bayanzurkh	Mean	121	87	44	26	15	20	34	10	26	34	94	129	52
		%	93	100	100	97	100	99	100	100	100	100	86	100	98
		Max-d	341	146	75	44	30	60	148	23	69	75	290	223	341
		Min-d	25	30	15	14	8	8	11	7	6	12	20	47	6

Appendix 5-9 Corrigenda of Data Report 2018

Refer to page 168 of Data Report 2018.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2018												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	127	85	39	19	13	12	11	11	14	27	59	113	43
		%	100	71	100	100	100	100	100	100	100	100	100	100	98
		Max-d	513	146	95	35	20	23	17	23	28	55	143	184	513
		Min-d	33	27	19	11	8	7	6	5	8	10	18	34	5
	Bayanzurkh	Mean	104	88	40	18	16	21	18	23	28	32	63	85	45
		%	100	88	89	98	99	99	91	89	95	100	99	97	95
		Max-d	194	170	97	37	31	42	36	104	98	105	117	151	194
		Min-d	15	16	9	9	8	12	7	<1	8	11	20	21	<1

Appendix 5-10 Corrigenda of Data Report 2019

Refer to page 173 of Data Report 2019.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2019												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	124	70	35	20	12	17	17	15	21	20	35	67	39
		%	100	100	100	100	53	80	100	100	100	100	100	100	94
		Max-d	241	114	63	43	29	102	86	41	252	33	55	148	252
		Min-d	20	30	13	10	8	5	6	7	7	10	18	25	5
	Bayanzurkh	Mean	92	68	33	23	19	16	19	24	22	30	35	***	35
		%	99	100	99	99	99	68	100	100	100	100	15	***	82
		Max-d	153	140	66	48	52	40	64	140	46	54	48	***	153
		Min-d	19	26	9	9	7	8	9	8	11	9	23	***	7

Appendix 5-11 Corrigenda of Data Report 2020

Refer to page 171 of Data Report 2020.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Bayanzurkh	Mean	56	43	13	20	19	24	14	15	36	30	31	56	29
		%	82	99	99	99	99	98	89	99	99	100	100	83	96
		Max-d	112	77	34	57	58	51	26	27	161	71	62	112	161
		Min-d	19	13	6	7	10	10	9	6	12	12	10	10	6

Appendix 5-12 Corrigenda of Data Report 2021

Refer to page 171 of Data Report 2021.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	30	43	72	49
		%	***	***	***	***	***	***	***	***	***	96	100	99	25
		Max-d	***	***	***	***	***	***	***	***	***	48	98	152	152
		Min-d	***	***	***	***	***	***	***	***	***	8	13	24	8



Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Bayanzurkh	Mean	***	***	***	***	***	***	***	***	***	30	43	72	49
		%	***	***	***	***	***	***	***	***	***	96	100	99	25
		Max-d	***	***	***	***	***	***	***	***	***	48	98	152	152
		Min-d	***	***	***	***	***	***	***	***	***	8	13	24	8

Appendix 5-13 Corrigenda of Data Report 2022

Refer to page 174 of Data Report 2022.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2022												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	55	41	21	15	12	15	15	10	15	25	29	48	26
		%	100	100	100	100	94	99	81	72	100	100	100	98	95
		Max-d	121	73	36	29	23	39	46	14	36	48	62	81	121
		Min-d	14	20	10	9	5	6	6	5	6	8	10	10	5



Country	Site		2022												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Bayanzurkh	Mean	54	41	21	15	12	15	15	10	14	24	29	48	25
		%	99	98	100	100	94	99	81	72	99	99	100	98	95
		Max-d	121	73	36	29	23	39	46	14	28	48	62	81	121
		Min-d	14	21	10	9	5	6	6	5	6	8	10	10	5

Originally, the PM2.5 monitor was registered as Ulaanbaatar site, but as of Sept. 2025, the monitor was measured at Bayanzurkh site. Some values are changed due to re-verification and re-calculation.

Appendix 5-14 Corrigenda of Data Report 2023

Refer to page 170 of Data Report 2022.

Table 4.12 PM_{2.5}

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	48	37	28	16	11	10	11	9	11	22	30	39	23
		%	100	100	100	100	94	99	99	99	99	96	100	99	99
		Max-d	102	65	63	36	25	18	28	15	22	36	79	74	102
		Min-d	12	11	6	7	4	5	5	5	6	9	8	13	4



Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Bayanzurkh	Mean	48	37	28	16	11	10	11	9	11	22	30	39	23
		%	100	100	100	100	94	99	99	99	99	96	100	99	99
		Max-d	102	65	63	36	25	18	28	15	22	36	79	74	102
		Min-d	12	11	6	7	4	5	5	5	6	9	8	13	4

Appendix 5-15 Corrigenda of Data Report 2023

Table 4.10.2 O₃ - Measured by AT, compiled on the basis of 8-hour moving averages.

Refer to page 165 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Max-8h d ^{*1}	68	64	68	94	87	102	92	107	100	72	53	54	107
		Min-8h d ^{*2}	13	16	18	21	24	20	28	31	16	15	16	10	10
		%	100	100	100	100	100	100	100	100	100	100	100	97	100
		Mean	35	35	43	57	56	62	63	67	54	38	37	31	48
	Hongwen	Max-8h d ^{*1}	58	61	69	67	75	66	81	60	55	75	75	61	81
		Min-8h d ^{*2}	14	23	16	22	24	15	16	18	15	29	28	6	6
		%	100	100	97	100	100	100	100	94	100	94	100	97	98
		Mean	39	43	49	47	50	35	33	37	38	51	51	34	42
	Haibin-Park	Max-8h d ^{*1}	71	94	119	104	81	83	114	66	91	101	131	81	131
		Min-8h d ^{*2}	10	21	9	18	26	19	18	26	20	17	27	8	8
		%	100	100	100	100	100	80	100	90	97	100	100	100	97
		Mean	41	55	56	55	48	36	37	34	43	63	64	44	48

*1 Max-8h d: Maximum of the daily maximum 8-hour average ozone concentrations in the month

*2 Min-8h d: Minimum of the daily maximum 8-hour average ozone concentrations in the month

Appendix 5-16 Corrigenda of Data Report 2022

Table 4.10.3 O₃ - Measured by AT, compiled on the basis of 8-hour moving averages.

Refer to page 170 of Data Report 2022.

Unit : ppb

Country	Site		2022												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Max-8h d ^{*1}	***	***	***	***	***	***	***	***	***	***	60	51	60
		Min-8h d ^{*2}	***	***	***	***	***	***	***	***	***	***	15	10	10
		%	***	***	***	***	***	***	***	***	***	***	100	100	17
		Mean	***	***	***	***	***	***	***	***	***	***	36	27	31
	Hongwen	Max-8h d ^{*1}	***	***	***	***	***	***	***	***	***	***	65	57	65
		Min-8h d ^{*2}	***	***	***	***	***	***	***	***	***	***	26	25	25
		%	***	***	***	***	***	***	***	***	***	***	100	94	16
		Mean	***	***	***	***	***	***	***	***	***	***	44	40	42
	Haibin-Park	Max-8h d ^{*1}	***	***	***	***	***	***	***	***	***	***	107	69	107
		Min-8h d ^{*2}	***	***	***	***	***	***	***	***	***	***	15	11	11
		%	***	***	***	***	***	***	***	***	***	***	100	100	17
		Mean	***	***	***	***	***	***	***	***	***	***	42	41	41

*1 Max-8h d: Maximum of the daily maximum 8-hour average ozone concentrations in the month

*2 Min-8h d: Minimum of the daily maximum 8-hour average ozone concentrations in the month

Appendix 5-17-1 Corrigenda of Data Report 2023

Table 4.3.2 SO₂ - Measured by FP (continued)

Refer to page 151 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.7	2.3	1.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.3	0.6	0.2	0.3	0.5
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.9	3.8	1.8	<0.1	<0.1	0.1	<0.1	<0.1	4.1	1.5	0.3	0.6	4.1
		Min-irreg	0.4	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.7	2.3	1.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.3	0.6	0.2	0.3	0.5
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.9	3.8	1.8	<0.1	<0.1	0.1	<0.1	<0.1	4.1	1.5	0.3	0.6	4.1
		Min-irreg	0.4	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-2 Corrigenda of Data Report 2023

Table 4.4.1 HNO₃ - Measured by FP (continued)

Refer to page 154 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.2	0.2	0.3	1.5	1.6	0.2	0.3	<0.1	0.3	0.5	<0.1	0.2	0.4
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.3	0.2	0.6	3.3	2.3	0.5	0.7	<0.1	1.1	1.4	0.1	0.3	3.3
		Min-irreg	0.1	0.2	<0.1	0.6	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.2	0.2	0.3	1.5	1.6	0.2	0.3	<0.1	0.3	0.5	<0.1	0.1	0.4
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.3	0.2	0.6	3.3	2.3	0.5	0.7	<0.1	1.1	1.4	0.1	0.3	3.3
		Min-irreg	0.1	0.2	<0.1	0.6	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-3 Corrigenda of Data Report 2023

Table 4.5.1 HCl - Measured by FP (continued)

Refer to page 157 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.5	0.6	1.4	1.4	1.1	0.8	0.3	0.5	0.6	2.6	0.3	0.7	0.9
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.6	0.7	3.4	1.8	1.4	1.9	0.8	0.7	1.4	5.2	0.5	0.8	5.2
		Min-irreg	0.4	0.5	0.6	0.9	0.6	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	0.6	<0.1

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.5	0.6	1.4	1.4	1.1	0.8	0.3	0.5	0.6	2.6	0.3	0.7	0.9
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.6	0.7	3.4	1.8	1.4	1.9	0.8	0.7	1.4	5.2	0.5	0.8	5.2
		Min-irreg	0.4	0.5	0.6	0.9	0.6	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	0.6	<0.1

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-4 Corrigenda of Data Report 2023

Table 4.6.1 NH₃ - Measured by FP (continued)

Refer to page 160 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	18.3	17.1	16.3	19.0	16.4	11.1	15.9	8.3	6.0	5.9	7.0	17.0	13.4
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	31.8	19.4	22.4	22.7	17.9	18.0	19.5	11.3	14.2	8.6	15.2	18.5	31.8
		Min-irreg	13.1	13.9	11.1	17.3	13.9	2.6	9.9	<0.1	0.2	1.8	<0.1	15.2	<0.1

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	18.3	17.1	16.3	19.0	16.4	11.1	15.9	8.3	6.0	5.9	7.0	18.3	13.6
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	31.8	19.4	22.4	22.7	17.9	18.0	19.5	11.3	14.2	8.6	15.2	23.5	31.8
		Min-irreg	13.1	13.9	11.1	17.3	13.9	2.6	9.9	<0.1	0.2	1.8	<0.1	15.2	<0.1

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-5 Corrigenda of Data Report 2023

Table 4.13 Particulate matter component: SO₄²⁻ - Measured by FP (continued)

Refer to page 172 of Data Report 2023.

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.87	1.63	2.64	6.68	6.35	6.25	4.64	1.08	4.29	1.77	0.26	0.70	3.16
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	2.74	2.90	3.30	11.76	13.79	7.77	5.44	4.34	14.49	4.12	0.75	1.09	14.49
		Min-irreg	0.02	0.40	2.13	3.91	<0.01	4.72	3.35	<0.01	0.02	0.24	<0.01	0.36	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.87	1.63	2.64	6.68	6.35	6.25	4.64	1.08	4.29	1.77	0.26	1.00	3.14
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	2.74	2.90	3.30	11.76	13.79	7.77	5.44	4.34	14.49	4.12	0.75	2.19	14.49
		Min-irreg	0.02	0.40	2.13	3.91	<0.01	4.72	3.35	<0.01	0.02	0.24	<0.01	0.36	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-6 Corrigenda of Data Report 2023

Table 4.14.1 Particulate matter component: NO₃⁻ - Measured by FP (continued)

Refer to page 175 of Data Report 2023.

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.76	1.30	2.40	2.04	0.78	0.62	2.63	0.62	0.33	0.90	0.25	0.92	1.14
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	2.02	2.19	3.17	3.66	1.77	2.98	3.08	2.47	0.65	2.70	0.61	1.28	3.66
		Min-irreg	<0.01	0.22	1.41	1.11	0.03	<0.01	1.96	<0.01	0.02	<0.01	<0.01	0.70	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.76	1.30	2.40	2.04	0.78	0.62	2.63	0.62	0.33	0.90	0.25	1.03	1.14
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	2.02	2.19	3.17	3.66	1.77	2.98	3.08	2.47	0.65	2.70	0.61	1.49	3.66
		Min-irreg	<0.01	0.22	1.41	1.11	0.03	<0.01	1.96	<0.01	0.02	<0.01	<0.01	0.70	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-7 Corrigenda of Data Report 2023

Table 4.15 Particulate matter component: Cl⁻ - Measured by FP (continued)

Refer to page 178 of Data Report 2023.

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.59	2.39	1.22	0.42	0.55	0.26	0.22	1.71	0.01	0.51	0.23	0.69	0.70
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	1.74	2.89	2.79	1.02	2.01	1.04	0.57	2.91	0.03	1.45	0.75	1.09	2.91
		Min-irreg	<0.01	1.67	0.55	0.03	0.04	<0.01	0.03	0.78	<0.01	<0.01	<0.01	0.36	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.59	2.39	1.22	0.42	0.55	0.26	0.22	1.71	0.01	0.51	0.23	0.84	0.72
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	1.74	2.89	2.79	1.02	2.01	1.04	0.57	2.91	0.03	1.45	0.75	1.44	2.91
		Min-irreg	<0.01	1.67	0.55	0.03	0.04	<0.01	0.03	0.78	<0.01	<0.01	<0.01	0.36	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-8 Corrigenda of Data Report 2023

Table 4.16.1 Particulate matter component: NH_4^+ - Measured by FP (continued)

Refer to page 181 of Data Report 2023.

Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.13	0.12	0.12	0.47	0.80	0.72	0.38	0.38	0.83	0.13	***	***	0.41
		%	100	76	100	100	100	100	100	100	80	100	***	***	79
		Max-irreg	0.39	0.21	0.15	1.06	2.29	2.15	0.48	0.47	2.74	0.34	***	***	2.74
		Min-irreg	0.04	0.08	0.09	0.16	0.03	0.07	0.32	0.25	<0.01	0.02	***	***	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.13	0.12	0.12	0.47	0.80	0.72	0.38	0.38	0.83	0.13		-	0.41
		%	100	76	100	100	100	100	100	100	80	100	0	0	78
		Max-irreg	0.39	0.21	0.15	1.06	2.29	2.15	0.48	0.47	2.74	0.34		-	2.74
		Min-irreg	0.04	0.08	0.09	0.16	0.03	0.07	0.32	0.25	<0.01	0.02		-	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-9 Corrigenda of Data Report 2023

Table 4.17.1 Particulate matter component: Na^+ - Measured by FP (continued)

Refer to page 184 of Data Report 2023.

Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.43	1.70	1.39	1.31	0.77	0.91	1.35	2.37	0.33	0.22	0.21	0.97	0.99
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	1.40	2.17	2.50	2.08	1.67	2.20	2.71	3.96	0.68	0.60	0.49	1.36	3.96
		Min-irreg	<0.01	1.03	0.97	0.83	0.03	0.23	0.54	1.11	0.02	<0.01	<0.01	0.49	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.43	1.70	1.39	1.31	0.77	0.91	1.35	2.37	0.33	0.22	0.21	0.83	0.98
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	1.40	2.17	2.50	2.08	1.67	2.20	2.71	3.96	0.68	0.60	0.49	1.36	3.96
		Min-irreg	<0.01	1.03	0.97	0.83	0.03	0.23	0.54	1.11	0.02	<0.01	<0.01	0.27	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-10 Corrigenda of Data Report 2023

Table 4.18.1 Particulate matter component: K^+ - Measured by FP (continued)

Refer to page 187 of Data Report 2023.

Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.27	0.72	0.47	0.50	0.36	0.08	0.48	1.11	0.55	0.10	0.16	0.08	0.39
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-irreg	0.40	0.81	0.86	0.96	1.07	0.16	0.50	1.20	0.99	0.14	0.21	0.08	1.20
		Min-irreg	0.15	0.63	0.08	0.05	<0.01	<0.01	0.47	1.01	0.11	0.08	0.12	0.08	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.40	0.26	0.38	0.50	0.27	0.26	0.28	0.30	0.15	0.43	0.04	0.58	0.33
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.90	0.33	0.49	0.70	0.41	0.35	0.45	0.38	0.43	1.20	0.11	2.24	2.24
		Min-irreg	<0.01	0.14	0.30	0.41	0.01	0.16	<0.01	0.23	<0.01	<0.01	<0.01	0.08	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-11 Corrigenda of Data Report 2023

Table 4.19.1 Particulate matter component: Mg^{2+} - Measured by FP(continued)

Refer to page 190 of Data Report 2023.

Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.02	0.17	0.13	0.11	0.06	0.04	0.09	0.25	<0.01	<0.01	0.02	0.13	0.08
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.04	0.21	0.26	0.22	0.15	0.20	0.27	0.47	<0.01	<0.01	0.06	0.17	0.47
		Min-irreg	<0.01	0.11	0.07	0.06	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	0.10	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.02	0.17	0.13	0.11	0.06	0.04	0.09	0.25	<0.01	<0.01	0.02	0.14	0.09
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	0.04	0.21	0.26	0.22	0.15	0.20	0.27	0.47	<0.01	<0.01	0.06	0.18	0.47
		Min-irreg	<0.01	0.11	0.07	0.06	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	0.10	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-12 Corrigenda of Data Report 2023

Table 4.20.1 Particulate matter component: Ca²⁺ - Measured by FP (continued)

Refer to page 193 of Data Report 2023.

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Manila Observatory	Mean	0.79	1.79	2.58	2.13	1.58	0.89	0.93	1.05	0.55	0.02	0.14	0.55	1.11
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	2.34	3.04	3.82	2.42	2.25	1.66	1.87	1.55	1.39	0.06	0.41	0.89	3.82
		Min-irreg	0.03	0.31	1.92	1.76	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.31	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila (Manila Observatory)	Mean	0.79	1.79	2.58	2.13	1.58	0.89	0.93	1.05	0.55	0.02	0.14	0.51	1.10
		%	100	76	100	100	100	100	100	100	80	100	100	100	96
		Max-irreg	2.34	3.04	3.82	2.42	2.25	1.66	1.87	1.55	1.39	0.06	0.41	0.89	3.82
		Min-irreg	0.03	0.31	1.92	1.76	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.31	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-18-1 Corrigenda of Data Report 2023

Table 4.3.2 SO₂ - Measured by FP (continued)

Refer to page 151 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	5.9	12.2	4.7	3.8	2.6	1.5	1.0	1.0	2.3	3.6	6.6	10.5	4.6
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	8.0	23.3	7.7	4.9	3.8	2.0	1.9	1.3	3.3	5.5	11.2	14.8	23.3
		Min-w	3.2	4.4	2.1	2.0	1.6	1.0	0.2	0.6	1.1	1.8	3.0	6.3	0.2

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	5.9	12.2	4.7	3.3	3.4	1.5	1.0	1.0	2.3	3.6	6.6	9.6	4.6
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	8.0	23.3	7.7	4.2	4.9	2.0	1.9	1.3	3.3	5.5	11.2	14.8	23.3
		Min-w	3.2	4.4	2.1	2.0	1.6	1.0	0.2	0.6	1.1	1.8	3.0	6.1	0.2

Their last results were submitted after Data Report 2023 publication.

Appendix 5-18-2 Corrigenda of Data Report 2023

Table 4.4.1 HNO₃ - Measured by FP (continued)

Refer to page 154 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.1	0.2	0.2	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.6	0.6
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.1	0.2	0.2	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.6	0.6
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-3 Corrigenda of Data Report 2023

Table 4.5.1 HCl - Measured by FP (continued)

Refer to page 157 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.2
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.2	0.2	0.4	0.4	0.2	0.2	0.2	0.3	0.2	0.6	0.4	0.8	0.8
		Min-w	<0.1	0.1	0.2	<0.1	<0.1	<0.1	0.1	0.2	0.1	<0.1	0.3	0.1	<0.1

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Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.1	0.2	0.3	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.2
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.2	0.2	0.4	0.2	0.4	0.2	0.2	0.3	0.2	0.6	0.4	0.8	0.8
		Min-w	<0.1	0.1	0.2	<0.1	<0.1	<0.1	0.1	0.2	0.1	<0.1	0.3	0.1	<0.1

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-4 Corrigenda of Data Report 2023

Table 4.6.1 NH₃ - Measured by FP (continued)

Refer to page 160 of Data Report 2023.

Unit : ppb

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.5	0.4	0.8	0.9	0.7	1.4	2.2	2.3	0.9	0.9	0.7	3.2	1.3
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	1.1	0.5	1.1	1.5	2.1	3.6	2.5	2.8	1.1	1.5	0.9	6.6	6.6
		Min-w	0.1	0.1	0.6	0.5	<0.1	0.2	1.9	0.9	0.6	0.6	0.5	<0.1	<0.1

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.5	0.4	0.8	1.2	0.6	1.4	2.2	2.3	0.9	0.9	0.7	4.2	1.4
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	1.1	0.5	1.1	1.5	2.1	3.6	2.5	2.8	1.1	1.5	0.9	8.5	8.5
		Min-w	0.1	0.1	0.6	0.9	<0.1	0.2	1.9	0.9	0.6	0.6	0.5	<0.1	<0.1

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-5 Corrigenda of Data Report 2023

Table 4.13 Particulate matter component: SO₄²⁻ - Measured by FP (continued)

Refer to page 172 of Data Report 2023.

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.67	1.12	0.40	0.51	0.40	0.45	0.39	0.33	0.48	0.43	0.23	1.22	0.56
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	1.40	2.66	0.87	1.45	0.79	0.84	1.16	0.66	0.75	0.82	0.56	2.63	2.66
		Min-w	0.17	0.22	0.14	0.12	0.14	0.13	0.10	0.10	0.15	0.07	<0.01	0.10	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.67	1.12	0.40	0.35	0.58	0.45	0.39	0.33	0.48	0.43	0.23	1.10	0.56
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	1.40	2.66	0.87	0.66	1.45	0.84	1.16	0.66	0.75	0.82	0.56	2.63	2.66
		Min-w	0.17	0.22	0.14	0.12	0.14	0.13	0.10	0.10	0.15	0.07	<0.01	0.10	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-6 Corrigenda of Data Report 2023

Table 4.14.1 Particulate matter component: NO₃⁻ - Measured by FP (continued)

Refer to page 175 of Data Report 2023.

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.08	0.04	0.08	0.03	0.02	0.03	0.02	0.03	0.04	0.04	0.03	0.33	0.06
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.14	0.07	0.20	0.08	0.06	0.04	0.07	0.09	0.06	0.08	0.09	0.59	0.59
		Min-w	0.04	0.02	0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.08	0.04	0.08	0.03	0.02	0.03	0.02	0.03	0.04	0.04	0.03	0.27	0.06
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.14	0.07	0.20	0.08	0.06	0.04	0.07	0.09	0.06	0.08	0.09	0.59	0.59
		Min-w	0.04	0.02	0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-7 Corrigenda of Data Report 2023

Table 4.15 Particulate matter component: Cl⁻ - Measured by FP (continued)

Refer to page 178 of Data Report 2023.

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.02	0.02	0.01	<0.01	0.01	0.03	0.03	0.02	<0.01	0.02	0.01	0.07	0.02
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.03	0.04	0.02	0.01	0.02	0.04	0.05	0.04	0.03	0.06	0.02	0.19	0.19
		Min-w	0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.02	0.02	0.01	<0.01	0.01	0.03	0.03	0.02	<0.01	0.02	0.01	0.09	0.03
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.03	0.04	0.02	0.01	0.02	0.04	0.05	0.04	0.03	0.06	0.02	0.19	0.19
		Min-w	0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-8 Corrigenda of Data Report 2023

Table 4.16.1 Particulate matter component: NH_4^+ - Measured by FP (continued)

Refer to page 181 of Data Report 2023.

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.12	0.16	0.11	0.15	0.15	0.15	0.18	0.08	0.10	0.05	0.01	0.27	0.13
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.38	0.39	0.27	0.49	0.35	0.43	0.53	0.27	0.19	0.14	0.03	0.91	0.91
		Min-w	<0.01	0.01	0.03	0.01	0.02	0.05	0.03	0.01	0.02	<0.01	<0.01	<0.01	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.12	0.16	0.11	0.08	0.20	0.15	0.18	0.08	0.10	0.05	0.01	0.22	0.13
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.38	0.39	0.27	0.16	0.49	0.43	0.53	0.27	0.19	0.14	0.03	0.91	0.91
		Min-w	<0.01	0.01	0.03	0.01	0.02	0.05	0.03	0.01	0.02	<0.01	<0.01	<0.01	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-9 Corrigenda of Data Report 2023

Table 4.17.1 Particulate matter component: Na^+ - Measured by FP (continued)

Refer to page 184 of Data Report 2023.

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.03	0.06	0.07	0.03	0.03	0.03	0.04	0.05	0.03	0.02	0.02	0.14	0.04
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.04	0.10	0.11	0.04	0.05	0.04	0.06	0.11	0.05	0.05	0.03	0.28	0.28
		Min-w	0.02	0.02	0.05	0.02	0.02	0.01	0.03	0.01	0.02	<0.01	<0.01	0.02	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.03	0.06	0.07	0.03	0.03	0.03	0.04	0.05	0.03	0.02	0.02	0.14	0.05
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.04	0.10	0.11	0.04	0.05	0.04	0.06	0.11	0.05	0.05	0.03	0.28	0.28
		Min-w	0.02	0.02	0.05	0.02	0.02	0.01	0.03	0.01	0.02	<0.01	<0.01	0.02	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-10 Corrigenda of Data Report 2023

Table 4.18.1 Particulate matter component: K^+ - Measured by FP (continued)

Refer to page 187 of Data Report 2023.

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.04	0.09	0.02	<0.01	0.02	0.04	0.05	0.03	0.02	0.04	0.03	0.09	0.04
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.08	0.31	0.02	0.01	0.03	0.07	0.08	0.06	0.02	0.07	0.05	0.24	0.31
		Min-w	<0.01	0.01	0.01	<0.01	<0.01	0.02	0.02	<0.01	0.01	0.02	0.02	0.01	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.04	0.09	0.02	<0.01	0.02	0.04	0.05	0.03	0.02	0.04	0.03	0.08	0.04
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.08	0.31	0.02	0.01	0.03	0.07	0.08	0.06	0.02	0.07	0.05	0.24	0.31
		Min-w	<0.01	0.01	0.01	<0.01	<0.01	0.02	0.02	<0.01	0.01	0.02	0.02	0.01	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-11 Corrigenda of Data Report 2023

Table 4.19.1 Particulate matter component: Mg^{2+} - Measured by FP(continued)

Refer to page 190 of Data Report 2023.

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	<0.01	0.04	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.01
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.01	0.08	0.05	<0.01	0.02	0.02	<0.01	<0.01	0.01	<0.01	<0.01	0.08	0.08
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	<0.01	0.04	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.01
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.01	0.08	0.05	<0.01	0.02	0.02	<0.01	<0.01	0.01	<0.01	<0.01	0.08	0.08
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-17-12 Corrigenda of Data Report 2023

Table 4.20.1 Particulate matter component: Ca²⁺ - Measured by FP (continued)

Refer to page 193 of Data Report 2023.

Unit : µg/m³

Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.08	0.13	0.02	0.03	0.04	0.06	0.03	0.04	0.06	0.02	0.02	0.35	0.07
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.14	0.43	0.03	0.06	0.07	0.15	0.08	0.06	0.09	0.05	0.06	0.79	0.79
		Min-w	0.03	<0.01	<0.01	<0.01	0.02	0.02	0.01	0.01	0.01	<0.01	<0.01	0.03	<0.01



Country	Site		2023												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Listvyanka	Mean	0.08	0.13	0.02	0.02	0.04	0.06	0.03	0.04	0.06	0.02	0.02	0.34	0.08
		%	100	100	75	100	100	100	100	100	100	100	100	100	98
		Max-w	0.14	0.43	0.03	0.04	0.07	0.15	0.08	0.06	0.09	0.05	0.06	0.79	0.79
		Min-w	0.03	<0.01	<0.01	<0.01	0.02	0.02	0.01	0.01	0.01	<0.01	<0.01	0.03	<0.01

Their last results were submitted after Data Report 2023 publication.

Appendix 5-18 Corrigenda of Data Report 2009

Refer to page 162 of Data Report 2009.

Table 4.6 NH₃

Unit : ppb			2009												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Japan	Ochiishi	Mean	0.4	0.2	0.3	0.6	6.2	0.5	0.7	0.7	0.6	0.6	0.4	0.2	1.0
		%	100	100	100	100	100	100	100	100	100	69	100	100	96
		Max-2w	0.4	0.3	0.4	0.7	11.7	0.6	0.8	1.0	0.7	0.7	0.4	0.4	11.7
		Min-2w	0.3	0.1	0.3	0.5	0.6	0.4	0.6	0.4	0.4	0.4	0.4	N.D.	N.D.



Updated version

Unit : ppb			2009												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Japan	Ochiishi	Mean	0.4	0.2	0.3	0.6	0.5	0.5	0.7	0.7	0.6	0.6	0.4	0.2	0.5
		%	100	100	100	100	100	100	100	100	100	69	100	100	96
		Max-2w	0.4	0.3	0.4	0.7	0.6	0.6	0.8	1.0	0.7	0.7	0.4	0.4	1.0
		Min-2w	0.3	0.1	0.3	0.5	0.3	0.4	0.6	0.4	0.4	0.4	0.4	N.D.	N.D.

The monthly average value for May was revised after publication of Data Report 2009.

Appendix 5-17-1

Table 4.21 Annual SO₂ concentration from 2014 to 2024

unit: ppb

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(UVF) FP	8.9 ***	9.8 ***	10.0 7.5	11.5 4.8	7.3 3.4	6.9 5.0	12.2 5.0	15.3 5.4	19.4 ***	10.2 1.0	*** ***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	7.5	4.8	3.4	5.0	5.8				10.3
	Bayanzurkh	MNA003	AT	8.9	9.8	10.0	11.5	7.3	6.9	12.2	15.3	19.4	10.2	
	Khan-Uul	MNA004	FP							4.1	5.4	***	1.0	2.2

Appendix 5-17-2

Table 4.22 Annual HNO₃ concentration from 2010 to 2024

unit: ppb

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.1	<0.1	<0.1	0.1	<0.1	<0.1	***	0.2	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.1	<0.1	<0.1	0.1	<0.1				
	Khan-Uul	MNA004	FP							0.1	<0.1	***	0.2	0.1

Appendix 5-17-3

Table 4.23 Annual HCl concentration from 2010 to 2024

unit: ppb

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	11.3	1.7	0.8	0.4	0.7	0.6	***	2.9	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	11.3	1.7	0.8	0.4	0.7				
	Khan-Uul	MNA004	FP							4.1	0.6	***	2.9	1.9

Appendix 5-17-4

Table 4.24 Annual NH₃ concentration from 2010 to 2024

unit: ppb

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	***	9.7	7.3	7.0	5.8	6.3	***	***	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	***	9.7	7.3	7.0	4.8				
	Khan-Uul	MNA004	FP							6.7	6.3	***	***	8.2

Appendix 5-17-5

Table 4.25 Annual NO concentration from 2010 to 2024

unit: ppb

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(CLD)	21.8	27.8	22.7	19.4	12.7	15.2	15.4	18.3	17.1	16.6	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(CLD)											
	Bayanzurkh	MNA003	AT(CLD)	21.8	27.8	22.7	19.4	12.7	15.2	15.4	18.3	17.1	16.6	55.3

Appendix 5-17-6

Table 4.26 Annual NO₂ concentration from 2010 to 2024

unit: ppb

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(CLD)	26.9	30.3	35.9	42.9	34.3	33.5	21.9	23.4	25.2	21.9	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(CLD)											
	Bayanzurkh	MNA003	AT(CLD)	26.9	30.3	35.9	42.9	34.3	33.5	21.9	23.4	25.2	21.9	20.5

Appendix 5-17-7

Table 4.27 Annual NO_x concentration from 2010 to 2024

unit: ppb

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(CLD)	48.7	58.2	58.6	62.3	47.0	48.7	37.3	41.8	42.3	38.5	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(CLD)											
	Bayanzurkh	MNA003	AT(CLD)	48.7	58.2	58.6	62.3	47.0	48.7	37.3	41.8	42.3	38.5	75.9

Appendix 5-17-8

Table 4.28 Annual O₃ concentration from 2010 to 2024

unit: ppb

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(UVP)	12	13	12	9	11	12	12	11	11	10	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(UVP)											
	Bayanzurkh	MNA003	AT(UVP)	12	13	12	9	11	12	12	11	11	10	8

Appendix 5-17-9

Table 4.29 Annual PM₁₀ concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(β-ray)	211	106	97	102	121	126	92	84	87	81	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(β-ray)											
	Bayanzurkh	MNA003	AT(β-ray)	211	106	97	102	121	126	92	84	87	81	76

Appendix 5-17-10

Table 4.30 Annual PM_{2.5} concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(β-ray)	50	50	53	48	43	39	***	49	26	23	23

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	AT(β-ray)		72	53	48	43	39					
	Bayanzurkh	MNA003	AT(β-ray)	50	53	58	52	45	35	29	49	25	23	23

re-calculation

Appendix 5-17-11

Table 4.31 Annual SO₄²⁻ in PM concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	2.10	2.23	1.25	1.15	0.95				

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	2.10	2.23	1.25	1.15	1.07				
	Khan-Uul	MNA004	FP							0.84	1.27	***	0.13	1.69

Appendix 5-17-12

Table 4.32 Annual NO₃⁻ in PM concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.10	0.18	0.18	0.16	0.14	0.37	***	0.22	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.10	0.18	0.18	0.16	0.09				
	Khan-Uul	MNA004	FP							0.19	0.37	***	0.22	0.91

Appendix 5-17-13

Table 4.33 Annual Cl⁻ in PM concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.08	0.20	0.14	0.20	0.12	0.18	***	0.12	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.08	0.20	0.14	0.20	0.08				
	Khan-Uul	MNA004	FP							0.15	0.18	***	0.12	0.77

Appendix 5-17-14

Table 4.34 Annual NH₄⁺ in PM concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.67	0.58	0.34	0.32	0.12	0.61	***	***	***

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.67	0.58	0.34	0.32	0.14				
	Khan-Uul	MNA004	FP							0.10	0.61	***	***	0.50

Appendix 5-17-15

Table 4.35 Annual Na⁺ in PM concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.20	0.31	0.18	0.22	0.17	0.12	***	***	***



Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.20	0.31	0.18	0.22	0.22				
	Khan-Uul	MNA004	FP							0.13	0.12	***	***	0.51

Appendix 5-17-16

Table 4.36 Annual K⁺ in PM concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.08	0.15	0.06	0.05	0.06	0.04	***	***	***



Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.08	0.15	0.06	0.05	0.06				
	Khan-Uul	MNA004	FP							0.06	0.04	***	***	0.16

Appendix 5-17-17

Table 4.37 Annual Mg²⁺ in PM concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.04	0.05	0.04	0.02	<0.01	0.02	***	***	***



Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.04	0.05	0.04	0.02	<0.01				
	Khan-Uul	MNA004	FP							<0.01	0.02	***	***	0.11

Appendix 5-17-18

Table 4.38 Annual Ca²⁺ in PM concentration from 2010 to 2024

unit: µg/m³

Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.55	0.74	0.83	0.54	0.5	0.79	***	***	***



Country	Site	Code	Method	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mongolia	Ulaanbaatar	MNA001	FP	***	***	0.55	0.74	0.83	0.54	0.42				
	Khan-Uul	MNA004	FP							0.58	0.79	***	***	1.35

Appendix 6

Corrigenda of Inland Aquatic Environment Monitoring

There were errors in the IAE results for the Ambulalakao Lake data in Philippines and Vachiralongkorn Dam in Thailand for 2007. The Page and table number correspond to those of Data Report 2007.

Duration: 2007.2-2007.12
Country: Philippines
Lake Name: Pandin Lake & Ambulalakao Lake

*4:Concerning "X" judging, it was not able to specify the main reasons

Duration: 2007.3-2007.12
Country: Thailand
Lake Name: Vachiralongkorn Dam

[illegible]

There were errors in the IAE results for the Baru River data in Malaysia for 2023.
The Page and table number correspond to those of Data Report 2023.

Appendix 6-1

P.276 Table 6.4.4 Result of Inland Aquatic Environment Monitoring

Duration: 2023.2.-2023.12.
Country: Malaysia
Lake/Stream: (See below)

Mandatory Parameters: 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Baru River	7-Feb-23	25.9	7.41	5.69	0.500	2.17	0.36	1.44	<0.003*1	4.33	0.45	5.24	2.08
	04-Apr-23	24.9	7.55	5.97	0.477	2.21	0.438	1.91	0.009	5.24	0.46	4.75	1.90
	06-Jun-23	25.8	7.46	6.04	0.483	2.01	0.279	1.18	0.019	4.29	0.60	4.90	2.01
	01-Aug-23	26.2	7.94	9.08	0.890	1.48	0.370	2.27	0.005	6.40	0.59	7.69	2.96
	03-Oct-23	25.4	6.75	4.61	0.415	1.61	0.22	1.32	0.020	4.38	0.39	3.23	1.65
	5-Dec-23	24.8	7.74	5.18	0.467	1.70	0.58	1.61	0.0	4.67	0.45	3.10	1.94
	mean*2	25.5	7.29	6.09	0.538	1.86	0.37	1.62	0.0	4.89	0.49	4.82	2.09

Mandatory Parameters: Once/year					
Site	Sampling Date	PO4 ³⁻ (mg/L)	TOC (mg/L)	T-P (mg/L)	COD (mg/L)
Baru River	7-Feb-23	<0.10*1	1.4	<0.2*1	4.6
	4-Apr-23	<0.10*1	2.1	0.3	3.6
	6-Jun-23	<0.10*1	1.0	0.3	4.9
	1-Aug-23	<0.10*1	1.4	0.3	3.8
	03-Oct-23	<0.10*1	1.3	0.4	3.0
	5-Dec-23	<0.10*1	2.3	0.8	4.3
	mean	<0.10*1	1.6	0.3	4.0

note

- : No analysis or measurement.

*1: Less than determination limit.

*2: Mean of pH takes an average of hydrogen ion.

When the value is under detection limit, it is considered as "0". Then the average and R1R2 were calculated by using it.

		Anion	Cation	R1	Judge			
Baru River	07-Feb-23	591	633	3.4	O	Acalc	R2	Judge
	04-Apr-23	584	633	4.1	O	6.4	6.2	O
	06-Jun-23	562	612	4.3	O	6.4	3.8	O
	01-Aug-23	990	921	-3.6	O	6.2	1.1	O
	03-Oct-23	488.7	498.6	1.0	O	9.8	4.0	O
	05-Dec-23	557.2	529.1	-2.6	O	5.2	5.5	O
						5.7	4.4	O

Appendix 6-2

P.282 Table 6.4.10 Summary of Inland Aquatic Environment Monitoring

Mandatory Parameters : 4 times/year														
Country	Location	Site	pH	EC (mS/m)	Alkalinity (meq/L)	Gran's ANC (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Malaysia	-	Baru River*6	7.29	6.09	0.538	-	1.86	0.37	1.62	0.01	4.89	0.49	4.82	2.09
	-	Kuala Tahan	-	-	-	-	-	-	-	-	-	-	-	-

Appendix 6-3

P.285 Table 6.5.12 Annual mean values of each parameters from 2022 to 2023 at Baru River (Malaysia)

	Mandatory Parameters : 4 times/year											Mandatory Parameters : Once/year					
	pH	EC	Alkalinity	iron/s ANi	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	Mg ²⁺	Transparency	PO ₄ ³⁻	NO ₂ ⁻	DOC	COD
		mS/m	meq/L	(meq/L)	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	m	mg/L	mg/L	mg/L
2022	7.62	8.02	0.747	-	2.58	0.42	1.58	<0.003*1	5.27	0.71	9.07	2.63	-	<0.10*1	-	-	5.2
2023	7.29	6.09	0.538	-	1.86	0.37	1.62	0.01	4.89	0.49	4.82	2.09	-	<0.10*1	-	-	4.0

- : No analysis or measurement.

*1: Less than determination/detection limit.