

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

Data Report 2021

December 2022

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 2021	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 Definitions	20
3.1.6 Terms and Abbreviations	23
3.1.7 Monitoring Sites	24
3.2 Results of Monitoring	27
4. Dry Deposition (Air Concentration) Monitoring	139
4.1 Method	141
4.1.1 Automatic Monitoring Method	141
4.1.2 Manual Monitoring Method	141
4.1.3 Monitoring Sites	141
4.2 Results of Monitoring	146
5. Soil and Vegetation Monitoring	221
5.1 Method	223
5.1.1 Field Operation	223
5.1.2 Laboratory Operation	225
5.1.3 Monitoring Sites	226
5.2 Results of Monitoring	228
6. Inland Aquatic Environment Monitoring	265
6.1 Method	267
6.1.1 Selection of Sampling Sites	267
6.1.2 Field Operation	267
6.1.3 Laboratory Operation	268
6.1.4 Monitoring Sites	269
6.2 Results of Monitoring	269

	Page
7. Catchment-scale Monitoring	305
7.1 Method	307
7.1.1 Field Operation	307
7.1.2 Laboratory Operation	309
7.1.3 Data Management	309
7.1.4 Monitoring Sites	310
7.2 Results of Monitoring	314
Appendix 1 Overview of Data Report 2021	319
Appendix 2 Meteorological Statistics at the Monitoring Sites	327
Appendix 3 Corrigenda of Dry Deposition Monitoring Data in 2020	345
Appendix 4 Supplemental Data of Catchment-scale Monitoring from 2019-2020	351

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 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 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.

Acid deposition monitoring of EANET covers 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 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 2021 through the discussion with QA/QC managers from participating countries at the 23rd Senior Technical Managers' Meeting (STM23). After verification by the experts of each monitoring field, the NC submitted the draft Data Report to the 22nd session of Scientific Advisory Committee (SAC22) held in October 2022, and the Data Report 2021 was adopted. Following the comments and guidance at the SAC22, the NC elaborated and finalized the report.

The Data Report 2021 contains the data obtained from monitoring activities carried out in 2021.

CHAPTER 2

Network Description

2. Network Description

2.1 Classification of Monitoring Sites

EANET monitoring sites are classified into two basic categories, namely acid deposition monitoring sites and ecological survey sites. Acid deposition monitoring sites are sites for the collection of fundamental data on the temporal and spatial distribution of acid deposition, 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
Acid deposition monitoring site for wet deposition and dry deposition monitoring	Urban site	- Assessment of the state of acid deposition in urban areas - Urbanized and industrial areas, and the areas immediately outside the urban area - Data can be used for evaluation of acid deposition effect on buildings and historical monuments or human health
	Rural site	- Assessment of the state of acid deposition in rural areas and/or hinterlands - Data can be used for the evaluation of 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 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 acid deposition monitoring site
	Ecosystem analysis site	- Assessment of 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 2021

Thirteen EANET countries, namely, Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand and Vietnam participated in acid deposition monitoring in 2021. A total of 65 sites are nominated for the acid deposition monitoring, including 26 urban, 18 rural, and 21 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 the acid deposition monitoring sites are presented in Table 2.2.



Figure 2.1 Locations of acid deposition monitoring sites in 2021

Table 2.2 Locations of acid deposition monitoring sites

Country	Site	Code*1	Classification	Latitude*2	Longitude*2	Altitude /m
Cambodia	Phnom Penh	<i>KHA001</i>	Urban	11°33'18"N	104°56'20"E	12
China	Chongqing - Haifu	<i>CNA003</i>	Urban	29°37'30"N	106°30'34"E	317
	- Jinyunshan	<i>CNA004</i>	Rural	29°49'42"N	106°22'43"E	871
	Xi'an - Shizhan	<i>CNA005</i>	Urban	34°14'33"N	108°57'10"E	415
	- Jiwozi	<i>CNA007</i>	Remote	33°51'06"N	108°48'52"E	1,837
	Xiamen - Hongwen	<i>CNA008</i>	Urban	24°28'47"N	118°09'47"E	39
	- Xiaoping	<i>CNA009</i>	Remote	24°51'23"N	118°02'55"E	530
	Zhuhai - Xiang Zhou	<i>CNA010</i>	Urban	22°16'22"N	113°31'46"E	29
	- Zhuxiandong	<i>CNA011</i>	Urban	22°12'24"N	113°31'00"E	18
	- Haibin-Park	<i>CNA012</i>	Urban	22°15'40"N	113°34'25"E	10
	Wuzhishan - Wuzhishan	<i>CNA013</i>	Remote	18°50'11"N	109°29'26"E	958
	Lijiang - Lijiang	<i>CNA014</i>	Remote	27°13'38"N	100°14'48"E	3410
Indonesia	Jakarta	<i>IDA001</i>	Urban	06°09'22"S	106°50'32"E	7
	Serpong	<i>IDA002</i>	Rural	06°21'02"S	106°40'04"E	64
	Kototabang	<i>IDA003</i>	Remote	00°12'08"S	100°19'05"E	845
	Bandung	<i>IDA004</i>	Urban	06°53'41"S	107°35'11"E	753
	Maros	<i>IDA005</i>	Rural	04°59'50"S	119°34'17"E	1
	Jembrana	<i>IDA006</i>	Rural	08°20'27"S	114°37'02"E	24
	Lombok	<i>IDA007</i>	Rural	08°38'10"S	116°10'15"E	52
Japan	Rishiri	<i>JPA001</i>	Remote	45°07'30"N	141°14'30"E	40
	Ochiishi	<i>JPA002</i>	Remote	43°09'43"N	145°29'50"E	49
	Sado-seki	<i>JPA004</i>	Remote	38°15'02"N	138°24'01"E	129
	Happo	<i>JPA005</i>	Remote	36°41'48"N	137°47'53"E	1,850
	Ijira	<i>JPA006</i>	Rural	35°34'14"N	136°41'51"E	140
	Oki	<i>JPA007</i>	Remote	36°17'19"N	133°11'06"E	90
	Yusuhara	<i>JPA009</i>	Remote	33°22'46"N	132°56'06"E	790
	Hedo	<i>JPA010</i>	Remote	26°51'58"N	128°14'55"E	60
	Ogasawara	<i>JPA011</i>	Remote	27°05'32"N	142°13'02"E	212
	Tokyo	<i>JPA012</i>	Urban	35°41'30"N	139°45'10"E	26
	Niigata-maki	<i>JPA013</i>	Rural	37°48'33"N	138°51'09"E	47
	Tsushima	<i>JPA014</i>	Remote	34°14'48"N	129°17'17"E	390
Lao PDR	Vientiane	<i>LAA001</i>	Urban	17°59'53"N	102°34'56"E	175
Malaysia	Petaling Jaya	<i>MYA001</i>	Urban	03°06'07"N	101°38'42"E	46
	Tanah Rata	<i>MYA002</i>	Rural	04°29'03"N	101°22'17"E	1,545
	Danum Valley	<i>MYA003</i>	Remote	04°58'53"N	117°50'37"E	426
	Kuching	<i>MYA004</i>	Urban	01°29'25"N	101°21'09"E	22
	Gunung Brinchang	<i>MYA005</i>	Rural	04°31'33"N	101°23'17"E	1,876
Mongolia	Ulaanbaatar	<i>MNA001</i>	Urban	47°55'13"N	106°54'43"E	1,275
	Terelj	<i>MNA002</i>	Remote	47°59'00"N	107°27'04"E	1,550
Myanmar	Yangon	<i>MMA001</i>	Urban	16°51'53"N	96°09'13"E	21
	Mandalay	<i>MMA002</i>	Urban	21°54'46"N	96°03'51"E	70
Philippines	Metro Manila	<i>PHA001</i>	Urban	14°38'09"N	121°04'43"E	55
	Los Baños	<i>PHA002</i>	Rural	14°09'53"N	121°15'00"E	25
	Mt. Sto. Tomas	<i>PHA003</i>	Remote	16°21'23" N	120°33'33" E	1,500

Table 2.2 Locations of acid deposition monitoring sites (continued)

Country	Site	Code* ¹	Classification	Latitude* ²	Longitude* ²	Altitude /m
Republic of Korea	Kanghwa	<i>KRA001</i>	Rural	37°42'32"N	126°16'26"E	60
	Cheju (Kosan)	<i>KRA002</i>	Remote	33°17'32"N	126°09'43"E	37
	Imsil	<i>KRA003</i>	Rural	35°36'09"N	127°10'53"E	217
Russia	Mondy	<i>RUA001</i>	Remote	51°37'18"N	100°55'10"E	1,996
	Listvyanka	<i>RUA002</i>	Rural	51°50'47"N	104°53'34"E	646
	Irkutsk	<i>RUA003</i>	Urban	52°14'53"N	104°15'33"E	495
	Primorskaya	<i>RUA004</i>	Rural	43°37'45"N	132°14'13"E	85
Thailand	Bangkok	<i>THA001</i>	Urban	13°47'04"N	100°32'22"E	5
	Samutprakarn	<i>THA002</i>	Urban	13°39'58"N	100°36'21"E	4
	Pathumthani	<i>THA003</i>	Rural	14°02'46"N	100°42'43"E	6
	Khanchanaburi	<i>THA004</i>	Remote	14°47'05"N	98°36'05"E	130
	(Vajiralongkorn Dam)					
	Chiang Mai					
	- Chang Phueak	<i>THA006</i>	Urban	18°50'26"N	98°58'11"E	329
	- Si Phum	<i>THA007</i>	Urban	18°47'27"N	98°59'24"E	313
	Nakhon Ratchasima					
	- Nai Mueang	<i>THA009</i>	Urban	14°58'46"N	102°05'53"E	184
Vietnam	Hanoi	<i>VNA001</i>	Urban	21°03'24"N	105°43'36"E	6
	Hoa Binh	<i>VNA002</i>	Rural	20°50'12"N	105°20'32"E	23
	Cuc Phuong	<i>VNA003</i>	Remote	20°18'01"N	105°41'38"E	155
	Da Nang	<i>VNA004</i>	Urban	16°02'35"N	108°12'24"E	5
	Can Tho	<i>VNA005</i>	Rural	10°05'18"N	105°41'45"E	2
	Ho Chi Minh	<i>VNA006</i>	Urban	10°47'04"N	106°42'00"E	5
	Yen Bai	<i>VNA007</i>	Rural	21°42'28"N	104°52'29"E	56

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

e.g.) *KH A 0 01*

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

(a): country code (2 digits) (b): item code ("A" : acid deposition monitoring)

(c): sub-serial number for ecological monitoring

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

*2 Each latitude and longitude are shown according to the World Geodetic System.

The current status on basic survey sites for ecological monitoring and their nearest acid deposition monitoring sites are shown in Table 2.3. Soil and vegetation monitoring and inland aquatic environment monitoring are conducted at 31 plots in 10 countries and 19 lakes/ rivers in 11 countries, respectively. Most of the ecological monitoring sites are corresponded to the acid deposition monitoring sites. Moreover, both soil and vegetation monitoring and inland aquatic environment monitoring are conducted in the vicinity of 4 acid deposition monitoring sites in China, 2 sites in Japan, 1 site in Mongolia, 2 sites in Philippines, 2 sites in Russia, 1 site in Thailand, and 1 site in Vietnam. It is expected that the 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 acid deposition monitoring sites

Country	Site for 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	<i>KHI002</i>
China	Chongqing - Jinyunshan	Jinyunshan	<i>CNS004</i>	Jinyunshan Lake	<i>CNI004</i>
	Xi'an - Jiwozi	Dabagou	<i>CNS007</i>	Jiwozi River	<i>CNI007</i>
	Xiamen - Xiaoping	Xiaoping	<i>CNS009</i>	Xiaoping Dam	<i>CNI209</i>
	Zhuhai - Zhuxiandong	Zhuxiandong	<i>CNS011</i>	Zhuxiandong Stream	<i>CNI111</i>
Indonesia	Serpong	Bogor Research Forest (Dramaga Experimental Forest)	<i>IDS002</i>	-	-
	Bandung	-	-	Patengang Lake	<i>IDI004</i>
	-	-	-	Gunung Lake	<i>IDI006</i>
Japan	Happo	Sekido-san	<i>JPS005</i>	Futago-ike Lake	<i>JPI005</i>
		Horyu-zan	<i>JPS105</i>		
	Ijira	Ijira	<i>JPS006</i>	Ijira Lake	<i>JPI006</i>
		Yamato	<i>JPS106</i>		
Lao PDR	Vientiane	-	-	Nam Houm Lake	<i>LAI001</i>
Malaysia	Petaling Jaya	Pasoh Reserve Forest 1	<i>MYS001</i>	-	-
		Pasoh Reserve Forest 2	<i>MYS101</i>	-	-
	Danum Valley	-	-	Baru River	<i>MYI103</i>
	-	UPMKB Rehabilitated Forest Planted in 1991	<i>MYS005</i>	-	-
		UPMKB Rehabilitated Forest Planted in 2008	<i>MYS105</i>	-	-
	-	-	-	Kuala Tahan	<i>MYI006</i>
Mongolia	Ulaanbaatar	Bogdkhan Mountain	<i>MNS001</i>	-	-
	Terelj	Terelj Mountain	<i>MNS002</i>	Terelj River	<i>MNI002</i>

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

Country	Site for 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
Philippines	Metro Manila	La Mesa Watershed	<i>PHS001</i>		
	Los Baños	Mt. Makiling	<i>PHS002</i>	Pandin Lake	<i>PHI102</i>
		UP Quezon, Land Grant	<i>PHS102</i>		
	Mt. Sto Tomas	Boneco Long Term Ecological Research Site	<i>PHS003</i>	Ambulalakaw Lake	<i>PHI003</i>
Republic of Korea	Imsil	Mt. Naejang	<i>KRS003</i>	-	-
Russia	Irkutsk	Irkutsk	<i>RUS003</i>	-	-
	Listvyanka	Bolshie Koty	<i>RUS002</i>		
		Pereemnaya river catchment	<i>RUS102</i>	Pereemnaya River	<i>RUI102</i>
	Mondy	Ilchir Lake	<i>RUS001</i>	-	-
		Okinskoe Lake	<i>RUS101</i>		
		Solar Observatory	<i>RUS201</i>		
	Primorskaya	Primorskaya	<i>RUS004</i>	Komarovka River	<i>RUI004</i>
Thailand	Khanchanaburi (Vajiralongkorn Dam)	Vajiralongkorn Dam	<i>THS004</i>	Vajiralongkorn Dam	<i>THI004</i>
		Vajiralongkorn Puye	<i>THS104</i>		
Vietnam	Hoa Binh	Cave of Heaven	<i>VNS002</i>	Hoa Binh Reservoir	<i>VNI002</i>
		Thang Ranh	<i>VNS102</i>		

*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 acid deposition monitoring site

(d): 2-digit serial number corresponding to its nearest acid deposition monitoring site (If there is no nearest acid deposition monitoring site within 50 km, another new serial number is assigned after the existing 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 acid deposition monitoring	Site for catchment-scale monitoring	Code for catchment-scale monitoring ^{*1}
Japan	Ijira	Lake Ijira catchment	<i>JPC006</i>
Philippines	Metro Manila	La Mesa Watershed	<i>PHC001</i>

*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 acid deposition monitoring site

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

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

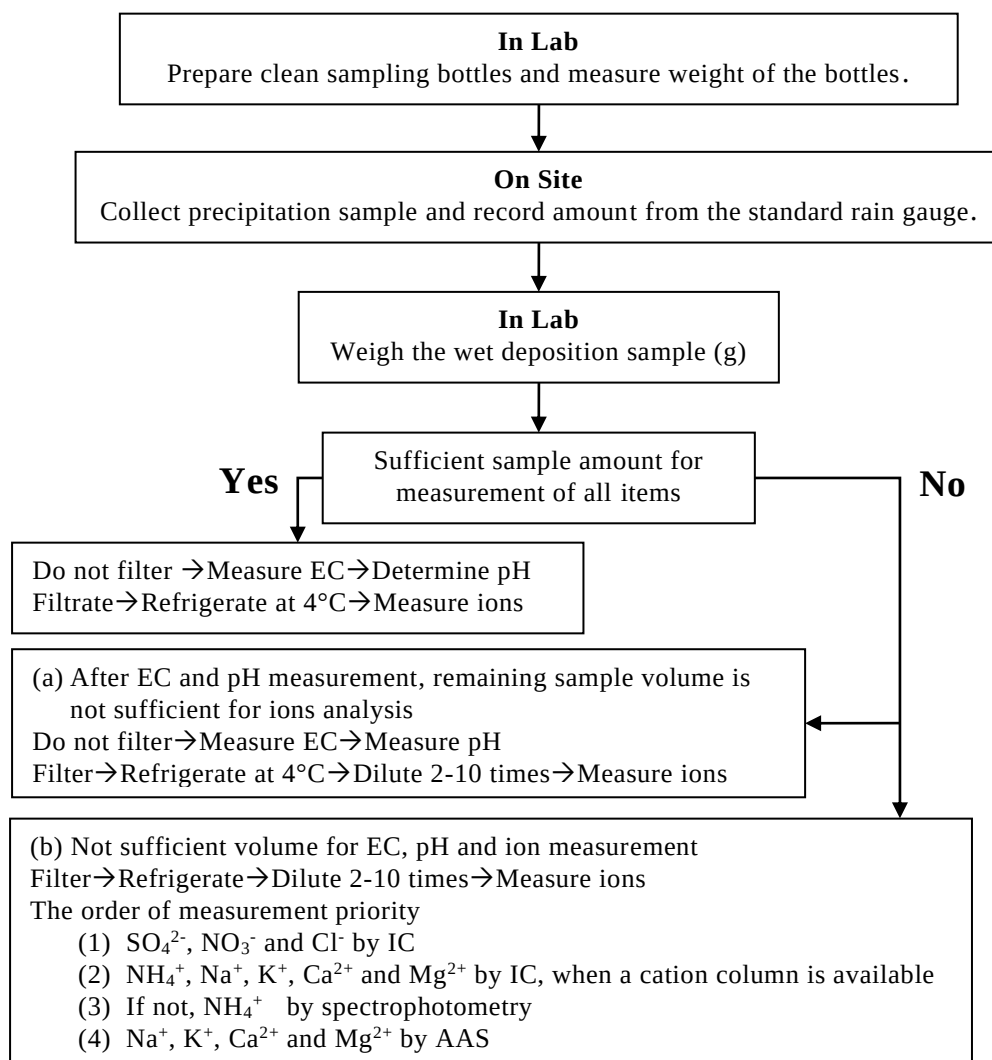
CHAPTER 3

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 for 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 37 out of 59 sites, while weekly collection are performed at 22 sites, 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 2021

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	
	Serpong	Rural	Daily	April 1998	
	Kototabang	Remote	Weekly	April 1998	
	Bandung	Urban	Daily	January 1999	
	Maros	Rural	Weekly	January 2008	
	Jembrana	Rural	Weekly	January 2019	
	Lombok	Rural	Weekly	January 2019	
Japan	Rishiri	Remote	Daily	April 1998	
	Ochiishi	Remote	Daily	January 2003	
	Sado-seki	Remote	Daily	April 1999	
	Happo	Remote	Daily	April 1998	
	Ijira	Rural	Weekly	June 1999	
	Oki	Remote	Daily	April 1998	
	Yusuhara	Remote	Daily	December 1999	
	Hedo	Remote	Daily	December 1999	
	Ogasawara	Remote	Daily	May 1999	
	Tokyo	Urban	Daily	April 2007	
	Niigata-maki	Rural	Daily	January 2019	
	Tsushima	Remote	Daily	January 2019	
Lao PDR	Vientiane* ¹	Urban	Daily	October 2003	
Malaysia	Petaling Jaya	Urban	Weekly	April 1998	
	Danum Valley	Remote	Weekly	January 2005	
	Kuching	Urban	Weekly	January 2008	
	Gunung Brinchang	Rural	Weekly	September 2020	
Mongolia	Ulaanbaatar* ²	Urban	Daily	August 1998	
	Terelj* ²	Remote	Daily	September 1998	
Myanmar	Yangon	Urban	Weekly	January 2007	

Table 3.6 Sampling frequencies for wet deposition monitoring in 2021 (continued)

Country	Site	Classification	Sampling Interval	Starting Month
Philippines	Metro Manila	Urban	Weekly	April 1999
	Los Baños ^{*1}	Rural	Weekly	April 1999
	Mt. Sto. Tomas ^{*1}	Remote	Weekly	October 2006
Republic of Korea	Kanghwa	Rural	Daily	March 1999
	Cheju (Kosan)	Remote	Daily	April 1999
	Imsil	Rural	Daily	January 2001
Russia	Mondy	Remote	Daily	May 1999
	Listvyanka	Rural	Daily	January 2000
	Irkutsk	Urban	Daily	January 2000
	Primorskaya	Rural	Daily	February 2002
Thailand	Bangkok ^{*1}	Urban	Daily	April 1999
	Samutprakarn ^{*1}	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, Vientiane, Los Baños, Mt. Sto. Tomas, Bangkok, Samutprakarn and Khanchanaburi were not submitted.

*2 Wet deposition monitoring data (anion) of Ulaanbaatar and Terelj were not submitted.

Table 3.7 Analytical methods and additional items in 2021

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)
		- Jiwozi	IC, TI	IC	HCO ₃ ⁻ (TI)
	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	
	Serpong	IC, TI	IC	IC	HCO ₃ ⁻ (TI)
	Kototabang	IC	IC	IC	
	Bandung	IC	IC	IC	
	Maros	IC	IC	IC	
	Jembrana	IC	IC	IC	
	Lombok	IC	IC	IC	

Table 3.7 Analytical methods and additional items in 2021 (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	
	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	HCO ₃ ⁻ (IC)
	Tsushima	IC	IC	IC	
Malaysia	Petaling Jaya	IC	IC	IC	F ⁻ , HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Danum Valley	IC	IC	IC	F ⁻ , HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Kuching	IC, TI	IC	IC	HCO ₃ ⁻ (TI), F ⁻ , HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Gunung Brinchang	IC, TI	IC	IC	HCO ₃ ⁻ (TI), F ⁻ , HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
Mongolia	Ulaanbaatar	-	IC	IC	
	Terelj	-	IC	IC	
Myanmar	Yangon	IC	IC	IC	
Philippines	Metro Manila	IC	SP	ICP- OES	HCO ₃ ⁻ , F ⁻ , Br ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ (IC)
Republic of Korea	Kanghwa	IC	IC	IC	
	Cheju (Kosan)	IC	IC	IC	
	Imsil	IC	IC	IC	
Russia	Mondy	IC, SP, TI	SP	AAS	HCO ₃ ⁻ (TI), F ⁻ , Br ⁻ (IC), NO ₂ ⁻ (SP), PO ₄ ³⁻ (SP)
	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	Pathumthani	IC	IC	IC	PO ₄ ³⁻ , HCOO ⁻ , CH ₃ COO ⁻ (IC)
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)
	Yen Bai	IC	IC	IC	F ⁻ (IC)

AAS: Atomic absorption spectrometry, AES: Atomic emission spectrometry,

IC: Ion chromatography, SP: Spectrophotometry, TI: Titration

ICP-OES: Inductively Coupled Plasma Optical Emission Spectrometry

3.2 Results of Monitoring

The monthly summaries of each monitoring site in 2021 are shown in Table 3.8 through Table 3.66. The annual summaries of wet deposition monitoring in 2021 are shown in Table 3.67 through Table 3.69. 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 3.70. The summaries of annual data from 2007 to 2021 are shown in Table 3.71 through Table 3.95. Figure 3.2 to Figure 3.60 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 3.96 through Table 3.103.

Note that the annual data before 2007 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>

Table 3.8 Monthly results

Site: Phnom Penh

Country: Cambodia

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	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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 ⁺
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	***	***	***	***	***	***	***	***	***	***	***
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.
2021	%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

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	90.5	90.0	178	16.2	240	8.27	7.34	71.8	71.6	7.16	11.1	4.96	6.31	29.5
Feb	75.0	74.6	77.0	12.4	192	6.49	22.9	45.5	45.4	8.70	0.758	6.12	4.42	24.5
Mar	45.4	45.1	53.8	6.29	107	4.03	4.25	32.9	32.8	4.09	3.48	5.46	2.74	105
Apr	48.1	47.9	76.8	8.20	134	4.14	3.78	44.1	44.0	4.89	1.31	5.88	3.23	38.3
May	26.3	26.2	36.4	5.69	87.1	2.82	2.41	31.7	31.6	2.68	0.661	6.18	1.99	165
June	38.5	38.2	69.2	8.49	151	4.86	2.81	39.1	39.0	3.25	0.228	6.64	3.25	34.2
July	21.6	21.6	39.0	4.12	64.1	1.17	1.12	12.5	12.5	1.21	3.20	5.49	1.54	267
Aug	13.3	13.2	24.8	3.66	38.2	1.72	1.44	14.8	14.8	1.28	2.23	5.65	1.07	232
Sept	11.7	11.6	15.2	3.02	25.3	1.61	1.01	10.9	10.9	1.33	3.13	5.50	0.872	257
Oct	32.4	32.2	46.8	6.01	92.8	2.46	1.49	21.0	20.9	1.41	2.95	5.53	2.12	107
Nov	37.5	37.3	64.3	5.98	83.9	2.69	2.01	25.5	25.4	2.28	9.73	5.01	2.60	40.7
Dec	61.4	60.9	123	13.0	177	7.88	7.86	37.0	36.8	4.93	6.23	5.21	4.29	18.6
Annual	26.4	26.2	41.0	5.19	73.5	2.47	2.38	21.6	21.6	2.19	2.94	5.53	1.85	1318
Max.	289	287	559	59.8	762	33.9	88.0	325	325	30.8	28.2	7.04	15.7	
Min.	3.96	3.93	5.48	0.846	9.98	0.435	<0.3	4.24	4.23	0.411	0.0912	4.55	0.342	

Wet deposition amount

2021	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	2.67	2.65	5.25	0.478	7.08	0.244	0.217	2.12	2.11	0.211	0.327
Feb	1.84	1.83	1.89	0.303	4.71	0.159	0.560	1.12	1.11	0.213	0.0186
Mar	4.77	4.75	5.66	0.662	11.3	0.424	0.448	3.46	3.45	0.430	0.366
Apr	1.84	1.83	2.94	0.314	5.15	0.159	0.145	1.69	1.68	0.187	0.0503
May	4.33	4.31	5.99	0.938	14.4	0.464	0.397	5.22	5.21	0.442	0.109
June	1.32	1.31	2.37	0.290	5.16	0.166	0.0959	1.34	1.33	0.111	<0.01
July	5.77	5.75	10.4	1.10	17.1	0.311	0.299	3.34	3.33	0.324	0.854
Aug	3.08	3.06	5.75	0.848	8.86	0.400	0.334	3.44	3.43	0.298	0.517
Sept	2.99	2.97	3.90	0.775	6.50	0.414	0.260	2.81	2.80	0.342	0.803
Oct	3.47	3.46	5.01	0.644	9.94	0.263	0.160	2.25	2.25	0.152	0.316
Nov	1.53	1.52	2.62	0.243	3.42	0.109	0.0817	1.04	1.03	0.0929	0.396
Dec	1.14	1.13	2.28	0.243	3.29	0.147	0.146	0.688	0.684	0.0917	0.116
Annual	34.7	34.6	54.1	6.84	96.8	3.26	3.14	28.5	28.4	2.89	3.88

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	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
Mar	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
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	99.8	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
Sept	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
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	99.9	99.9	99.9	100

Terms and abbreviations are given in Table 3.5.

Table 3.10 Monthly results

Site: Jinyunshan

Country: China

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	112	112	198	18.7	241	10.5	8.27	58.6	58.4	10.1	46.1	4.34	7.73	22.9
Feb	75.6	75.3	91.4	12.5	199	4.36	11.7	39.8	39.7	6.74	2.59	5.59	4.29	32.2
Mar	59.0	58.7	89.4	9.66	132	4.72	6.34	39.5	39.4	6.89	10.6	4.97	3.39	59.9
Apr	56.1	55.9	79.5	8.02	117	3.30	3.73	34.3	34.2	6.03	16.2	4.79	3.46	67.1
May	27.0	26.9	34.3	4.79	77.5	2.11	2.39	23.8	23.8	2.99	1.07	5.97	1.75	170
June	29.9	29.8	42.0	4.56	101	1.13	1.72	20.5	20.5	2.23	1.62	5.79	2.10	66.7
July	13.0	13.0	23.2	3.08	31.5	0.487	0.379	9.83	9.82	1.17	3.75	5.43	0.902	265
Aug	13.2	13.2	18.9	2.38	27.5	0.430	0.595	8.61	8.60	0.970	8.17	5.09	1.06	285
Sept	10.3	10.2	13.3	2.01	19.1	0.673	0.530	6.50	6.48	0.846	5.52	5.26	0.808	361
Oct	25.4	25.3	33.6	4.64	48.6	1.36	1.22	11.0	11.0	1.19	19.2	4.72	2.01	136
Nov	53.3	53.1	89.6	8.00	91.5	3.22	3.42	29.0	29.0	3.62	41.1	4.39	4.32	40.9
Dec	81.4	81.0	140	13.4	189	7.80	10.2	35.7	35.5	5.28	41.3	4.38	6.12	22.9
Annual	24.4	24.3	35.7	4.28	55.8	1.51	1.78	15.4	15.4	2.12	8.96	5.05	1.71	1530
Max.	499	498	1166	79.5	1037	27.8	97.2	346	345	35.8	234	6.96	35.0	
Min.	4.06	4.06	5.32	1.13	4.43	<0.3	<0.3	1.75	1.74	0.411	0.110	3.63	0.403	

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	2.57	2.56	4.55	0.429	5.52	0.239	0.189	1.34	1.34	0.231	1.06
Feb	2.43	2.43	2.94	0.403	6.42	0.140	0.376	1.28	1.28	0.217	0.0835
Mar	3.54	3.52	5.36	0.579	7.90	0.283	0.380	2.37	2.36	0.413	0.635
Apr	3.76	3.75	5.33	0.538	7.88	0.221	0.250	2.30	2.30	0.405	1.09
May	4.59	4.57	5.84	0.815	13.2	0.359	0.407	4.05	4.05	0.509	0.181
June	2.00	1.99	2.80	0.304	6.75	0.0756	0.115	1.37	1.37	0.149	0.108
July	3.45	3.44	6.15	0.817	8.34	0.129	0.100	2.60	2.60	0.310	0.994
Aug	3.76	3.76	5.39	0.677	7.84	0.123	0.170	2.45	2.45	0.276	2.33
Sept	3.70	3.69	4.79	0.724	6.88	0.243	0.191	2.34	2.34	0.305	1.99
Oct	3.46	3.44	4.58	0.632	6.62	0.185	0.167	1.50	1.50	0.163	2.62
Nov	2.18	2.17	3.67	0.327	3.74	0.132	0.140	1.19	1.19	0.148	1.68
Dec	1.86	1.85	3.21	0.308	4.32	0.179	0.233	0.817	0.813	0.121	0.945
Annual	37.3	37.2	54.6	6.55	85.4	2.31	2.72	23.6	23.6	3.25	13.7

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.
2021	%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

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	70.9	67.2	27.1	33.7	125	61.6	16.1	47.2	45.8	5.61	0.0961	7.02	4.06	25.2
Mar	162	156	31.6	42.3	423	92.3	12.2	125	123	5.33	0.0573	7.24	9.05	11.7
Apr	61.1	57.6	15.9	58.2	204	58.2	8.36	126	125	3.44	0.0133	7.88	5.41	43.9
May	48.7	47.0	19.0	15.2	171	27.8	8.19	92.1	91.5	7.82	0.0222	7.65	5.08	55.9
June	30.7	30.3	22.2	25.0	76.2	6.12	3.18	85.9	85.8	0.467	0.0326	7.49	3.55	66.5
July	20.7	20.5	9.37	24.6	14.0	3.13	0.622	103	102	<0.3	0.0460	7.34	2.92	106
Aug	27.4	26.6	8.93	28.5	69.5	13.1	2.95	63.9	63.6	<0.3	0.0714	7.15	3.15	138
Sept	18.3	18.0	6.94	24.2	18.0	4.93	0.609	87.6	87.5	<0.3	0.0963	7.02	2.47	276
Oct	42.2	40.4	13.9	9.39	86.3	30.1	2.87	88.5	87.9	<0.3	0.141	6.85	3.82	91.3
Nov	210	203	74.9	65.9	152	110	33.2	592	590	12.9	0.0271	7.57	16.4	12.7
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	34.7	33.6	12.9	25.8	69.5	17.9	3.52	95.0	94.6	1.25	0.0744	7.13	3.57	827
Max.	371	360	173	187	476	268	76.5	806	801	46.3	0.236	8.07	27.2	
Min.	8.98	8.91	3.45	2.99	2.83	<0.3	<0.3	10.3	8.97	<0.3	0.0085	6.63	1.17	

Wet deposition amount

2021	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	1.79	1.69	0.682	0.848	3.15	1.55	0.406	1.19	1.15	0.141	<0.01
Mar	1.90	1.84	0.371	0.497	4.97	1.08	0.143	1.47	1.44	0.0626	<0.01
Apr	2.68	2.53	0.697	2.55	8.92	2.55	0.366	5.53	5.47	0.151	<0.01
May	2.72	2.63	1.06	0.849	9.56	1.56	0.458	5.15	5.12	0.437	<0.01
June	2.04	2.02	1.47	1.66	5.06	0.407	0.211	5.71	5.70	0.0310	<0.01
July	2.20	2.18	0.994	2.61	1.49	0.332	0.0661	10.9	10.9	0.0174	<0.01
Aug	3.78	3.67	1.23	3.93	9.59	1.81	0.408	8.82	8.78	0.0154	<0.01
Sept	5.05	4.97	1.92	6.67	4.98	1.36	0.168	24.2	24.2	<0.01	0.0266
Oct	3.86	3.69	1.27	0.857	7.88	2.74	0.262	8.08	8.02	0.0139	0.0128
Nov	2.67	2.59	0.954	0.840	1.93	1.40	0.423	7.55	7.52	0.164	<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	28.7	27.8	10.7	21.3	57.5	14.8	2.91	78.6	78.3	1.03	0.0616

Data completeness

2021	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	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

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	30.4	29.3	5.86	16.9	99.0	17.5	4.62	52.1	51.7	2.09	0.0454	7.34	2.42	14.2
Feb	30.5	29.2	5.89	20.0	97.1	21.6	5.81	56.1	55.6	2.33	0.0430	7.37	2.53	21.9
Mar	28.3	27.3	7.89	16.8	120	15.4	6.50	68.3	68.0	<0.3	0.0342	7.47	3.01	26.1
Apr	19.0	18.5	4.98	9.21	71.8	8.76	3.00	45.8	45.6	0.957	0.0655	7.18	1.87	140
May	11.5	11.0	5.56	8.55	73.5	7.61	4.76	64.8	64.6	9.40	0.0276	7.56	2.33	37.7
June	7.96	7.00	8.69	8.10	20.4	15.9	5.77	14.3	14.0	<0.3	0.277	6.56	0.883	88.6
July	10.6	9.54	6.80	8.53	34.0	17.6	6.22	8.81	8.43	<0.3	0.618	6.21	0.846	94.2
Aug	14.4	13.3	2.41	8.07	8.39	17.2	5.00	44.1	43.8	<0.3	0.377	6.42	1.17	91.0
Sept	18.8	17.4	2.73	8.92	9.92	23.3	4.37	39.1	38.6	<0.3	0.594	6.23	1.28	263
Oct	9.25	8.11	2.68	3.70	10.9	18.9	5.85	17.7	17.3	<0.3	1.76	5.75	0.908	134
Nov	98.4	84.8	3.29	12.8	13.3	226	15.1	60.0	55.1	<0.3	0.991	6.00	4.36	15.0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	16.9	15.6	4.41	8.66	31.9	20.9	5.05	34.9	34.4	0.630	0.580	6.24	1.41	926
Max.	98.4	84.8	12.4	24.9	121	226	15.1	98.0	97.9	45.3	2.19	7.78	4.36	
Min.	6.77	6.24	2.10	3.05	<0.8	4.13	1.25	6.47	5.97	<0.3	0.0165	5.66	0.760	

Wet deposition amount

2021	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	0.431	0.416	0.0832	0.240	1.41	0.249	0.0657	0.739	0.734	0.0296	<0.01
Feb	0.668	0.640	0.129	0.439	2.13	0.472	0.127	1.23	1.22	0.0511	<0.01
Mar	0.738	0.714	0.206	0.440	3.14	0.402	0.170	1.78	1.77	<0.01	<0.01
Apr	2.65	2.58	0.695	1.29	10.0	1.22	0.420	6.40	6.37	0.134	<0.01
May	0.432	0.415	0.210	0.322	2.77	0.287	0.179	2.44	2.44	0.354	<0.01
June	0.706	0.621	0.770	0.717	1.81	1.41	0.511	1.27	1.24	<0.01	0.0246
July	0.998	0.898	0.641	0.803	3.21	1.66	0.586	0.830	0.794	<0.01	0.0583
Aug	1.31	1.21	0.219	0.735	0.763	1.57	0.455	4.02	3.98	<0.01	0.0343
Sept	4.95	4.58	0.718	2.35	2.61	6.14	1.15	10.3	10.2	0.0121	0.156
Oct	1.24	1.09	0.360	0.497	1.46	2.54	0.784	2.38	2.33	<0.01	0.236
Nov	1.48	1.27	0.0494	0.193	0.200	3.40	0.227	0.900	0.827	<0.01	0.0149
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	15.6	14.4	4.08	8.02	29.5	19.3	4.67	32.3	31.9	0.583	0.537

Data completeness

2021	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	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

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	41.1	37.4	48.8	43.3	93.2	60.2	10.9	75.1	73.8	10.1	2.86	5.54	3.63	24.2
Apr	11.6	10.6	25.6	20.2	29.5	16.5	3.15	12.4	12.0	3.38	11.5	4.94	1.55	23.2
May	20.0	18.3	45.9	30.1	42.7	27.8	4.05	28.4	27.8	5.11	3.72	5.43	2.18	78.6
June	13.5	11.9	26.2	20.2	44.8	25.5	3.57	15.2	14.6	4.38	4.83	5.32	1.57	116
July	21.0	18.1	33.2	38.6	36.7	49.1	11.8	37.3	36.2	5.83	3.72	5.43	2.31	12.6
Aug	26.3	20.8	40.5	53.2	19.9	91.6	27.3	53.1	51.1	9.31	1.97	5.71	3.11	102
Sept	26.8	25.2	38.2	24.1	64.3	26.1	5.56	41.0	40.4	5.93	16.9	4.77	2.79	25.4
Oct	16.4	15.0	41.5	19.4	78.3	23.0	4.62	16.5	16.0	3.75	4.79	5.32	1.96	26.4
Nov	95.1	87.8	126	107	145	120	32.8	140	137	21.9	0.902	6.04	8.15	8.7
Dec	18.1	16.2	25.2	19.2	58.4	31.7	5.35	37.7	37.0	6.00	2.15	5.67	2.18	26.3
Annual	22.0	19.3	37.9	33.2	46.2	45.3	10.6	35.3	34.4	6.44	4.63	5.33	2.42	443
Max.	180	167	182	175	204	211	41.3	215	210	38.8	24.5	6.39	12.2	
Min.	6.46	5.96	11.9	7.04	10.0	7.39	1.26	5.00	4.84	1.96	0.407	4.61	0.740	

Wet deposition amount

2021	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	0.992	0.905	1.18	1.05	2.25	1.46	0.264	1.81	1.78	0.245	0.0691
Apr	0.270	0.247	0.594	0.468	0.685	0.383	0.0730	0.287	0.278	0.0783	0.265
May	1.57	1.44	3.61	2.36	3.36	2.19	0.318	2.23	2.18	0.401	0.292
June	1.56	1.38	3.03	2.34	5.19	2.95	0.413	1.76	1.69	0.507	0.559
July	0.265	0.228	0.419	0.486	0.462	0.619	0.149	0.469	0.456	0.0735	0.0468
Aug	2.68	2.12	4.13	5.43	2.03	9.34	2.79	5.42	5.21	0.950	0.201
Sept	0.681	0.641	0.972	0.614	1.64	0.663	0.141	1.04	1.03	0.151	0.429
Oct	0.432	0.395	1.09	0.513	2.07	0.608	0.122	0.436	0.422	0.0990	0.126
Nov	0.829	0.766	1.10	0.929	1.27	1.04	0.286	1.22	1.20	0.191	<0.01
Dec	0.476	0.426	0.662	0.505	1.53	0.834	0.141	0.991	0.973	0.158	0.0565
Annual	9.75	8.54	16.8	14.7	20.5	20.1	4.69	15.7	15.2	2.85	2.05

Data completeness

2021	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	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 3.14 Monthly results

Site: Xiaoping

Country: China

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	3.65	3.33	5.16	8.17	<0.8	5.22	1.15	2.50	2.39	1.25	8.71	5.06	0.560	15.2
Mar	7.60	7.34	15.9	10.1	5.94	4.23	1.48	3.54	3.45	1.59	14.7	4.83	0.956	26.6
Apr	15.2	14.8	47.3	11.3	31.8	6.09	2.33	6.70	6.57	2.18	40.6	4.39	2.20	37.6
May	16.9	16.1	44.2	17.6	53.7	13.1	4.31	9.64	9.36	2.58	10.8	4.97	1.77	114
June	11.0	10.7	28.8	10.0	27.9	4.78	1.74	5.66	5.56	2.31	19.8	4.70	1.34	211
July	12.7	12.1	34.1	14.5	49.5	9.26	2.01	7.77	7.57	2.06	5.58	5.25	1.32	83.7
Aug	9.09	8.62	23.7	11.3	27.5	7.74	2.85	5.91	5.75	1.95	7.96	5.10	1.01	170
Sept	29.5	29.1	28.2	13.6	66.2	6.79	3.01	12.4	12.3	2.41	7.68	5.11	1.63	53.3
Oct	2.19	1.90	9.03	3.94	4.28	4.78	0.923	4.00	3.90	1.83	7.76	5.11	0.640	5.1
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	3.54	3.12	18.8	5.33	1.29	7.00	2.90	4.94	4.79	2.19	16.2	4.79	1.02	23.0
Annual	12.6	12.2	30.1	12.1	34.8	7.52	2.55	6.93	6.77	2.19	13.6	4.87	1.35	739
Max.	62.5	61.7	256	41.1	243	39.1	28.7	57.5	56.7	8.33	97.7	5.94	7.63	
Min.	1.88	1.62	5.16	2.82	<0.8	2.17	0.590	1.83	1.73	1.25	1.15	4.01	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 ⁺
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	0.0554	0.0506	0.0785	0.124	<0.01	0.0793	0.0175	0.0380	0.0363	0.0190	0.132
Mar	0.202	0.195	0.422	0.269	0.158	0.112	0.0393	0.0939	0.0915	0.0423	0.391
Apr	0.571	0.557	1.78	0.424	1.19	0.229	0.0875	0.252	0.247	0.0819	1.53
May	1.93	1.84	5.04	2.00	6.12	1.49	0.491	1.10	1.07	0.294	1.23
June	2.31	2.25	6.08	2.12	5.88	1.01	0.368	1.19	1.17	0.487	4.17
July	1.06	1.02	2.85	1.22	4.14	0.774	0.168	0.650	0.633	0.173	0.467
Aug	1.55	1.47	4.04	1.92	4.67	1.32	0.485	1.01	0.978	0.332	1.36
Sept	1.57	1.55	1.50	0.725	3.52	0.362	0.160	0.660	0.653	0.128	0.409
Oct	0.0110	<0.01	0.0456	0.0199	0.0216	0.0242	<0.01	0.0202	0.0197	<0.01	0.0392
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.0817	0.0720	0.432	0.123	0.0298	0.161	0.0667	0.114	0.110	0.0505	0.373
Annual	9.34	9.01	22.3	8.94	25.8	5.56	1.89	5.13	5.01	1.62	10.1

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.
2021	%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	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 3.15 Monthly results

Site: Xiang Zhou

Country: China

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	11.7	10.2	30.3	30.2	30.8	24.6	1.88	14.2	13.6	3.50	6.04	5.22	1.57	64.5
Mar	35.1	30.7	106	82.7	87.1	73.9	6.65	17.2	15.6	9.97	26.7	4.57	4.54	8.5
Apr	15.0	12.9	52.4	39.3	38.3	34.8	2.44	11.1	10.3	4.58	27.6	4.56	2.61	92.0
May	1.99	1.72	5.56	4.97	5.04	4.43	<0.3	2.31	2.21	0.978	5.79	5.24	0.441	293
June	4.11	3.62	7.54	10.9	12.1	8.51	0.807	3.22	3.04	1.32	6.62	5.18	0.646	578
July	5.34	4.49	13.1	16.5	13.4	14.2	0.461	5.40	5.09	1.85	3.82	5.42	0.735	256
Aug	6.78	5.70	14.5	18.4	21.2	17.9	1.02	5.92	5.54	2.32	8.13	5.09	1.06	343
Sept	5.31	4.27	16.5	19.2	17.3	17.2	0.767	4.53	4.15	2.07	5.44	5.26	0.904	192
Oct	6.59	4.61	11.4	37.0	7.92	32.7	1.11	10.2	9.53	3.83	2.23	5.65	0.972	620
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	9.32	8.70	24.5	11.9	34.3	10.3	1.19	11.9	11.7	1.91	1.52	5.82	1.01	25.7
Annual	5.83	4.73	13.3	20.8	14.0	18.3	0.901	6.29	5.89	2.38	6.03	5.22	0.905	2472
Max.	84.5	70.6	303	246	159	231	11.0	73.4	72.9	29.2	93.3	7.04	11.7	
Min.	1.56	<0.3	3.39	3.95	<0.8	1.30	<0.3	1.25	1.05	0.411	0.0912	4.03	0.334	

Wet deposition amount

2021	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	0.754	0.659	1.96	1.95	1.99	1.59	0.121	0.914	0.879	0.226	0.389
Mar	0.298	0.261	0.901	0.703	0.740	0.629	0.0565	0.146	0.133	0.0847	0.227
Apr	1.38	1.18	4.82	3.62	3.52	3.20	0.225	1.02	0.948	0.422	2.54
May	0.583	0.505	1.63	1.46	1.48	1.30	0.0270	0.676	0.647	0.287	1.70
June	2.38	2.09	4.35	6.27	7.00	4.91	0.466	1.86	1.75	0.765	3.82
July	1.37	1.15	3.35	4.23	3.43	3.64	0.118	1.38	1.30	0.474	0.979
Aug	2.32	1.95	4.97	6.30	7.26	6.13	0.349	2.03	1.90	0.795	2.78
Sept	1.02	0.819	3.17	3.69	3.32	3.30	0.147	0.869	0.798	0.397	1.04
Oct	4.09	2.86	7.10	23.0	4.92	20.3	0.687	6.35	5.91	2.37	1.38
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.240	0.224	0.629	0.306	0.883	0.265	0.0306	0.306	0.300	0.0492	0.0391
Annual	14.4	11.7	32.9	51.5	34.5	45.3	2.23	15.5	14.6	5.87	14.9

Data completeness

2021	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	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 3.16 Monthly results

Site: Zhuxiandong

Country: China

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	22.8	19.1	64.8	67.9	27.2	61.9	3.34	43.0	41.7	9.88	5.88	5.23	2.77	70.5
Mar	54.3	46.3	167	148	104	132	11.3	52.2	49.4	20.3	24.3	4.61	6.64	9.0
Apr	33.1	28.8	102	82.2	68.1	70.7	4.74	26.5	25.0	10.3	18.9	4.72	3.75	94.0
May	5.72	5.01	13.2	13.9	11.7	11.7	1.80	7.12	6.87	2.27	5.09	5.29	0.741	253
June	5.04	4.12	9.82	17.9	11.6	15.2	1.22	4.31	3.98	2.19	2.53	5.60	0.616	526
July	7.56	6.58	20.8	18.5	26.3	16.3	1.13	7.05	6.70	2.53	3.94	5.40	0.986	303
Aug	6.78	5.56	15.0	20.8	17.6	20.1	1.35	10.7	10.3	3.33	1.96	5.71	0.862	226
Sept	12.7	11.7	36.0	19.5	41.4	16.5	1.40	13.2	12.8	3.07	3.46	5.46	1.36	211
Oct	4.52	2.62	5.65	36.4	6.14	31.6	1.53	3.60	2.92	3.72	1.66	5.78	0.740	684
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	10.8	10.1	24.4	15.1	40.7	11.5	1.79	20.3	20.0	3.44	0.759	6.12	1.26	23.9
Annual	7.98	6.52	19.1	27.7	18.4	24.2	1.63	8.47	7.95	3.49	3.56	5.45	1.02	2398
Max.	122	103	405	384	207	364	21.7	109	101	49.4	91.2	6.79	14.8	
Min.	2.71	1.60	2.58	4.80	<0.8	2.17	<0.3	0.998	0.951	0.411	0.162	4.04	0.292	

Wet deposition amount

2021	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	1.61	1.34	4.57	4.79	1.92	4.36	0.236	3.03	2.94	0.696	0.415
Mar	0.489	0.417	1.50	1.33	0.940	1.19	0.101	0.470	0.444	0.183	0.219
Apr	3.11	2.71	9.57	7.72	6.40	6.65	0.446	2.49	2.35	0.973	1.78
May	1.44	1.27	3.33	3.50	2.94	2.96	0.453	1.80	1.73	0.572	1.29
June	2.65	2.17	5.17	9.41	6.11	8.00	0.644	2.26	2.09	1.15	1.33
July	2.29	1.99	6.31	5.59	7.96	4.93	0.342	2.14	2.03	0.766	1.19
Aug	1.53	1.25	3.39	4.68	3.96	4.54	0.304	2.41	2.31	0.752	0.441
Sept	2.68	2.47	7.57	4.11	8.71	3.48	0.295	2.77	2.70	0.646	0.729
Oct	3.09	1.79	3.86	24.9	4.20	21.6	1.05	2.46	2.00	2.54	1.14
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.257	0.241	0.582	0.360	0.973	0.275	0.0428	0.485	0.479	0.0823	0.0181
Annual	19.1	15.6	45.9	66.4	44.1	58.0	3.91	20.3	19.1	8.36	8.55

Data completeness

2021	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	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 3.17 Monthly results

Site: Wuzhishan

Country: China

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	6.33	5.72	13.8	9.99	25.4	10.1	2.86	4.93	4.71	1.21	0.679	6.17	0.701	98.9
May	4.61	3.74	13.0	19.0	22.3	14.5	6.66	7.79	7.47	2.08	1.16	5.93	0.792	61.5
June	3.25	2.80	8.45	9.12	12.9	7.46	1.78	3.11	2.95	0.973	1.02	5.99	0.471	143
July	1.41	1.15	3.85	4.82	5.84	4.34	1.72	2.91	2.81	0.710	0.259	6.59	0.435	113
Aug	2.31	1.91	6.28	6.92	13.2	6.52	3.50	3.18	3.07	1.00	0.781	6.11	0.494	146
Sept	2.63	2.21	7.00	6.29	15.8	6.88	2.07	4.97	4.84	2.19	0.983	6.01	0.450	183
Oct	1.81	1.49	2.71	5.72	9.76	5.34	4.40	1.82	1.71	1.33	0.276	6.56	0.526	406
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	3.94	3.17	13.2	13.6	9.98	12.6	19.2	6.99	6.71	3.29	0.209	6.68	0.870	6.0
Annual	2.69	2.27	6.20	7.41	13.2	6.83	3.40	3.37	3.23	1.36	0.623	6.21	0.525	1157
Max.	17.9	14.5	38.5	64.3	74.8	56.5	20.2	19.0	18.5	8.63	2.29	8.07	2.41	
Min.	0.500	0.421	0.661	0.762	1.66	<0.3	<0.3	<0.2	<0.2	<0.3	0.0085	5.64	0.130	

Wet deposition amount

2021	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	0.626	0.566	1.36	0.988	2.51	0.998	0.283	0.488	0.466	0.119	0.0672
May	0.284	0.230	0.797	1.17	1.37	0.892	0.410	0.479	0.460	0.128	0.0715
June	0.464	0.400	1.21	1.30	1.84	1.07	0.255	0.445	0.422	0.139	0.145
July	0.159	0.130	0.435	0.544	0.660	0.490	0.195	0.329	0.318	0.0802	0.0293
Aug	0.337	0.279	0.916	1.01	1.93	0.952	0.510	0.464	0.447	0.147	0.114
Sept	0.480	0.404	1.28	1.15	2.88	1.26	0.379	0.909	0.886	0.400	0.180
Oct	0.735	0.604	1.10	2.32	3.96	2.17	1.79	0.740	0.693	0.541	0.112
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.0236	0.0190	0.0791	0.0816	0.0599	0.0757	0.115	0.0419	0.0403	0.0197	<0.01
Annual	3.11	2.63	7.17	8.57	15.2	7.90	3.93	3.89	3.73	1.57	0.720

Data completeness

2021	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	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 3.18 Monthly results

Site: Lijiang

Country: China

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	37.3	36.5	31.5	18.4	132	13.9	9.73	38.9	38.6	10.3	0.112	6.95	0.980	6.5
May	<0.3	<0.3	<0.5	<0.5	35.7	8.87	1.74	8.11	7.92	2.02	0.108	6.97	0.765	18.8
June	<0.3	<0.3	<0.5	0.811	11.9	1.39	0.465	3.05	3.02	1.07	0.110	6.96	0.371	177
July	0.467	0.441	<0.5	1.85	14.5	0.440	0.322	6.11	6.10	0.686	0.121	6.92	0.364	139
Aug	5.50	5.47	1.26	3.01	7.38	0.557	0.307	3.27	3.26	0.536	0.448	6.35	0.311	182
Sept	<0.3	<0.3	<0.5	2.23	8.31	0.440	1.26	2.85	2.84	2.97	0.301	6.52	0.347	91.5
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	2.18	2.13	0.882	2.07	12.6	1.15	0.642	4.31	4.29	1.24	0.241	6.62	0.366	614
Max.	37.3	36.5	31.5	18.4	132	13.9	9.73	38.9	38.6	10.3	0.661	7.23	0.980	
Min.	<0.3	<0.3	<0.5	<0.5	2.78	0.440	<0.3	0.380	0.370	0.400	0.0589	6.18	0.130	

Wet deposition amount

2021	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	0.242	0.237	0.205	0.120	0.857	0.0905	0.0632	0.253	0.251	0.0670	<0.01
May	<0.01	<0.01	<0.01	<0.01	0.670	0.167	0.0328	0.152	0.149	0.0380	<0.01
June	0.0166	<0.01	0.0598	0.143	2.10	0.245	0.0821	0.539	0.533	0.189	0.0194
July	0.0648	0.0611	0.0269	0.257	2.01	0.0611	0.0447	0.847	0.846	0.0952	0.0167
Aug	1.00	0.996	0.230	0.549	1.34	0.101	0.0560	0.596	0.594	0.0977	0.0816
Sept	<0.01	<0.01	0.0111	0.204	0.760	0.0403	0.116	0.261	0.260	0.272	0.0275
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	1.34	1.31	0.542	1.27	7.75	0.705	0.394	2.65	2.63	0.759	0.148

Data completeness

2021	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	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
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

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	24.2	23.3	15.9	18.0	25.9	13.5	1.11	8.14	7.85	2.81	9.29	5.03	1.79	454
Feb	19.7	18.1	22.9	29.3	24.8	26.4	2.92	5.67	5.10	4.38	14.3	4.85	1.62	603
Mar	36.7	35.6	33.1	23.5	29.6	19.1	2.83	17.3	16.9	5.61	13.2	4.88	2.45	116
Apr	26.1	25.7	18.6	13.4	27.0	7.85	1.77	6.45	6.28	1.99	17.4	4.76	1.84	214
May	23.8	23.5	22.8	8.67	41.6	5.72	1.49	5.51	5.38	1.95	1.92	5.72	1.39	112
June	61.9	60.4	60.3	22.7	73.5	25.6	5.20	23.3	22.7	3.93	24.6	4.61	3.68	78.6
July	26.7	25.9	29.4	14.6	13.1	13.5	1.71	11.7	11.4	1.82	25.3	4.60	2.25	36.2
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	99.8	98.8	89.2	53.2	48.0	17.5	2.84	15.9	15.5	3.66	18.8	4.73	2.82	56.9
Oct	24.6	24.2	22.7	9.01	31.2	6.60	4.86	4.78	4.64	1.55	16.2	4.79	1.87	181
Nov	20.7	20.3	19.8	9.27	37.8	6.67	0.654	9.87	9.72	1.32	5.81	5.24	1.09	110
Dec	25.2	24.6	22.3	15.4	35.2	9.94	2.73	10.3	10.1	1.63	5.48	5.26	1.43	153
Annual	27.2	26.2	24.6	20.2	30.6	15.9	2.43	8.42	8.08	3.06	12.6	4.90	1.81	2115
Max.	173	171	155	88.6	561	431	103	369	360	46.8	51.3	6.01	5.43	
Min.	8.59	8.18	6.17	2.51	<0.8	0.964	0.537	2.09	2.00	<0.3	0.977	4.29	0.635	

Wet deposition amount

2021	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	11.0	10.6	7.20	8.15	11.7	6.10	0.505	3.69	3.56	1.28	4.22
Feb	11.8	10.9	13.8	17.6	14.9	15.9	1.76	3.42	3.07	2.64	8.61
Mar	4.27	4.14	3.85	2.74	3.45	2.23	0.329	2.02	1.97	0.652	1.54
Apr	5.60	5.50	3.98	2.88	5.78	1.68	0.380	1.38	1.35	0.427	3.74
May	2.67	2.63	2.56	0.971	4.66	0.640	0.167	0.617	0.603	0.218	0.215
June	4.87	4.74	4.74	1.78	5.78	2.01	0.409	1.83	1.79	0.309	1.93
July	0.967	0.937	1.06	0.530	0.472	0.488	0.0619	0.422	0.411	0.0659	0.915
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sept	5.68	5.62	5.08	3.03	2.73	0.998	0.162	0.903	0.881	0.208	1.07
Oct	4.45	4.38	4.11	1.63	5.65	1.20	0.881	0.867	0.841	0.281	2.94
Nov	2.28	2.23	2.17	1.02	4.16	0.734	0.0719	1.09	1.07	0.145	0.640
Dec	3.85	3.76	3.41	2.36	5.39	1.52	0.418	1.57	1.54	0.249	0.838
Annual	57.4	55.4	52.0	42.7	64.8	33.5	5.14	17.8	17.1	6.47	26.7

Data completeness

2021	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	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
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 3.20 Monthly results

Site: Serpong

Country: Indonesia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	27.3	24.5	19.8	43.0	50.5	45.6	7.88	10.5	9.47	5.55	1.56	5.81	1.81	191
Feb	15.6	13.8	13.2	22.7	30.3	28.8	2.04	4.18	3.56	2.35	3.04	5.52	1.12	366
Mar	35.6	33.6	47.0	33.9	72.1	33.8	9.49	22.5	21.7	4.56	1.20	5.92	2.47	94.1
Apr	23.1	22.0	26.6	18.8	49.1	18.1	2.00	10.9	10.5	2.43	4.80	5.32	1.69	325
May	30.0	29.1	34.0	16.8	72.3	15.4	2.27	6.31	5.98	2.49	4.71	5.33	1.81	350
June	28.6	27.7	35.1	19.1	86.2	14.8	4.92	11.3	10.9	3.66	0.899	6.05	1.82	258
July	77.0	74.8	80.8	69.1	168	36.7	18.1	35.7	34.9	6.54	1.50	5.83	4.63	36.1
Aug	96.7	93.1	129	85.6	191	59.2	23.0	45.4	44.2	11.3	0.652	6.19	6.27	51.5
Sept	41.3	39.9	44.9	31.3	110	23.6	10.2	23.9	23.4	5.86	0.431	6.37	2.86	121
Oct	45.0	44.1	56.2	25.9	94.6	14.4	7.77	17.1	16.8	4.26	7.45	5.13	2.84	209
Nov	25.5	25.0	19.8	15.7	58.3	9.62	1.80	8.27	8.06	2.48	2.19	5.66	1.59	128
Dec	31.7	31.0	31.9	23.4	75.3	10.7	4.62	7.88	7.65	2.15	5.83	5.23	1.97	112
Annual	30.6	29.3	33.7	25.6	69.6	22.4	5.04	11.7	11.3	3.54	3.39	5.47	2.00	2241
Max.	199	194	292	197	306	183	116	108	104	24.0	13.8	7.33	11.9	
Min.	7.20	5.88	4.37	6.13	13.8	<0.3	<0.3	1.46	1.44	<0.3	0.0468	4.86	0.590	

Wet deposition amount

2021	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	5.21	4.69	3.78	8.23	9.66	8.72	1.51	2.00	1.81	1.06	0.299
Feb	5.71	5.07	4.84	8.33	11.1	10.6	0.748	1.53	1.30	0.860	1.12
Mar	3.35	3.16	4.42	3.19	6.78	3.18	0.893	2.11	2.04	0.429	0.113
Apr	7.49	7.14	8.63	6.11	15.9	5.88	0.648	3.52	3.39	0.790	1.56
May	10.5	10.2	11.9	5.88	25.3	5.38	0.793	2.21	2.09	0.873	1.65
June	7.36	7.13	9.04	4.92	22.2	3.81	1.27	2.90	2.82	0.941	0.231
July	2.78	2.70	2.92	2.49	6.06	1.33	0.652	1.29	1.26	0.236	0.0540
Aug	4.98	4.80	6.64	4.41	9.85	3.05	1.18	2.34	2.27	0.584	0.0336
Sept	5.01	4.84	5.45	3.80	13.4	2.86	1.24	2.91	2.84	0.712	0.0523
Oct	9.38	9.20	11.7	5.40	19.7	3.01	1.62	3.57	3.50	0.888	1.55
Nov	3.26	3.18	2.52	2.00	7.44	1.23	0.229	1.05	1.03	0.316	0.279
Dec	3.53	3.46	3.56	2.61	8.40	1.19	0.515	0.879	0.854	0.240	0.651
Annual	68.6	65.6	75.4	57.4	156	50.2	11.3	26.3	25.2	7.93	7.59

Data completeness

2021	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	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 3.21 Monthly results

Site: Kototabang

Country: Indonesia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	2.88	2.80	4.69	4.83	12.9	1.48	5.36	2.90	2.87	0.972	1.25	5.90	0.341	115
Feb	6.37	5.89	9.09	18.9	18.1	7.98	14.3	2.71	2.54	2.17	5.59	5.25	0.746	90.4
Mar	6.09	5.98	8.16	2.65	12.8	1.73	1.81	2.35	2.31	1.14	3.28	5.48	0.429	349
Apr	4.75	4.47	7.67	6.37	12.2	4.61	6.65	4.03	3.93	1.14	4.93	5.31	0.482	134
May	7.26	6.93	8.53	9.73	11.7	5.50	8.05	25.3	25.2	1.24	2.95	5.53	0.822	233
June	4.95	4.75	1.98	5.85	<0.8	3.27	4.18	19.5	19.4	1.18	3.12	5.51	0.562	196
July	9.03	8.31	7.05	14.4	22.6	11.8	5.27	34.7	34.5	2.53	2.80	5.55	1.21	174
Aug	4.87	4.69	5.98	6.08	10.5	2.94	4.29	4.66	4.60	0.541	0.590	6.23	0.382	248
Sept	5.49	5.37	5.67	2.69	11.0	1.99	1.16	5.38	5.33	0.343	2.64	5.58	0.400	305
Oct	6.19	5.78	5.14	6.78	7.35	6.91	9.31	14.7	14.5	0.943	2.27	5.64	0.664	194
Nov	2.55	2.47	2.28	1.75	3.36	1.21	2.11	4.91	4.88	<0.3	1.50	5.82	0.204	111
Dec	4.75	4.69	2.44	3.23	4.48	1.03	1.27	2.77	2.75	<0.3	1.83	5.74	0.243	426
Annual	5.55	5.33	5.57	5.89	9.94	3.63	4.29	9.73	9.65	0.922	2.55	5.59	0.507	2575
Max.	19.7	19.0	19.9	21.8	92.3	18.7	26.8	55.3	55.0	3.78	11.7	6.40	1.77	
Min.	1.49	1.38	<0.5	<0.5	<0.8	<0.3	<0.3	0.597	0.566	<0.3	0.403	4.93	0.189	

Wet deposition amount

2021	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	0.331	0.321	0.538	0.554	1.48	0.169	0.615	0.333	0.329	0.111	0.143
Feb	0.576	0.532	0.822	1.71	1.64	0.721	1.29	0.245	0.229	0.197	0.505
Mar	2.12	2.09	2.85	0.923	4.48	0.603	0.630	0.819	0.806	0.396	1.14
Apr	0.639	0.601	1.03	0.856	1.63	0.620	0.894	0.541	0.528	0.153	0.663
May	1.69	1.61	1.98	2.27	2.71	1.28	1.87	5.88	5.86	0.288	0.686
June	0.967	0.928	0.387	1.14	0.0467	0.639	0.818	3.81	3.79	0.232	0.609
July	1.57	1.45	1.23	2.51	3.94	2.06	0.919	6.05	6.01	0.441	0.489
Aug	1.20	1.16	1.48	1.50	2.60	0.727	1.06	1.15	1.14	0.134	0.146
Sept	1.67	1.64	1.73	0.822	3.35	0.607	0.355	1.64	1.63	0.105	0.805
Oct	1.20	1.12	0.998	1.32	1.43	1.34	1.81	2.85	2.82	0.183	0.440
Nov	0.281	0.273	0.252	0.194	0.371	0.134	0.233	0.542	0.539	0.0162	0.166
Dec	2.03	2.00	1.04	1.38	1.91	0.441	0.541	1.18	1.17	0.117	0.781
Annual	14.3	13.7	14.3	15.2	25.6	9.35	11.0	25.0	24.8	2.37	6.58

Data completeness

2021	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	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 3.22 Monthly results

Site: Bandung

Country: Indonesia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	18.7	18.3	11.8	7.10	45.3	5.79	2.09	12.4	12.2	2.30	0.389	6.41	1.22	48.7
Feb	18.7	18.2	11.8	10.0	23.1	9.19	2.14	13.6	13.4	2.86	1.35	5.87	1.07	114
Mar	28.3	27.9	19.1	5.50	36.6	5.79	2.22	19.2	19.0	3.67	3.20	5.49	1.49	193
Apr	47.3	46.8	26.0	8.27	80.5	7.08	2.57	21.2	21.0	3.76	7.29	5.14	2.29	138
May	27.5	26.9	19.6	10.9	62.0	10.7	3.84	13.7	13.5	2.60	0.456	6.34	1.60	325
June	47.4	47.0	28.2	9.76	90.7	7.29	2.88	19.2	19.0	2.28	2.12	5.67	2.21	131
July	29.1	28.3	17.2	11.0	45.1	12.6	3.62	18.1	17.8	4.12	0.479	6.32	1.58	18.0
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	30.6	29.9	25.6	11.2	81.2	11.3	3.86	24.0	23.7	4.04	0.178	6.75	2.00	85.3
Oct	31.3	30.8	23.5	7.91	49.6	7.88	2.64	19.1	18.9	3.02	4.00	5.40	1.50	225
Nov	24.1	23.9	14.4	3.80	35.5	2.81	1.48	14.8	14.8	2.01	4.55	5.34	1.24	315
Dec	34.6	34.3	18.4	5.42	51.0	4.39	1.65	17.8	17.7	2.45	6.24	5.20	1.61	183
Annual	30.6	30.1	19.7	7.67	53.2	7.05	2.54	17.1	16.9	2.81	3.22	5.49	1.59	1775
Max.	135	134	96.6	47.6	239	46.1	12.0	74.2	73.2	13.8	24.5	6.99	5.77	
Min.	8.37	8.15	5.16	<0.5	9.78	1.56	0.688	6.21	5.98	0.905	0.102	4.61	0.370	

Wet deposition amount

2021	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	0.910	0.893	0.573	0.346	2.21	0.282	0.102	0.602	0.596	0.112	0.0190
Feb	2.14	2.08	1.35	1.14	2.63	1.05	0.244	1.55	1.53	0.326	0.154
Mar	5.45	5.38	3.67	1.06	7.06	1.12	0.427	3.69	3.67	0.708	0.616
Apr	6.54	6.48	3.60	1.14	11.1	0.980	0.355	2.93	2.91	0.520	1.01
May	8.94	8.73	6.35	3.54	20.1	3.49	1.25	4.45	4.37	0.844	0.148
June	6.21	6.15	3.70	1.28	11.9	0.954	0.377	2.51	2.49	0.299	0.278
July	0.523	0.509	0.310	0.198	0.812	0.228	0.0651	0.325	0.320	0.0742	<0.01
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sept	2.61	2.55	2.19	0.956	6.93	0.959	0.329	2.04	2.02	0.344	0.0152
Oct	7.04	6.94	5.29	1.78	11.2	1.77	0.595	4.29	4.25	0.678	0.900
Nov	7.57	7.52	4.53	1.19	11.2	0.886	0.467	4.66	4.64	0.633	1.43
Dec	6.33	6.28	3.36	0.992	9.33	0.803	0.302	3.26	3.25	0.448	1.14
Annual	54.3	53.5	34.9	13.6	94.4	12.5	4.51	30.3	30.1	4.99	5.72

Data completeness

2021	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	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
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 3.23 Monthly results

Site: Maros

Country: Indonesia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	5.48	4.68	8.63	4.81	10.1	13.3	3.30	10.8	10.6	1.72	1.38	5.86	0.659	19.2
Feb	3.41	1.20	4.63	4.37	<0.8	36.6	4.86	6.94	6.15	3.82	1.48	5.83	0.915	97.8
Mar	5.09	4.36	6.50	9.68	<0.8	12.1	2.79	5.09	4.83	1.25	1.74	5.76	0.427	93.3
Apr	6.72	5.97	10.2	7.72	<0.8	12.4	1.51	9.06	8.79	1.28	0.724	6.14	0.417	159
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	5.74	5.32	7.70	7.95	8.60	6.89	2.23	54.0	53.8	2.29	0.326	6.49	1.12	69.8
July	12.5	10.2	20.7	46.4	10.1	38.8	7.32	130	129	8.21	0.114	6.95	3.22	1.9
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Oct	7.95	7.29	6.33	12.5	6.00	10.8	2.42	21.7	21.5	1.53	0.121	6.92	0.624	104
Nov	6.33	6.15	7.10	25.5	5.89	2.97	1.25	25.1	25.1	0.739	0.520	6.28	0.505	406
Dec	4.21	3.24	1.89	12.3	2.75	16.0	1.67	26.2	25.8	1.96	0.329	6.48	0.756	653
Annual	5.33	4.57	5.11	14.3	3.52	12.6	1.91	22.7	22.4	1.65	0.568	6.25	0.659	1604
Max.	12.5	10.2	20.7	46.4	18.8	38.8	7.32	130	129	8.21	2.16	7.05	3.22	
Min.	3.41	1.20	<0.5	3.41	<0.8	2.17	1.09	4.54	4.01	0.670	0.0891	5.67	0.300	

Wet deposition amount

2021	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	0.105	0.0898	0.166	0.0923	0.194	0.255	0.0633	0.208	0.203	0.0330	0.0265
Feb	0.333	0.117	0.453	0.427	<0.01	3.58	0.475	0.678	0.601	0.374	0.145
Mar	0.475	0.407	0.607	0.903	<0.01	1.13	0.260	0.475	0.451	0.117	0.163
Apr	1.07	0.948	1.61	1.22	<0.01	1.97	0.240	1.44	1.39	0.203	0.115
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	0.400	0.371	0.538	0.555	0.600	0.481	0.156	3.77	3.76	0.160	0.0228
July	0.0238	0.0193	0.0394	0.0882	0.0191	0.0738	0.0139	0.247	0.246	0.0156	<0.01
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sept	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct	0.825	0.757	0.657	1.29	0.623	1.13	0.251	2.25	2.23	0.159	0.0126
Nov	2.57	2.50	2.88	10.4	2.39	1.21	0.508	10.2	10.2	0.300	0.211
Dec	2.75	2.12	1.23	8.04	1.80	10.4	1.09	17.1	16.9	1.28	0.215
Annual	8.55	7.33	8.19	23.0	5.64	20.3	3.06	36.4	35.9	2.64	0.910

Data completeness

2021	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	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	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	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 3.24 Monthly results

Site: Jembrana

Country: Indonesia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	6.61	5.71	32.9	19.5	7.29	15.0	5.33	8.04	7.72	2.95	15.1	4.82	1.61	378
Feb	12.2	11.5	46.6	17.7	34.9	10.9	8.42	4.34	4.10	3.11	14.7	4.83	1.96	398
Mar	12.2	11.4	24.1	23.9	13.3	12.7	4.22	3.53	3.26	4.38	24.8	4.61	1.84	177
Apr	13.5	11.8	76.5	80.5	59.5	28.6	44.7	7.90	7.28	6.73	15.1	4.82	2.97	97.7
May	8.99	3.87	21.9	130	<0.8	85.1	35.4	18.8	16.9	13.1	16.0	4.80	2.94	16.4
June	7.58	5.24	14.7	52.7	28.3	38.8	8.31	8.11	7.27	9.07	7.67	5.11	1.58	99.9
July	18.4	7.43	46.9	1674	40.4	182	1049	24.2	20.3	22.9	6.80	5.17	17.0	35.9
Aug	8.34	4.17	14.0	75.6	3.76	69.2	3.79	4.01	2.52	8.85	5.71	5.24	1.58	226
Sept	7.72	4.13	11.0	66.7	1.31	59.5	4.66	5.77	4.48	7.10	6.13	5.21	1.29	364
Oct	15.4	9.49	24.4	115	1.39	97.9	6.99	7.78	5.67	11.8	22.2	4.65	2.77	118
Nov	4.44	3.93	8.35	10.9	<0.8	8.38	1.23	2.66	2.48	1.06	8.85	5.05	0.964	414
Dec	5.14	4.27	10.1	17.8	2.70	14.4	1.41	3.21	2.90	1.61	12.0	4.92	0.942	248
Annual	8.55	6.61	24.2	61.3	12.2	32.2	20.9	5.43	4.74	4.87	12.2	4.91	1.79	2573
Max.	52.7	31.0	211	1874	135	458	1200	64.0	56.5	69.4	45.7	5.81	18.6	
Min.	2.78	2.16	<0.5	6.70	<0.8	2.95	<0.3	1.24	1.12	0.543	1.57	4.34	0.367	

Wet deposition amount

2021	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	2.50	2.16	12.4	7.38	2.76	5.66	2.01	3.04	2.91	1.11	5.69
Feb	4.84	4.58	18.6	7.04	13.9	4.35	3.35	1.73	1.63	1.24	5.86
Mar	2.16	2.02	4.26	4.22	2.34	2.25	0.747	0.624	0.576	0.774	4.37
Apr	1.32	1.15	7.47	7.86	5.81	2.79	4.37	0.771	0.711	0.657	1.48
May	0.148	0.0634	0.360	2.14	<0.01	1.39	0.580	0.308	0.277	0.215	0.263
June	0.757	0.524	1.47	5.26	2.83	3.87	0.830	0.810	0.727	0.906	0.767
July	0.661	0.267	1.68	60.1	1.45	6.54	37.7	0.870	0.729	0.823	0.244
Aug	1.88	0.942	3.16	17.1	0.849	15.6	0.857	0.907	0.569	2.00	1.29
Sept	2.81	1.50	4.00	24.3	0.478	21.7	1.70	2.10	1.63	2.58	2.23
Oct	1.81	1.11	2.87	13.5	0.164	11.5	0.822	0.914	0.666	1.39	2.61
Nov	1.84	1.63	3.46	4.52	0.126	3.47	0.511	1.10	1.03	0.439	3.66
Dec	1.28	1.06	2.52	4.42	0.671	3.58	0.349	0.797	0.719	0.399	2.98
Annual	22.0	17.0	62.2	158	31.4	82.7	53.8	14.0	12.2	12.5	31.4

Data completeness

2021	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	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 3.25 Monthly results

Site: Lombok

Country: Indonesia

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	6.27	5.57	2.00	14.3	1.51	11.6	6.11	4.90	4.65	3.60	3.40	5.47	0.672	294
Feb	6.59	5.43	2.79	18.1	2.22	19.3	4.33	5.68	5.26	3.38	5.42	5.27	0.689	354
Mar	6.63	5.35	<0.5	20.6	1.25	21.2	4.65	5.82	5.36	8.27	5.22	5.28	0.717	106
Apr	7.57	6.47	6.05	18.3	7.82	18.2	4.36	7.44	7.05	4.53	1.74	5.76	0.601	251
May	13.1	9.41	23.4	47.1	21.5	62.1	12.5	21.1	19.7	16.0	6.61	5.18	1.71	10.0
June	10.4	9.34	8.56	18.3	<0.8	18.0	2.69	3.24	2.85	2.26	9.16	5.04	0.934	321
July	11.6	5.57	8.51	115	4.43	100	7.90	12.0	9.81	12.5	7.16	5.15	2.76	5.8
Aug	11.0	7.01	8.18	70.1	1.96	66.1	6.10	8.38	6.95	9.28	6.13	5.21	1.61	32.8
Sept	90.7	81.7	1.82	172	2.62	149	24.1	32.5	29.2	29.7	47.7	4.32	3.76	10.8
Oct	14.2	13.0	3.91	22.7	67.3	20.9	20.7	6.58	6.13	4.01	3.12	5.51	1.72	134
Nov	13.6	12.1	7.34	21.2	70.0	23.4	15.2	9.68	9.17	5.51	3.27	5.48	1.84	235
Dec	9.37	8.56	5.99	16.5	16.3	13.6	4.97	8.65	8.36	2.81	5.72	5.24	0.773	315
Annual	9.52	8.35	5.10	20.2	16.6	19.5	6.93	6.65	6.23	4.14	5.15	5.29	0.968	2069
Max.	552	532	23.4	239	242	340	74.5	117	109	84.9	124	6.37	5.28	
Min.	4.34	3.04	<0.5	7.92	<0.8	1.22	0.947	1.76	1.60	0.558	0.427	3.91	0.286	

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	1.84	1.64	0.588	4.19	0.444	3.40	1.80	1.44	1.37	1.06	1.00
Feb	2.33	1.92	0.989	6.39	0.785	6.82	1.53	2.01	1.86	1.20	1.92
Mar	0.700	0.565	0.0102	2.18	0.132	2.24	0.491	0.615	0.566	0.873	0.551
Apr	1.90	1.62	1.52	4.59	1.96	4.56	1.09	1.87	1.77	1.14	0.437
May	0.131	0.0941	0.234	0.471	0.215	0.621	0.125	0.211	0.197	0.160	0.0661
June	3.35	3.00	2.75	5.86	0.177	5.78	0.863	1.04	0.916	0.724	2.94
July	0.0673	0.0323	0.0494	0.669	0.0257	0.580	0.0458	0.0695	0.0569	0.0728	0.0415
Aug	0.361	0.230	0.268	2.30	0.0644	2.17	0.200	0.275	0.228	0.304	0.201
Sept	0.979	0.882	0.0196	1.86	0.0283	1.61	0.260	0.351	0.316	0.321	0.515
Oct	1.91	1.74	0.523	3.04	9.01	2.79	2.78	0.880	0.820	0.536	0.417
Nov	3.19	2.86	1.73	4.99	16.5	5.51	3.59	2.28	2.16	1.30	0.771
Dec	2.95	2.70	1.89	5.20	5.13	4.28	1.57	2.73	2.63	0.886	1.80
Annual	19.7	17.3	10.6	41.7	34.4	40.4	14.3	13.8	12.9	8.56	10.7

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.
2021	%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 3.26 Monthly results

Site: Rishiri

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	32.2	16.3	17.5	296	16.7	264	8.16	10.8	5.12	30.5	17.1	4.77	5.54	61.6
Feb	42.3	9.85	14.1	611	18.2	542	15.7	16.7	5.02	60.9	8.63	5.06	9.14	107
Mar	29.9	16.0	21.9	260	30.4	231	7.09	27.9	22.9	31.4	4.74	5.32	4.74	46.2
Apr	11.8	6.49	12.5	97.5	15.9	87.4	2.70	6.49	4.60	9.80	4.32	5.36	2.01	88.3
May	11.7	9.25	11.9	45.8	13.2	41.3	1.41	3.60	2.71	5.16	10.5	4.98	1.56	84.2
June	5.65	4.23	6.21	25.5	4.26	23.6	1.05	1.57	1.06	2.74	7.41	5.13	0.923	39.7
July	19.5	18.8	13.9	15.6	11.9	12.3	0.720	2.08	1.81	1.92	29.2	4.54	2.06	5.9
Aug	5.35	2.56	4.97	50.8	3.77	46.3	1.16	1.92	0.920	5.47	5.76	5.24	1.17	84.1
Sept	9.76	3.79	8.44	112	6.72	99.1	2.27	3.05	0.905	13.0	5.05	5.30	2.14	59.0
Oct	28.3	9.17	17.4	372	27.3	318	7.86	13.6	6.71	40.2	7.67	5.12	5.88	152
Nov	25.8	8.58	15.7	322	17.6	286	7.07	12.2	6.04	35.9	9.06	5.04	5.30	156
Dec	24.4	7.04	9.46	315	8.91	288	6.99	8.24	2.05	34.4	13.9	4.86	5.17	171
Annual	22.0	8.15	12.8	259	15.0	230	6.17	9.79	4.83	27.7	8.77	5.06	4.36	1055
Max.	248	82.1	313	4285	364	3823	88.1	124	112	472	75.9	5.99	57.7	
Min.	1.74	<0.3	<0.5	1.63	<0.8	1.46	<0.3	0.570	<0.2	<0.3	1.02	4.12	0.334	

Wet deposition amount

2021	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	1.98	1.00	1.08	18.2	1.03	16.3	0.503	0.668	0.316	1.88	1.05
Feb	4.53	1.05	1.51	65.4	1.95	57.9	1.67	1.79	0.537	6.51	0.923
Mar	1.38	0.737	1.01	12.0	1.40	10.6	0.327	1.29	1.06	1.45	0.219
Apr	1.04	0.574	1.10	8.61	1.40	7.72	0.238	0.573	0.407	0.866	0.381
May	0.989	0.779	1.00	3.86	1.11	3.48	0.119	0.304	0.228	0.435	0.883
June	0.224	0.168	0.246	1.01	0.169	0.936	0.0419	0.0624	0.0422	0.109	0.294
July	0.115	0.111	0.0823	0.0919	0.0704	0.0725	<0.01	0.0123	0.0107	0.0113	0.172
Aug	0.450	0.215	0.418	4.27	0.317	3.89	0.0979	0.161	0.0773	0.460	0.484
Sept	0.575	0.223	0.497	6.59	0.396	5.84	0.134	0.180	0.0534	0.769	0.298
Oct	4.30	1.39	2.63	56.5	4.15	48.2	1.19	2.06	1.02	6.10	1.16
Nov	4.04	1.34	2.46	50.5	2.75	44.7	1.11	1.91	0.946	5.62	1.42
Dec	4.18	1.21	1.62	54.0	1.53	49.3	1.20	1.41	0.350	5.89	2.38
Annual	23.2	8.60	13.5	273	15.8	243	6.52	10.3	5.09	29.2	9.26

Data completeness

2021	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	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	100
Feb	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2	100
Mar	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	100
June	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	100
July	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	100
Aug	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	100
Sept	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	100
Oct	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.3	55.3	55.3	90.3
Nov	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
Dec	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	100
Annual	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.8	82.8	82.8	99.2

Terms and abbreviations are given in Table 3.5.

Table 3.27 Monthly results

Site: Ochiishi

Country: Japan

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	*	*	*	*	*	*	*	*	*	*	*	*	*	18.5
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	25.5
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	126
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	81.0
May	*	*	*	*	*	*	*	*	*	*	*	*	*	83.0
June	*	*	*	*	*	*	*	*	*	*	*	*	*	34.5
July	*	*	*	*	*	*	*	*	*	*	*	*	*	39.0
Aug	*	*	*	*	*	*	*	*	*	*	*	*	*	121
Sept	*	*	*	*	*	*	*	*	*	*	*	*	*	102
Oct	*	*	*	*	*	*	*	*	*	*	*	*	*	82.0
Nov	36.0	18.9	42.1	323	43.0	282	24.7	15.1	9.00	32.1	12.7	4.90	4.51	75.5
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	20.0
Annual	36.0	18.9	42.1	323	43.0	282	24.7	15.1	9.00	32.1	12.7	4.90	4.51	807
Max.	111	55.0	77.5	1047	119	925	159	48.6	28.7	100	12.7	4.90	4.51	
Min.	25.3	13.8	37.0	219	32.1	191	5.57	10.3	6.19	22.4	12.7	4.90	4.51	

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	*	*	*	*	*	*	*	*	*	*	*
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	*	*	*	*	*	*	*	*	*	*	*
Aug	*	*	*	*	*	*	*	*	*	*	*
Sept	*	*	*	*	*	*	*	*	*	*	*
Oct	*	*	*	*	*	*	*	*	*	*	*
Nov	2.72	1.43	3.18	24.4	3.25	21.3	1.87	1.14	0.679	2.43	0.961
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	29.0	15.3	34.0	260	34.7	228	20.0	12.2	7.26	25.9	10.3

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	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	92.9
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	77.4
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	100
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	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	4.6	4.6	4.6	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	97.5

Terms and abbreviations are given in Table 3.5.

Table 3.28 Monthly results

Site: Sado-seki

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	117	33.6	18.9	1527	14.3	1389	43.3	53.1	23.1	188	18.6	4.73	27.9	91.0
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	97.5
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	70.5
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	113
May	*	*	*	*	*	*	*	*	*	*	*	*	*	127
June	*	*	*	*	*	*	*	*	*	*	*	*	*	58.0
July	*	*	*	*	*	*	*	*	*	*	*	*	*	152
Aug	*	*	*	*	*	*	*	*	*	*	*	*	*	100
Sept	*	*	*	*	*	*	*	*	*	*	*	*	*	114
Oct	*	*	*	*	*	*	*	*	*	*	*	*	*	118
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	251
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	240
Annual	117	33.6	18.9	1527	14.3	1389	43.3	53.1	23.1	188	18.6	4.73	27.9	1530
Max.	279	83.8	33.3	3482	20.6	3240	115	134	63.5	473	66.1	5.21	65.6	
Min.	28.0	<0.3	14.1	293	12.7	250	5.70	14.3	1.92	28.7	6.17	4.18	4.85	

Wet deposition amount

2021	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	10.6	3.06	1.72	139	1.30	126	3.94	4.83	2.10	17.1	1.69
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	*	*	*	*	*	*	*	*	*	*	*
Aug	*	*	*	*	*	*	*	*	*	*	*
Sept	*	*	*	*	*	*	*	*	*	*	*
Oct	*	*	*	*	*	*	*	*	*	*	*
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	179	51.4	28.9	2335	21.8	2124	66.2	81.2	35.3	288	28.4

Data completeness

2021	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	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	15.9	15.9	15.9	25.8
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	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	2.2

Terms and abbreviations are given in Table 3.5.

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

Table 3.29 Monthly results

Site: Happo

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	7.30	6.43	8.56	16.6	7.78	14.4	0.638	4.65	4.34	2.09	6.98	5.16	0.752	165
Feb	12.3	11.1	17.2	22.3	26.1	19.5	1.20	5.10	4.68	2.66	7.39	5.13	1.19	189
Mar	3.50	3.36	6.80	2.69	7.59	2.27	0.457	2.45	2.40	0.804	2.97	5.53	0.384	117
Apr	4.84	4.53	5.05	6.18	6.28	5.13	0.478	3.68	3.57	1.12	4.40	5.36	0.523	167
May	4.68	4.52	8.41	2.89	9.20	2.78	0.599	7.82	7.76	1.39	2.58	5.59	0.481	314
June	6.05	5.99	8.14	2.52	11.4	1.12	<0.3	0.985	0.961	0.374	7.60	5.12	0.591	209
July	3.45	3.40	5.29	1.20	5.83	0.829	<0.3	0.677	0.659	0.331	6.11	5.21	0.432	345
Aug	1.80	1.76	3.07	0.941	1.89	0.681	<0.3	0.362	0.348	<0.3	3.86	5.41	0.280	529
Sept	2.61	2.54	4.29	1.24	2.22	1.17	0.326	0.511	0.486	0.342	5.40	5.27	0.404	199
Oct	4.98	4.63	6.18	6.96	3.85	5.73	0.314	1.49	1.37	0.727	8.56	5.07	0.637	105
Nov	4.88	3.92	7.97	20.0	6.02	15.9	0.546	1.75	1.41	1.97	6.40	5.19	0.735	136
Dec	5.58	4.95	8.98	13.4	6.62	10.5	0.483	1.71	1.48	1.38	8.75	5.06	0.735	202
Annual	4.65	4.34	6.90	6.37	7.25	5.25	0.426	2.45	2.34	0.962	5.53	5.26	0.541	2674
Max.	63.1	56.7	103	135	179	139	8.20	90.6	90.1	20.0	44.7	6.96	5.27	
Min.	<0.3	<0.3	<0.5	<0.5	<0.8	0.400	<0.3	0.200	<0.2	<0.3	0.110	4.35	0.145	

Wet deposition amount

2021	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	1.20	1.06	1.41	2.73	1.28	2.37	0.105	0.766	0.715	0.345	1.15
Feb	2.31	2.09	3.24	4.21	4.92	3.68	0.226	0.961	0.881	0.502	1.39
Mar	0.410	0.394	0.797	0.316	0.890	0.266	0.0536	0.287	0.281	0.0942	0.348
Apr	0.808	0.756	0.843	1.03	1.05	0.856	0.0799	0.614	0.595	0.186	0.735
May	1.47	1.42	2.64	0.906	2.88	0.870	0.188	2.45	2.43	0.436	0.810
June	1.27	1.25	1.70	0.527	2.38	0.234	0.0522	0.206	0.201	0.0782	1.59
July	1.19	1.17	1.82	0.413	2.01	0.286	0.0890	0.233	0.227	0.114	2.11
Aug	0.953	0.932	1.62	0.498	0.998	0.360	0.0770	0.192	0.184	0.126	2.04
Sept	0.518	0.504	0.853	0.247	0.441	0.232	0.0648	0.102	0.0967	0.0680	1.07
Oct	0.520	0.484	0.646	0.727	0.402	0.599	0.0329	0.156	0.143	0.0760	0.894
Nov	0.661	0.531	1.08	2.71	0.816	2.15	0.0739	0.237	0.190	0.267	0.867
Dec	1.13	0.998	1.81	2.69	1.33	2.11	0.0974	0.344	0.299	0.278	1.76
Annual	12.4	11.6	18.5	17.0	19.4	14.1	1.14	6.55	6.25	2.57	14.8

Data completeness

2021	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	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	97.2	97.2	97.2	100
Feb	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
Mar	87.6	87.6	87.6	87.6	87.6	87.6	87.6	87.6	87.6	87.6	87.2	87.2	87.2	100
Apr	100	100	100	100	100	100	100	100	100	100	99.7	99.7	99.7	100
May	100	100	100	100	100	100	100	100	100	100	99.7	99.7	99.7	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	99.5	99.5	99.5	100
Aug	100	100	100	100	100	100	100	100	100	100	99.5	99.5	99.5	100
Sept	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.2	99.2	99.2	100
Oct	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	97.1	97.1	97.1	100
Nov	100	100	100	100	100	100	100	100	100	100	99.6	99.6	99.6	100
Dec	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	98.8	98.8	98.8	100
Annual	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	98.7	98.7	98.7	100

Terms and abbreviations are given in Table 3.5.

Table 3.30 Monthly results

Site: Ijira

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	10.4	7.65	16.5	53.7	12.8	45.9	1.19	5.02	4.03	5.85	10.1	4.99	1.62	151
Feb	15.7	10.9	24.4	94.3	22.7	80.3	2.27	6.60	4.86	9.82	12.1	4.92	2.47	124
Mar	7.42	6.53	8.79	16.4	11.4	14.8	0.656	2.06	1.74	2.12	6.65	5.18	0.836	450
Apr	7.35	6.11	9.18	23.2	9.98	20.5	0.684	3.47	3.03	2.90	5.69	5.24	0.890	440
May	4.71	4.49	7.86	4.16	7.14	3.71	<0.3	1.81	1.73	0.751	6.97	5.16	0.553	509
June	4.59	4.41	11.7	3.51	12.1	2.97	<0.3	1.26	1.20	0.518	8.87	5.05	0.621	499
July	8.86	8.52	21.1	7.43	19.2	5.78	0.686	1.73	1.61	0.923	20.1	4.70	1.22	293
Aug	3.81	3.02	4.63	15.7	5.56	13.1	0.350	1.19	0.911	1.73	5.11	5.29	0.580	886
Sept	5.08	4.66	11.6	8.76	7.69	7.10	0.308	0.961	0.808	0.960	13.9	4.86	0.810	453
Oct	9.22	8.04	26.1	22.5	20.3	19.5	1.15	4.31	3.89	2.76	12.3	4.91	1.38	35.7
Nov	4.55	3.15	7.08	28.5	3.29	23.2	1.34	2.43	1.92	3.00	6.34	5.20	0.838	123
Dec	6.71	3.76	9.36	59.6	6.31	48.9	1.38	2.08	1.03	5.83	9.35	5.03	1.40	247
Annual	6.08	5.10	10.2	19.1	9.66	16.2	0.588	2.03	1.68	2.17	8.72	5.06	0.866	4209
Max.	56.9	52.0	119	149	103	126	12.9	60.8	59.0	16.8	39.0	5.63	5.06	
Min.	1.20	0.826	2.40	1.30	1.50	0.800	<0.3	0.400	0.350	<0.3	2.33	4.41	0.289	

Wet deposition amount

2021	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	1.57	1.15	2.48	8.08	1.92	6.92	0.178	0.755	0.606	0.880	1.52
Feb	1.95	1.35	3.02	11.7	2.81	9.96	0.281	0.818	0.603	1.22	1.50
Mar	3.34	2.94	3.95	7.38	5.15	6.67	0.295	0.928	0.784	0.956	2.99
Apr	3.23	2.69	4.04	10.2	4.39	9.04	0.301	1.53	1.33	1.28	2.51
May	2.39	2.28	4.00	2.12	3.63	1.89	0.145	0.919	0.878	0.382	3.54
June	2.29	2.20	5.81	1.75	6.05	1.48	0.0760	0.630	0.598	0.259	4.42
July	2.59	2.49	6.16	2.17	5.62	1.69	0.201	0.507	0.470	0.270	5.88
Aug	3.37	2.67	4.10	13.9	4.93	11.6	0.310	1.06	0.807	1.53	4.52
Sept	2.30	2.11	5.24	3.97	3.48	3.21	0.140	0.435	0.366	0.435	6.28
Oct	0.329	0.287	0.933	0.805	0.726	0.698	0.0411	0.154	0.139	0.0985	0.438
Nov	0.560	0.388	0.871	3.50	0.404	2.85	0.165	0.298	0.237	0.370	0.779
Dec	1.66	0.930	2.31	14.7	1.56	12.1	0.341	0.515	0.253	1.44	2.31
Annual	25.6	21.5	42.9	80.3	40.7	68.1	2.47	8.54	7.07	9.11	36.7

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	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
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	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
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	99.9	99.9	99.9	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 3.31 Monthly results

Site: Oki

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	124	16.1	30.0	2083	16.3	1794	39.0	54.4	15.6	203	6.02	5.22	23.7	103
Feb	68.2	16.3	23.8	998	21.6	860	19.4	28.2	9.61	98.0	10.1	5.00	12.7	46.1
Mar	22.4	6.62	11.7	303	10.0	262	5.84	9.98	4.31	27.9	7.89	5.10	4.73	104
Apr	16.7	8.79	16.8	151	22.6	131	3.95	11.0	8.20	15.5	3.68	5.43	2.81	58.3
May	11.6	5.81	12.8	116	12.0	95.3	2.88	5.69	3.63	12.4	6.27	5.20	2.17	140
June	5.70	4.26	8.27	28.1	10.9	23.8	1.09	1.84	1.33	2.94	5.37	5.27	0.924	84.9
July	5.83	3.41	9.54	46.6	6.85	40.2	1.18	1.66	0.789	4.79	8.33	5.08	1.24	156
Aug	37.9	1.98	1.92	654	<0.8	597	17.2	14.1	1.21	58.7	4.07	5.39	9.52	555
Sept	9.72	7.02	13.7	50.3	9.24	44.8	1.63	2.25	1.28	5.74	12.6	4.90	1.56	127
Oct	19.9	6.26	14.0	257	7.86	227	5.13	7.07	2.17	25.2	13.0	4.89	4.45	70.3
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	102
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	191
Annual	29.4	6.54	12.5	434	9.83	380	9.38	12.2	3.99	41.7	7.38	5.13	5.93	1736
Max.	1563	84.4	214	29663	196	25293	536	591	66.7	2854	35.7	6.40	258	
Min.	2.13	0.907	0.809	4.84	<0.8	4.10	<0.3	0.600	0.376	0.800	0.398	4.45	0.418	

Wet deposition amount

2021	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	12.8	1.65	3.08	214	1.67	184	4.00	5.58	1.60	20.8	0.617
Feb	3.14	0.753	1.10	46.0	0.996	39.7	0.895	1.30	0.443	4.52	0.465
Mar	2.33	0.689	1.22	31.5	1.04	27.3	0.608	1.04	0.448	2.90	0.821
Apr	0.973	0.513	0.980	8.81	1.32	7.64	0.231	0.644	0.479	0.907	0.215
May	1.62	0.813	1.79	16.2	1.68	13.3	0.403	0.795	0.507	1.74	0.876
June	0.484	0.362	0.703	2.38	0.926	2.03	0.0928	0.157	0.113	0.249	0.456
July	0.907	0.531	1.48	7.25	1.07	6.25	0.183	0.258	0.123	0.745	1.29
Aug	21.1	1.10	1.07	363	0.0249	331	9.57	7.83	0.670	32.6	2.26
Sept	1.24	0.893	1.74	6.39	1.18	5.70	0.207	0.286	0.163	0.731	1.61
Oct	1.40	0.440	0.986	18.0	0.552	15.9	0.360	0.497	0.153	1.77	0.910
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	51.1	11.3	21.7	754	17.1	659	16.3	21.2	6.92	72.3	12.8

Data completeness

2021	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	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	86.1	86.1	86.1	96.8
Feb	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	86.3	86.3	86.3	96.4
Mar	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	93.1	93.1	93.1	93.5
Apr	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
May	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	94.9	94.9	94.9	96.8
June	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	98.0	98.0	98.0	100
July	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	93.5
Aug	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3	32.3
Sept	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	89.5	89.5	89.5	96.7
Oct	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	83.5	83.5	83.5	77.4
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	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	56.3	56.3	56.3	73.4

Terms and abbreviations are given in Table 3.5.

Table 3.32 Monthly results

Site: Yusuhara

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	13.6	8.82	19.6	92.3	10.3	78.9	2.38	6.06	4.36	9.50	17.4	4.76	2.35	94.5
Feb	17.0	11.2	14.9	114	14.2	96.2	2.93	5.15	3.07	11.1	16.3	4.79	2.61	126
Mar	7.09	6.11	7.80	18.8	7.52	16.3	1.22	1.84	1.49	2.42	9.95	5.00	0.945	170
Apr	13.2	9.37	13.2	72.4	11.0	60.3	2.27	5.99	4.69	7.71	9.23	5.03	1.76	197
May	4.45	4.10	5.33	6.83	5.41	5.78	0.968	2.23	2.11	1.57	6.46	5.19	0.538	485
June	3.37	2.96	6.30	7.67	6.49	6.79	0.937	1.13	0.980	1.28	5.59	5.25	0.505	193
July	1.48	1.29	3.08	3.78	1.48	3.01	0.629	0.735	0.670	0.727	4.87	5.31	0.370	391
Aug	1.76	1.55	1.59	4.35	1.28	3.51	0.654	0.705	0.629	0.709	3.77	5.42	0.311	629
Sept	3.58	3.08	4.58	10.0	2.30	8.33	0.819	0.858	0.678	1.52	9.09	5.04	0.587	244
Oct	3.26	2.95	2.79	5.99	2.17	5.14	1.00	1.05	0.937	1.12	6.71	5.17	0.479	68.5
Nov	4.41	2.43	5.13	39.1	2.61	32.9	1.11	1.50	0.790	3.70	6.83	5.17	0.977	170
Dec	20.4	15.8	33.6	89.7	26.3	75.7	2.63	8.02	6.39	9.44	21.2	4.67	2.70	43.3
Annual	4.99	3.90	6.04	21.2	4.78	17.9	1.09	1.96	1.58	2.54	7.15	5.15	0.763	2811
Max.	157	86.2	213	1436	225	1232	29.1	107	84.1	135	97.7	6.52	24.1	
Min.	0.300	<0.3	0.700	<0.5	<0.8	0.600	0.600	0.500	0.240	0.500	0.302	4.01	0.170	

Wet deposition amount

2021	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	1.28	0.834	1.85	8.73	0.977	7.45	0.224	0.573	0.412	0.898	1.64
Feb	2.13	1.40	1.87	14.4	1.79	12.1	0.368	0.647	0.385	1.39	2.05
Mar	1.20	1.04	1.32	3.19	1.27	2.76	0.206	0.313	0.253	0.410	1.69
Apr	2.60	1.85	2.60	14.3	2.17	11.9	0.447	1.18	0.923	1.52	1.82
May	2.16	1.99	2.58	3.31	2.62	2.80	0.470	1.08	1.02	0.761	3.13
June	0.649	0.570	1.21	1.48	1.25	1.31	0.180	0.217	0.189	0.246	1.08
July	0.577	0.506	1.20	1.48	0.578	1.18	0.246	0.288	0.262	0.284	1.90
Aug	1.11	0.977	1.00	2.74	0.804	2.21	0.411	0.443	0.395	0.446	2.37
Sept	0.875	0.752	1.12	2.45	0.561	2.04	0.200	0.210	0.166	0.373	2.22
Oct	0.223	0.202	0.191	0.410	0.149	0.352	0.0687	0.0718	0.0642	0.0767	0.460
Nov	0.749	0.412	0.872	6.65	0.444	5.59	0.189	0.255	0.134	0.630	1.16
Dec	0.883	0.686	1.45	3.88	1.14	3.28	0.114	0.348	0.277	0.409	0.916
Annual	14.0	11.0	17.0	59.7	13.4	50.2	3.06	5.51	4.43	7.14	20.1

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	71.2	71.2	71.2	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	99.7	100	100	99.7	99.7	99.7	99.7	99.7	99.7	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	99.9	99.9	99.9	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	99.3	99.3	99.3	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	97.7	97.7	97.7	100
Annual	98.8	98.7	98.8	98.8	98.7	98.7	98.7	98.7	98.7	98.7	98.6	98.6	98.6	100

Terms and abbreviations are given in Table 3.5.

Table 3.33 Monthly results

Site: Hedo

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	82.6	14.7	20.2	1353	23.8	1125	24.4	28.5	4.16	129	20.8	4.68	19.7	253
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	185
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	146
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	176
May	*	*	*	*	*	*	*	*	*	*	*	*	*	254
June	*	*	*	*	*	*	*	*	*	*	*	*	*	764
July	*	*	*	*	*	*	*	*	*	*	*	*	*	260
Aug	*	*	*	*	*	*	*	*	*	*	*	*	*	197
Sept	*	*	*	*	*	*	*	*	*	*	*	*	*	149
Oct	*	*	*	*	*	*	*	*	*	*	*	*	*	184
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	118
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	57.5
Annual	82.6	14.7	20.2	1353	23.8	1125	24.4	28.5	4.16	129	20.8	4.68	19.7	2740
Max.	84.1	36.6	43.2	1439	44.2	1196	25.8	29.2	10.6	137	60.8	4.80	20.6	
Min.	70.2	12.0	17.4	667	21.3	557	13.2	22.7	3.35	65.0	15.8	4.22	12.8	

Wet deposition amount

2021	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	20.8	3.72	5.11	342	6.02	284	6.17	7.19	1.05	32.6	5.25
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	*	*	*	*	*	*	*	*	*	*	*
Aug	*	*	*	*	*	*	*	*	*	*	*
Sept	*	*	*	*	*	*	*	*	*	*	*
Oct	*	*	*	*	*	*	*	*	*	*	*
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	226	40.4	55.4	3707	65.3	3083	66.9	78.0	11.4	354	56.9

Data completeness

2021	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	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	54.8
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	36.7
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	16.2

Terms and abbreviations are given in Table 3.5.

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

Table 3.34 Monthly results

Site: Ogasawara

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	4.80	1.14	1.68	70.3	1.31	60.9	1.23	1.57	0.264	6.82	4.55	5.34	1.22	258
Feb	18.7	1.99	2.92	324	2.58	277	8.40	6.08	0.401	29.4	4.37	5.36	4.41	90.1
Mar	6.14	2.14	3.99	76.6	4.36	66.4	1.76	2.04	0.657	7.43	4.99	5.30	1.14	63.1
Apr	22.0	1.46	3.68	394	3.87	342	7.44	7.82	0.632	36.8	4.52	5.34	5.43	110
May	2.92	0.960	2.69	37.0	0.997	32.6	0.964	1.17	0.465	3.58	5.34	5.27	0.809	106
June	4.12	0.909	2.26	62.7	1.35	53.3	1.24	1.66	0.504	6.15	4.76	5.32	1.14	261
July	2.33	0.675	1.07	30.4	<0.8	27.4	0.680	0.796	0.204	3.03	4.12	5.38	0.662	195
Aug	7.60	1.79	1.89	112	1.90	96.4	2.20	1.91	<0.2	9.76	6.51	5.19	1.48	34.1
Sept	10.1	2.64	1.97	145	0.901	124	1.93	2.84	0.322	12.3	7.00	5.15	2.26	52.4
Oct	37.5	3.04	2.16	670	1.12	573	7.12	12.9	0.615	58.5	4.59	5.34	9.08	264
Nov	10.0	4.14	3.14	111	2.35	97.1	2.44	2.82	0.722	11.1	7.77	5.11	1.97	251
Dec	6.66	1.48	2.38	98.5	1.42	86.1	1.94	2.43	0.566	9.98	5.04	5.30	1.60	196
Annual	11.8	1.90	2.36	190	1.68	164	2.99	3.97	0.485	17.4	5.17	5.29	2.80	1880
Max.	176	43.3	63.4	2929	42.0	2536	234	69.2	19.4	258	49.0	5.92	17.9	
Min.	0.900	<0.3	<0.5	10.1	<0.8	8.70	0.300	0.500	<0.2	1.10	1.20	4.31	0.430	

Wet deposition amount

2021	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	1.24	0.294	0.435	18.2	0.338	15.7	0.319	0.405	0.0681	1.76	1.17
Feb	1.68	0.179	0.263	29.1	0.233	24.9	0.757	0.548	0.0361	2.65	0.394
Mar	0.387	0.135	0.252	4.83	0.275	4.19	0.111	0.129	0.0414	0.469	0.315
Apr	2.43	0.161	0.406	43.4	0.427	37.7	0.820	0.862	0.0697	4.05	0.499
May	0.309	0.101	0.284	3.91	0.105	3.44	0.102	0.123	0.0491	0.378	0.563
June	1.07	0.237	0.589	16.3	0.352	13.9	0.323	0.431	0.131	1.60	1.24
July	0.453	0.131	0.209	5.92	0.149	5.33	0.132	0.155	0.0397	0.591	0.803
Aug	0.259	0.0611	0.0645	3.83	0.0647	3.29	0.0752	0.0650	<0.01	0.333	0.222
Sept	0.531	0.138	0.103	7.62	0.0472	6.52	0.101	0.149	0.0169	0.644	0.367
Oct	9.93	0.803	0.572	177	0.296	151	1.88	3.40	0.163	15.5	1.21
Nov	2.51	1.04	0.789	27.9	0.590	24.3	0.613	0.707	0.181	2.78	1.95
Dec	1.30	0.289	0.465	19.3	0.278	16.8	0.380	0.475	0.111	1.95	0.986
Annual	22.1	3.57	4.43	358	3.15	308	5.62	7.46	0.911	32.7	9.72

Data completeness

2021	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	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	98.8	98.8	98.8	100
Feb	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	98.3	98.3	98.3	100
Mar	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	93.6	93.6	93.6	100
Apr	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	98.9	98.9	98.9	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	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.4	99.4	99.4	100
July	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
Aug	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	92.4	92.4	92.4	100
Sept	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.3	96.3	96.3	100
Oct	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	98.8	98.8	98.8	96.8
Nov	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	98.9	98.9	98.9	100
Dec	100	100	100	100	100	100	100	100	100	100	99.5	99.5	99.5	100
Annual	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	98.7	98.7	98.7	99.7

Terms and abbreviations are given in Table 3.5.

Table 3.35 Monthly results

Site: Tokyo

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	9.54	7.83	12.4	32.7	25.3	28.5	0.748	3.27	2.66	3.25	4.71	5.33	1.11	40.5
Feb	3.31	2.46	3.31	16.5	8.84	14.1	<0.3	1.09	0.788	1.53	3.07	5.51	0.528	79.5
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	155
Apr	6.73	4.60	9.89	41.4	20.5	35.4	1.00	3.01	2.25	3.92	4.39	5.36	1.12	139
May	12.4	11.1	26.4	25.6	35.6	21.8	0.683	9.38	8.91	3.33	7.36	5.13	1.43	84.7
June	14.1	12.6	21.3	30.0	33.7	25.4	0.699	5.24	4.69	3.20	7.68	5.11	1.38	169
July	6.75	6.53	18.3	4.63	19.7	3.67	<0.3	2.45	2.37	0.650	10.8	4.97	0.925	254
Aug	3.53	2.84	5.30	13.2	7.57	11.5	<0.3	1.04	0.790	1.28	5.84	5.23	0.580	355
Sept	7.96	6.17	12.3	35.0	16.5	29.6	0.667	1.83	1.19	2.98	8.88	5.05	1.20	216
Oct	5.53	5.00	9.70	10.7	17.5	8.76	<0.3	1.93	1.74	1.13	5.04	5.30	0.657	155
Nov	7.29	4.81	6.48	47.7	13.7	41.2	0.799	2.37	1.48	4.70	5.27	5.28	1.15	135
Dec	2.76	2.48	6.04	5.56	12.7	4.64	<0.3	1.70	1.60	0.619	2.96	5.53	0.440	57.0
Annual	6.96	5.79	11.7	22.8	17.6	19.4	0.502	2.62	2.20	2.26	6.71	5.17	0.941	1839
Max.	61.6	55.1	100	416	152	355	7.30	50.5	49.6	37.5	53.7	6.51	6.71	
Min.	0.800	0.704	0.900	<0.5	1.50	<0.3	<0.3	0.200	<0.2	<0.3	0.309	4.27	0.220	

Wet deposition amount

2021	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	0.386	0.317	0.503	1.32	1.02	1.15	0.0303	0.133	0.108	0.132	0.191
Feb	0.263	0.195	0.263	1.31	0.702	1.12	0.0232	0.0869	0.0626	0.121	0.244
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	0.933	0.637	1.37	5.74	2.84	4.91	0.139	0.418	0.312	0.543	0.609
May	1.05	0.940	2.24	2.17	3.02	1.85	0.0578	0.795	0.755	0.282	0.623
June	2.38	2.12	3.61	5.06	5.70	4.30	0.118	0.886	0.793	0.541	1.30
July	1.72	1.66	4.65	1.18	5.02	0.935	0.0575	0.623	0.602	0.165	2.75
Aug	1.25	1.01	1.88	4.67	2.68	4.07	0.105	0.368	0.280	0.454	2.07
Sept	1.72	1.34	2.66	7.58	3.57	6.40	0.144	0.396	0.258	0.644	1.92
Oct	0.855	0.774	1.50	1.66	2.70	1.35	0.0389	0.298	0.269	0.174	0.779
Nov	0.984	0.649	0.874	6.44	1.84	5.56	0.108	0.321	0.200	0.635	0.711
Dec	0.157	0.141	0.344	0.317	0.721	0.265	<0.01	0.0968	0.0910	0.0353	0.169
Annual	12.8	10.6	21.5	41.9	32.4	35.7	0.922	4.82	4.04	4.16	12.3

Data completeness

2021	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	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
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	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	99.6	99.6	99.6	100
May	93.9	93.9	93.9	93.9	93.9	93.9	93.9	93.9	93.9	93.9	92.7	92.7	92.7	100
June	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	98.8	98.8	98.8	96.7
July	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	87.8	87.8	87.8	100
Aug	100	100	100	100	100	100	100	100	100	100	99.4	99.4	99.4	100
Sept	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
Oct	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.1	78.1	78.1	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	99.1	99.1	99.1	100
Annual	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.4	87.4	87.4	99.7

Terms and abbreviations are given in Table 3.5.

Table 3.36 Monthly results

Site: Niigata-maki

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	28.9	10.7	15.2	341	14.0	302	6.98	13.0	6.49	34.2	12.1	4.92	5.60	243
Feb	46.9	11.9	21.6	672	21.8	580	13.3	17.6	5.11	65.3	10.7	4.97	9.69	90.9
Mar	14.2	9.10	20.9	99.3	23.3	84.6	2.70	7.08	5.25	10.4	7.69	5.11	2.16	62.4
Apr	4.77	3.45	7.90	25.6	5.17	21.8	0.814	3.22	2.74	2.91	6.20	5.21	0.805	108
May	6.70	5.96	14.0	13.4	5.10	12.2	0.600	2.90	2.64	2.20	13.2	4.88	1.02	104
June	7.91	7.56	15.3	7.81	23.0	5.83	0.515	1.87	1.74	1.17	8.69	5.06	0.879	74.5
July	3.41	3.06	8.25	6.61	9.38	5.86	0.396	0.656	0.530	0.934	5.59	5.25	0.538	225
Aug	8.45	3.41	7.76	97.1	6.10	83.5	2.41	2.72	0.917	9.57	9.74	5.01	1.88	195
Sept	2.77	2.36	5.46	8.43	3.76	6.86	0.450	0.688	0.540	1.12	8.32	5.08	0.550	136
Oct	13.0	6.76	10.6	119	8.34	103	2.46	4.02	1.80	12.0	12.0	4.92	2.39	119
Nov	32.9	6.05	16.6	519	11.2	446	10.3	11.9	2.27	50.4	10.7	4.97	7.83	209
Dec	25.7	8.70	22.6	326	17.2	281	6.47	9.60	3.52	32.4	14.7	4.83	5.46	210
Annual	17.9	6.46	13.5	218	11.9	189	4.55	6.81	2.72	21.6	10.1	5.00	3.67	1777
Max.	316	83.3	289	5691	309	4901	104	126	86.2	558	74.1	7.14	72.6	
Min.	0.900	0.870	1.30	1.00	<0.8	0.500	0.300	0.400	<0.2	0.500	0.0724	4.13	0.250	

Wet deposition amount

2021	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	7.03	2.60	3.69	82.9	3.41	73.5	1.70	3.17	1.58	8.32	2.95
Feb	4.26	1.08	1.96	61.0	1.98	52.7	1.21	1.60	0.464	5.94	0.968
Mar	0.887	0.569	1.31	6.20	1.45	5.28	0.168	0.442	0.328	0.652	0.481
Apr	0.516	0.373	0.855	2.77	0.559	2.36	0.0880	0.348	0.297	0.314	0.671
May	0.693	0.617	1.45	1.39	0.528	1.26	0.0621	0.300	0.273	0.228	1.36
June	0.589	0.563	1.14	0.582	1.72	0.434	0.0384	0.139	0.130	0.0872	0.647
July	0.768	0.689	1.86	1.49	2.11	1.32	0.0890	0.148	0.119	0.210	1.26
Aug	1.65	0.667	1.52	19.0	1.19	16.3	0.470	0.532	0.179	1.87	1.90
Sept	0.377	0.320	0.743	1.15	0.511	0.933	0.0612	0.0936	0.0734	0.153	1.13
Oct	1.54	0.804	1.26	14.2	0.993	12.2	0.293	0.479	0.214	1.42	1.43
Nov	6.88	1.26	3.47	108	2.33	93.2	2.15	2.49	0.474	10.5	2.24
Dec	5.39	1.83	4.76	68.4	3.60	59.1	1.36	2.02	0.740	6.81	3.09
Annual	31.7	11.5	23.9	387	21.2	336	8.08	12.1	4.83	38.4	17.9

Data completeness

2021	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	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.8
Feb	100	100	100	100	100	100	100	100	100	100	99.6	99.6	99.6	100
Mar	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	98.4	98.4	98.4	100
Apr	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	100
May	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	100
June	100	100	100	100	100	100	100	100	100	100	99.3	99.3	99.3	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	99.8	99.8	99.8	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	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	100
Dec	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.0	91.0	91.0	100
Annual	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.6	89.6	89.6	99.7

Terms and abbreviations are given in Table 3.5.

Table 3.37 Monthly results

Site: Tsushima

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	19.5	16.5	15.9	59.7	13.1	50.1	1.40	5.62	4.54	6.11	20.8	4.68	2.34	91.1
Feb	11.9	9.31	12.7	50.7	6.73	43.5	1.20	3.33	2.39	5.02	10.4	4.98	1.56	69.5
Mar	17.2	14.4	14.4	54.3	14.1	45.3	1.68	2.71	1.73	5.29	22.5	4.65	2.18	194
Apr	12.5	10.9	8.62	32.3	9.78	26.8	1.32	2.39	1.81	3.32	14.8	4.83	1.45	110
May	6.81	6.24	12.1	11.1	10.6	9.42	1.15	1.56	1.36	1.46	9.26	5.03	0.889	228
June	12.4	11.8	11.4	13.5	14.6	11.4	0.702	1.22	0.973	1.49	15.5	4.81	1.24	156
July	7.98	6.47	13.6	28.3	10.5	25.2	1.48	1.08	0.534	3.06	11.0	4.96	1.23	135
Aug	8.23	6.06	9.72	42.2	7.20	36.0	1.04	1.27	0.497	4.16	11.4	4.94	1.37	579
Sept	8.26	6.28	10.4	36.7	7.10	32.9	0.994	1.48	0.765	3.82	11.5	4.94	1.28	443
Oct	9.68	5.49	11.0	78.5	5.93	69.6	1.83	2.88	1.38	7.97	10.5	4.98	1.80	113
Nov	11.9	7.91	10.1	76.5	8.25	66.5	1.63	2.81	1.38	7.37	9.97	5.00	1.88	94.0
Dec	4.51	4.10	15.5	7.87	8.74	6.84	0.392	1.45	1.30	0.976	7.72	5.11	0.753	19.0
Annual	10.3	8.16	11.3	40.6	9.17	35.0	1.20	1.92	1.16	4.11	13.0	4.89	1.46	2231
Max.	52.4	46.0	132	451	138	395	17.6	41.3	39.0	44.4	81.5	5.94	8.09	
Min.	1.60	1.21	1.90	2.10	<0.8	1.50	<0.3	0.300	<0.2	<0.3	1.15	4.09	0.360	

Wet deposition amount

2021	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	1.78	1.50	1.45	5.43	1.19	4.56	0.127	0.512	0.414	0.556	1.89
Feb	0.829	0.647	0.885	3.52	0.468	3.02	0.0835	0.231	0.166	0.349	0.725
Mar	3.32	2.79	2.78	10.5	2.72	8.77	0.324	0.525	0.335	1.02	4.36
Apr	1.37	1.20	0.949	3.55	1.08	2.95	0.145	0.263	0.199	0.365	1.63
May	1.55	1.42	2.76	2.55	2.43	2.15	0.262	0.357	0.311	0.334	2.11
June	1.94	1.83	1.78	2.10	2.27	1.77	0.109	0.190	0.151	0.232	2.41
July	1.07	0.870	1.83	3.81	1.41	3.38	0.199	0.145	0.0718	0.411	1.47
Aug	4.76	3.51	5.63	24.4	4.17	20.8	0.602	0.738	0.288	2.41	6.58
Sept	3.66	2.78	4.60	16.3	3.15	14.6	0.441	0.654	0.339	1.69	5.10
Oct	1.09	0.620	1.24	8.87	0.670	7.86	0.206	0.326	0.156	0.900	1.19
Nov	1.12	0.744	0.946	7.19	0.776	6.25	0.153	0.265	0.129	0.692	0.937
Dec	0.0858	0.0779	0.295	0.150	0.166	0.130	<0.01	0.0276	0.0247	0.0186	0.147
Annual	22.9	18.2	25.1	90.5	20.4	78.1	2.67	4.27	2.58	9.18	28.9

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	97.8	97.8	97.8	100
Mar	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	96.8
Apr	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	100
May	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	68.1	68.1	68.1	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	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
Aug	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.5	98.5	98.5	100
Sept	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.2	94.2	94.2	100
Oct	100	100	100	100	100	100	100	100	100	100	98.7	98.7	98.7	100
Nov	100	100	100	100	100	100	100	100	100	100	98.4	98.4	98.4	100
Dec	100	100	100	100	100	100	100	100	100	100	97.4	97.4	97.4	100
Annual	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	94.9	94.9	94.9	99.7

Terms and abbreviations are given in Table 3.5.

Table 3.38 Monthly results

Site: Vientiane

Country: Lao PDR

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	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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 ⁺
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	***	***	***	***	***	***	***	***	***	***	***
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.
2021	%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 3.39 Monthly results

Site: Petaling Jaya

Country: Malaysia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	5.24	5.07	25.4	6.24	12.0	2.89	0.811	3.12	3.05	0.654	14.0	4.85	1.09	682
Feb	22.7	22.0	54.4	20.4	56.9	11.3	3.03	8.83	8.58	1.87	16.5	4.78	2.40	105
Mar	14.4	14.1	36.9	8.43	26.9	4.29	1.64	5.73	5.64	0.958	25.8	4.59	1.89	395
Apr	16.5	16.2	39.6	10.1	24.2	4.50	1.51	7.05	6.95	0.949	36.7	4.44	2.31	357
May	9.36	9.18	34.6	8.33	20.4	2.88	1.42	4.52	4.46	0.525	30.1	4.52	1.85	345
June	9.36	8.90	28.6	11.2	23.9	7.60	2.66	2.86	2.69	0.706	24.7	4.61	1.76	262
July	9.64	9.31	14.6	8.84	17.9	5.49	1.29	2.27	2.15	0.722	15.2	4.82	1.14	176
Aug	8.50	7.90	22.8	11.8	12.7	10.0	2.72	3.38	3.17	0.903	21.1	4.68	1.46	205
Sept	9.34	9.15	18.8	5.46	14.1	3.26	1.19	3.29	3.22	0.909	16.0	4.79	1.19	207
Oct	9.21	8.98	38.7	10.9	28.5	3.93	1.62	5.95	5.86	0.963	18.1	4.74	1.64	240
Nov	7.15	6.92	22.8	7.83	12.2	3.82	1.03	3.66	3.58	0.617	18.0	4.74	1.33	301
Dec	5.18	4.85	15.9	7.51	11.9	5.42	1.40	2.13	2.01	0.364	11.6	4.94	0.882	497
Annual	9.56	9.27	27.8	8.76	18.9	4.88	1.53	4.06	3.95	0.743	20.8	4.68	1.50	3772
Max.	38.5	37.6	95.6	39.8	101	17.3	8.85	21.8	21.4	3.15	52.5	5.71	4.49	
Min.	1.50	1.26	4.70	2.80	3.40	1.50	<0.3	0.880	0.796	<0.3	1.95	4.28	0.330	

Wet deposition amount

2021	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	3.58	3.46	17.3	4.26	8.16	1.97	0.553	2.13	2.08	0.446	9.56
Feb	2.38	2.30	5.69	2.13	5.95	1.18	0.317	0.923	0.898	0.196	1.73
Mar	5.69	5.59	14.6	3.33	10.6	1.69	0.650	2.26	2.23	0.379	10.2
Apr	5.88	5.79	14.1	3.61	8.64	1.61	0.540	2.52	2.48	0.339	13.1
May	3.23	3.17	11.9	2.87	7.04	0.992	0.489	1.56	1.54	0.181	10.4
June	2.45	2.33	7.48	2.94	6.26	1.99	0.696	0.748	0.705	0.185	6.46
July	1.69	1.64	2.56	1.55	3.14	0.963	0.227	0.399	0.378	0.127	2.67
Aug	1.74	1.62	4.69	2.43	2.61	2.06	0.559	0.694	0.650	0.185	4.33
Sept	1.93	1.89	3.89	1.13	2.91	0.676	0.246	0.682	0.667	0.188	3.32
Oct	2.21	2.15	9.29	2.63	6.85	0.944	0.389	1.43	1.41	0.231	4.34
Nov	2.15	2.08	6.86	2.36	3.69	1.15	0.312	1.10	1.08	0.186	5.43
Dec	2.57	2.41	7.91	3.73	5.90	2.70	0.695	1.06	1.00	0.181	5.76
Annual	36.1	35.0	105	33.0	71.4	18.4	5.78	15.3	14.9	2.80	78.3

Data completeness

2021	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	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	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	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	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	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	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	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	100

Terms and abbreviations are given in Table 3.5.

Table 3.40 Monthly results

Site: Danum Valley

Country: Malaysia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	2.57	1.69	<0.5	19.0	<0.8	14.6	2.47	1.51	1.20	0.983	6.52	5.19	0.592	609
Feb	3.49	2.68	3.72	17.3	1.66	13.4	1.83	2.74	2.45	1.32	3.22	5.49	0.569	246
Mar	1.69	1.39	1.82	7.22	<0.8	5.01	1.66	1.25	1.14	0.573	7.81	5.11	0.583	165
Apr	8.10	7.03	0.651	18.4	<0.8	17.8	6.00	4.80	4.42	1.49	8.59	5.07	0.959	373
May	<0.3	<0.3	<0.5	4.71	<0.8	2.49	1.73	0.827	0.773	<0.3	3.67	5.43	0.263	246
June	1.35	1.22	0.879	2.22	<0.8	2.16	1.06	1.15	1.10	<0.3	5.16	5.29	0.347	215
July	2.89	2.54	0.644	4.73	<0.8	5.88	3.73	2.56	2.43	0.743	6.40	5.19	0.540	405
Aug	2.77	2.42	<0.5	5.73	<0.8	5.75	3.29	2.87	2.75	0.794	8.24	5.08	0.557	191
Sept	1.38	1.22	<0.5	4.23	<0.8	2.65	1.45	1.42	1.36	0.537	3.93	5.41	0.445	151
Oct	1.90	1.65	3.28	8.83	<0.8	4.16	2.18	1.58	1.49	0.518	7.22	5.14	0.495	276
Nov	1.44	1.31	1.90	4.97	<0.8	2.12	1.82	1.03	0.984	0.485	4.68	5.33	0.365	339
Dec	1.22	0.894	<0.5	7.12	2.35	5.39	0.731	0.963	0.846	0.750	3.63	5.44	0.375	445
Annual	2.46	2.05	1.10	8.74	<0.8	6.84	2.43	1.89	1.74	0.714	5.78	5.24	0.506	3659
Max.	10.1	8.79	9.63	41.2	5.04	31.5	15.8	7.33	6.86	3.11	15.8	5.73	1.12	
Min.	<0.3	<0.3	<0.5	0.910	<0.8	0.540	0.400	0.360	0.325	<0.3	1.86	4.80	0.190	

Wet deposition amount

2021	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	1.56	1.03	0.0652	11.6	<0.01	8.91	1.51	0.921	0.728	0.598	3.97
Feb	0.857	0.659	0.914	4.24	0.408	3.28	0.451	0.672	0.601	0.324	0.792
Mar	0.279	0.229	0.299	1.19	0.0714	0.825	0.274	0.205	0.187	0.0944	1.29
Apr	3.02	2.62	0.243	6.86	0.0209	6.64	2.24	1.79	1.65	0.555	3.21
May	0.0453	0.0197	<0.01	1.16	<0.01	0.614	0.426	0.204	0.190	0.0377	0.905
June	0.290	0.262	0.189	0.476	<0.01	0.463	0.227	0.247	0.237	0.0480	1.11
July	1.17	1.03	0.261	1.91	0.0966	2.38	1.51	1.04	0.985	0.301	2.59
Aug	0.529	0.462	<0.01	1.09	<0.01	1.10	0.627	0.548	0.525	0.151	1.57
Sept	0.208	0.184	0.0213	0.638	0.0316	0.399	0.219	0.214	0.206	0.0809	0.593
Oct	0.525	0.455	0.905	2.44	0.0705	1.15	0.602	0.437	0.412	0.143	1.99
Nov	0.488	0.444	0.644	1.68	0.0717	0.719	0.617	0.349	0.334	0.164	1.59
Dec	0.542	0.398	0.127	3.17	1.04	2.40	0.325	0.428	0.376	0.334	1.61
Annual	9.00	7.50	4.01	32.0	1.61	25.0	8.88	6.92	6.38	2.61	21.2

Data completeness

2021	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	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	100
Feb	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	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	88.5	88.5	88.5	88.5	88.5	88.5	88.5	88.5	88.5	88.5	88.5	88.5	88.5	100
Aug	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	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	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
Annual	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	100

Terms and abbreviations are given in Table 3.5.

Table 3.41 Monthly results

Site: Kuching

Country: Malaysia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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.	
	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	1.50	0.895	<0.5	16.9	<0.8	10.1	0.471	0.635	0.418	0.521	4.20	5.38	0.398	910	
Feb	2.79	1.98	1.99	17.5	<0.8	13.4	1.36	2.12	1.83	0.806	2.38	5.62	0.443	596	
Mar	3.22	2.95	5.52	6.21	12.1	4.46	0.907	1.27	1.17	<0.3	2.07	5.68	0.445	421	
Apr	3.33	3.16	6.80	3.98	14.9	2.84	1.33	2.31	2.25	<0.3	2.81	5.55	0.500	173	
May	2.06	1.90	5.73	4.02	7.06	2.66	0.992	2.41	2.35	<0.3	4.05	5.39	0.411	193	
June	1.97	1.77	4.87	9.00	5.85	3.28	1.03	1.67	1.60	<0.3	2.97	5.53	0.365	243	
July	2.39	2.24	8.15	3.52	9.02	2.42	1.53	1.94	1.89	0.438	3.85	5.41	0.482	485	
Aug	5.88	5.59	13.8	4.68	<0.8	4.72	7.11	4.85	4.75	1.17	7.10	5.15	1.85	331	
Sept	4.07	3.58	19.6	10.1	1.95	8.10	4.06	3.23	3.06	0.672	11.4	4.94	0.897	179	
Oct	3.63	3.23	23.5	8.13	1.67	6.64	2.05	5.74	5.59	0.955	14.5	4.84	1.01	293	
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	*	346
Dec	3.50	2.62	18.7	21.6	14.8	14.6	4.58	6.47	6.15	1.23	2.28	5.64	0.823	261	
Annual	2.86	2.41	7.42	11.0	4.98	7.50	1.96	2.46	2.29	0.596	4.52	5.34	0.630	4430	
Max.	16.4	15.7	41.8	27.5	55.1	21.2	22.4	12.3	12.1	2.50	25.1	7.08	4.78		
Min.	0.610	0.353	<0.5	1.60	<0.8	0.800	<0.3	0.400	0.270	<0.3	0.0832	4.60	0.230		

Wet deposition amount

2021	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	1.37	0.815	0.225	15.4	<0.01	9.16	0.429	0.578	0.380	0.474	3.83
Feb	1.66	1.18	1.19	10.5	0.0495	8.01	0.813	1.27	1.09	0.480	1.42
Mar	1.35	1.24	2.32	2.61	5.09	1.88	0.381	0.532	0.492	0.104	0.869
Apr	0.575	0.546	1.17	0.688	2.57	0.490	0.230	0.398	0.388	0.0158	0.485
May	0.396	0.365	1.10	0.774	1.36	0.513	0.191	0.463	0.452	0.0298	0.779
June	0.478	0.430	1.18	2.19	1.42	0.796	0.251	0.407	0.390	0.0314	0.721
July	1.16	1.09	3.95	1.71	4.37	1.17	0.741	0.941	0.915	0.213	1.87
Aug	1.94	1.85	4.58	1.55	0.128	1.56	2.35	1.60	1.57	0.388	2.35
Sept	0.727	0.640	3.51	1.81	0.348	1.45	0.726	0.578	0.547	0.120	2.04
Oct	1.06	0.947	6.91	2.39	0.489	1.95	0.601	1.68	1.64	0.280	4.26
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	0.913	0.683	4.87	5.62	3.85	3.81	1.19	1.69	1.60	0.320	0.595
Annual	12.7	10.7	32.8	48.8	22.0	33.2	8.66	10.9	10.2	2.64	20.0

Data completeness

2021	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	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	100
Feb	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
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	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	100
Oct	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	100
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	100

Terms and abbreviations are given in Table 3.5.

Table 3.42 Monthly results

Site: Gunung Brinchang

Country: Malaysia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	0.720	0.647	2.60	2.18	1.89	1.61	1.12	1.91	1.87	<0.3	5.84	5.23	0.404	241
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	5.11	4.55	9.31	8.17	7.36	9.28	3.26	3.64	3.44	0.664	6.68	5.17	0.702	165
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	--	--	--	--	--	--	--	--	--	--	--	--	--	0
July	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	1.20	1.05	1.97	13.0	<0.8	4.48	1.49	3.05	2.95	<0.3	4.14	5.38	0.371	165
Annual	2.13	1.89	4.36	7.04	2.93	4.66	1.85	2.74	2.64	0.332	5.59	5.25	0.481	571
Max.	8.60	7.93	14.8	26.5	26.0	24.7	9.07	11.9	11.4	1.43	9.55	6.30	1.05	
Min.	<0.3	<0.3	<0.5	1.09	<0.8	0.910	<0.3	0.300	0.244	<0.3	0.501	5.02	0.220	

Wet deposition amount

2021	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	0.174	0.156	0.626	0.526	0.455	0.388	0.271	0.460	0.452	0.0354	1.41
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.846	0.753	1.54	1.35	1.22	1.53	0.539	0.602	0.569	0.110	1.11
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.198	0.173	0.325	2.15	<0.01	0.739	0.246	0.502	0.486	0.0443	0.682
Annual	1.22	1.08	2.49	4.02	1.67	2.66	1.06	1.56	1.51	0.189	3.20

Data completeness

2021	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	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
May	--	--	--	--	--	--	--	--	--	--	--	--	--	100
June	--	--	--	--	--	--	--	--	--	--	--	--	--	100
July	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Sept	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	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 3.43 Monthly results

Site: Ulaanbaatar

Country: Mongolia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	*	*	*	*	36.2	4.26	0.684	30.4	30.3	2.14	1.10	5.96	1.14	26.1
June	*	*	*	*	66.3	5.22	1.01	40.9	40.8	2.95	1.38	5.86	1.56	68.2
July	*	*	*	*	57.1	5.20	2.42	82.8	82.7	4.23	1.42	5.85	2.25	31.5
Aug	*	*	*	*	83.3	34.8	2.84	55.2	54.5	4.14	4.56	5.34	3.74	26.4
Sept	*	*	*	*	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	*	*	*	*	62.5	17.4	1.57	49.2	48.8	3.33	2.08	5.68	2.10	178
Max.	*	*	*	*	238	317	8.97	249	249	10.7	19.1	7.50	6.14	
Min.	*	*	*	*	1.70	0.870	<0.3	11.5	11.2	1.23	0.0316	4.72	0.664	

Wet deposition amount

2021	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	*	*	*	*	0.945	0.111	0.0179	0.793	0.790	0.0558	0.0287
June	*	*	*	*	4.52	0.356	0.0688	2.79	2.78	0.201	0.0941
July	*	*	*	*	1.80	0.164	0.0763	2.61	2.61	0.133	0.0447
Aug	*	*	*	*	2.20	0.920	0.0750	1.46	1.44	0.109	0.120
Sept	*	*	*	*	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	*	*	*	*	11.1	3.10	0.278	8.73	8.66	0.591	0.369

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	100
June	0	0	0	0	100	100	100	100	100	100	100	100	100	100
July	0	0	0	0	100	100	100	100	100	100	100	100	100	100
Aug	0	0	0	0	100	100	100	100	100	100	100	100	100	100
Sept	0	0	0	0	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	0	0	0	0	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: Terej

Country: Mongolia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	*	*	*	*	30.8	18.3	1.36	19.0	18.6	2.14	2.85	5.54	1.67	16.9
June	*	*	*	*	54.1	85.0	6.75	64.4	62.7	5.78	1.27	5.90	4.08	55.7
July	*	*	*	*	48.6	122	5.48	20.7	18.1	2.07	2.88	5.54	5.48	43.5
Aug	*	*	*	*	79.8	202	2.37	17.9	14.0	2.48	1.95	5.71	4.75	36.6
Sept	*	*	*	*	53.7	89.7	2.12	13.5	11.6	1.58	1.73	5.76	2.71	38.1
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	*	*	*	*	55.6	111	4.22	31.3	29.1	3.14	2.00	5.70	4.04	191
Max.	*	*	*	*	336	1711	33.1	129	128	19.7	6.31	6.14	16.1	
Min.	*	*	*	*	<0.8	2.60	0.770	4.70	<0.2	0.410	0.724	5.20	0.399	

Wet deposition amount

2021	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	*	*	*	*	0.520	0.309	0.0230	0.321	0.314	0.0363	0.0483
June	*	*	*	*	3.02	4.74	0.376	3.59	3.50	0.322	0.0707
July	*	*	*	*	2.11	5.32	0.238	0.901	0.786	0.0902	0.125
Aug	*	*	*	*	2.92	7.39	0.0865	0.656	0.514	0.0909	0.0712
Sept	*	*	*	*	2.05	3.42	0.0808	0.516	0.442	0.0603	0.0661
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	*	*	*	*	10.6	21.2	0.805	5.98	5.55	0.600	0.381

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	100
June	0	0	0	0	100	100	100	100	100	100	100	100	100	100
July	0	0	0	0	100	100	100	100	100	100	100	100	100	100
Aug	0	0	0	0	100	100	100	100	100	100	100	100	100	100
Sept	0	0	0	0	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	0	0	0	0	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: Yangon

Country: Myanmar

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	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Feb	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Mar	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Apr	16.2	14.6	33.8	38.1	59.7	25.8	69.8	9.09	8.53	56.7	0.126	6.90	1.86	84.6
May	14.5	12.3	75.6	15.1	13.6	36.3	9.36	6.04	5.25	64.3	0.0794	7.10	1.09	11.9
June	7.64	6.38	12.0	22.5	12.7	20.8	5.36	2.62	2.17	27.1	0.188	6.72	0.452	530
July	4.03	2.94	10.3	20.5	18.1	18.2	3.86	2.78	2.38	20.4	0.207	6.68	0.462	416
Aug	8.12	6.74	53.4	22.5	27.9	22.8	11.8	4.18	3.69	38.8	0.158	6.80	0.920	178
Sept	2.83	2.26	7.57	9.86	14.1	9.56	5.28	1.53	1.32	30.1	0.179	6.75	0.889	373
Oct	2.20	1.75	10.8	6.24	17.6	7.48	2.68	1.39	1.23	29.2	0.179	6.75	1.09	461
Nov	11.4	10.9	43.1	20.5	74.5	9.75	6.26	2.94	2.73	60.1	0.171	6.77	3.55	20.9
Dec	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Annual	5.31	4.37	15.7	16.8	19.0	15.7	7.66	2.60	2.26	29.5	0.182	6.74	0.807	2075
Max.	49.0	46.3	478	99.6	284	45.0	77.5	18.2	17.2	162	0.316	7.10	5.48	
Min.	0.916	0.609	3.21	3.67	1.05	4.13	1.10	0.499	0.389	14.8	0.0794	6.50	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 ⁺
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	**	**	**	**	**	**	**	**	**	**	**
Feb	**	**	**	**	**	**	**	**	**	**	**
Mar	**	**	**	**	**	**	**	**	**	**	**
Apr	1.37	1.24	2.86	3.22	5.05	2.19	5.90	0.769	0.722	4.80	0.0106
May	0.172	0.146	0.899	0.179	0.161	0.431	0.111	0.0718	0.0624	0.764	<0.01
June	4.05	3.38	6.35	11.9	6.74	11.0	2.84	1.39	1.15	14.4	0.0999
July	1.68	1.22	4.29	8.54	7.54	7.58	1.61	1.16	0.992	8.49	0.0861
Aug	1.44	1.20	9.49	4.00	4.95	4.05	2.10	0.742	0.655	6.89	0.0280
Sept	1.06	0.842	2.83	3.68	5.25	3.57	1.97	0.571	0.494	11.2	0.0667
Oct	1.01	0.805	4.96	2.87	8.10	3.45	1.24	0.640	0.565	13.5	0.0823
Nov	0.239	0.227	0.901	0.428	1.56	0.204	0.131	0.0615	0.0571	1.26	<0.01
Dec	**	**	**	**	**	**	**	**	**	**	**
Annual	11.0	9.06	32.6	34.9	39.3	32.5	15.9	5.40	4.70	61.3	0.378

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	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Feb	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Mar	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
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	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
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 3.46 Monthly results

Site: Metro Manila

Country: Philippines

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	8.33	7.93	11.3	6.61	13.3	6.65	1.45	9.54	9.39	1.58	1.27	5.90	0.632	184
Feb	28.8	27.9	24.2	19.1	52.9	15.6	3.56	33.1	32.8	4.22	0.243	6.62	2.11	18.0
Mar	32.3	31.9	36.9	20.1	29.2	6.57	1.13	29.4	29.3	2.84	0.263	6.58	2.12	99.9
Apr	20.3	19.3	43.9	32.4	25.3	17.8	2.88	28.2	27.8	4.96	11.5	4.94	2.34	57.4
May	43.2	42.9	45.0	16.0	25.8	3.90	1.33	21.1	21.0	<0.3	0.771	6.11	2.13	65.4
June	44.1	43.8	17.7	9.79	24.1	4.65	<0.3	5.94	5.84	<0.3	40.9	4.39	2.28	243
July	11.8	9.08	4.22	61.7	4.62	45.9	1.33	7.35	6.36	0.784	9.20	5.04	1.20	926
Aug	26.8	26.7	23.8	9.68	17.8	3.24	0.655	<0.2	<0.2	2.86	18.7	4.73	1.86	242
Sept	10.9	10.9	13.8	6.78	25.2	0.822	1.05	8.77	8.76	0.779	1.84	5.73	0.816	429
Oct	15.0	11.8	14.0	34.1	21.6	54.2	11.1	10.1	8.93	4.18	2.69	5.57	0.994	148
Nov	11.3	10.9	5.24	12.5	25.3	7.31	3.57	10.6	10.4	1.87	0.894	6.05	0.949	47.9
Dec	10.6	10.3	<0.5	4.82	30.9	4.71	1.53	13.3	13.2	1.90	0.866	6.06	0.953	95.8
Annual	18.0	16.6	13.2	30.2	16.5	22.3	1.77	9.22	8.75	1.41	10.0	5.00	1.33	2556
Max.	99.7	99.4	61.6	104	215	86.1	22.2	77.3	76.6	13.9	121	6.86	6.53	
Min.	3.65	3.46	<0.5	3.27	<0.8	<0.3	<0.3	<0.2	<0.2	<0.3	0.137	3.92	0.434	

Wet deposition amount

2021	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	1.53	1.46	2.08	1.21	2.45	1.22	0.267	1.75	1.72	0.289	0.233
Feb	0.519	0.502	0.436	0.343	0.951	0.282	0.0641	0.597	0.591	0.0759	<0.01
Mar	3.22	3.18	3.69	2.01	2.92	0.656	0.113	2.94	2.93	0.284	0.0263
Apr	1.17	1.11	2.52	1.86	1.45	1.02	0.165	1.62	1.60	0.285	0.658
May	2.82	2.81	2.94	1.05	1.68	0.255	0.0868	1.38	1.37	0.0142	0.0504
June	10.7	10.7	4.30	2.38	5.87	1.13	0.0359	1.44	1.42	<0.01	9.95
July	11.0	8.40	3.91	57.1	4.27	42.5	1.23	6.80	5.88	0.726	8.52
Aug	6.49	6.45	5.75	2.34	4.31	0.784	0.159	<0.01	<0.01	0.691	4.52
Sept	4.68	4.66	5.90	2.91	10.8	0.353	0.451	3.76	3.76	0.334	0.791
Oct	2.23	1.75	2.08	5.05	3.20	8.03	1.65	1.50	1.32	0.620	0.398
Nov	0.542	0.521	0.251	0.597	1.21	0.350	0.171	0.507	0.500	0.0896	0.0428
Dec	1.01	0.987	<0.01	0.462	2.96	0.452	0.147	1.28	1.27	0.182	0.0830
Annual	45.9	42.5	33.9	77.3	42.1	57.0	4.54	23.6	22.4	3.59	25.6

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	86.6	86.6	86.6	100
Feb	100	100	100	100	100	100	100	100	100	100	56.1	56.1	56.1	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	78.1
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	75.2
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	50.4
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	75.5
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	80.4
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	98.7	98.7	98.7	88.9

Terms and abbreviations are given in Table 3.5.

Table 3.47 Monthly results

Site: Los Baños

Country: Philippines

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	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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 ⁺
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	***	***	***	***	***	***	***	***	***	***	***
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.
2021	%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 3.48 Monthly results

Site: Mt. Sto. Tomas

Country: Philippines

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	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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 ⁺
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	***	***	***	***	***	***	***	***	***	***	***
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.
2021	%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 3.49 Monthly results

Site: Kanghwa

Country: R of Korea

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	29.1	23.5	51.5	105	65.7	92.1	1.80	21.9	19.9	12.9	0.724	6.14	2.99	10.9
Feb	69.3	54.0	110	284	148	253	10.7	46.0	40.5	32.0	0.242	6.62	7.26	3.6
Mar	15.1	14.0	31.3	16.1	32.1	17.7	1.79	11.2	10.8	3.94	6.19	5.21	1.31	58.3
Apr	12.7	11.8	35.4	18.6	25.9	13.6	2.77	15.8	15.5	5.27	6.46	5.19	1.31	64.0
May	16.2	15.3	36.9	22.4	36.5	15.2	1.83	16.1	15.8	4.15	2.68	5.57	1.53	137
June	15.7	15.0	33.7	20.2	47.7	11.2	2.35	10.7	10.5	4.00	2.44	5.61	1.44	57.2
July	6.47	5.83	21.2	13.0	22.7	10.6	0.510	4.63	4.40	3.26	4.77	5.32	0.894	52.1
Aug	7.25	6.68	19.6	12.2	25.0	9.42	1.60	4.33	4.13	2.62	3.27	5.49	0.872	126
Sept	13.2	10.9	26.4	45.5	33.0	38.6	2.93	4.50	3.67	4.97	7.95	5.10	1.72	92.3
Oct	27.6	22.7	43.5	94.2	43.1	81.2	3.54	11.6	9.86	10.5	22.6	4.65	3.09	37.5
Nov	28.4	21.6	65.9	129	75.8	112	5.35	15.5	13.0	13.9	6.84	5.17	3.40	44.6
Dec	35.2	25.2	101	193	105	167	15.1	24.0	20.4	21.1	2.86	5.54	4.96	4.0
Annual	15.0	13.2	33.5	36.4	36.8	29.9	2.41	10.6	10.0	5.35	5.59	5.25	1.62	688
Max.	86.0	78.1	321	349	309	302	21.3	123	120	36.4	30.0	7.04	8.46	
Min.	1.57	1.36	4.91	3.30	4.32	<0.3	<0.3	1.92	1.83	1.50	0.0919	4.52	0.370	

Wet deposition amount

2021	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	0.316	0.256	0.560	1.14	0.714	1.00	0.0196	0.238	0.217	0.140	<0.01
Feb	0.253	0.197	0.400	1.04	0.540	0.925	0.0390	0.168	0.148	0.117	<0.01
Mar	0.879	0.817	1.82	0.937	1.87	1.03	0.104	0.650	0.628	0.230	0.361
Apr	0.810	0.758	2.27	1.19	1.66	0.871	0.177	1.01	0.992	0.338	0.413
May	2.22	2.10	5.08	3.09	5.02	2.10	0.251	2.22	2.17	0.571	0.368
June	0.897	0.859	1.93	1.15	2.73	0.638	0.134	0.613	0.599	0.229	0.140
July	0.337	0.304	1.10	0.676	1.18	0.552	0.0265	0.241	0.229	0.170	0.248
Aug	0.911	0.840	2.47	1.53	3.14	1.18	0.201	0.545	0.519	0.330	0.411
Sept	1.22	1.00	2.44	4.20	3.05	3.56	0.271	0.415	0.338	0.458	0.734
Oct	1.03	0.849	1.63	3.53	1.61	3.04	0.132	0.435	0.369	0.392	0.846
Nov	1.27	0.964	2.94	5.76	3.38	5.01	0.238	0.689	0.580	0.622	0.305
Dec	0.141	0.101	0.405	0.775	0.422	0.669	0.0607	0.0962	0.0817	0.0848	0.0115
Annual	10.3	9.04	23.0	25.0	25.3	20.6	1.66	7.32	6.87	3.68	3.85

Data completeness

2021	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	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 3.50 Monthly results

Site: Cheju

Country: R of Korea

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	40.0	13.6	29.8	454	34.1	439	9.86	21.4	11.9	46.4	0.343	6.46	7.87	62.4
Feb	128	38.7	82.1	1583	54.8	1479	31.3	63.8	31.8	151	8.21	5.09	25.1	32.1
Mar	49.4	31.6	29.9	314	31.9	295	39.2	10.8	4.46	33.7	2.37	5.62	6.07	92.6
Apr	31.0	22.7	28.3	115	43.7	137	4.57	9.70	6.74	10.6	1.28	5.89	3.15	101
May	29.4	17.6	22.0	179	24.8	195	3.90	8.37	4.15	19.9	3.68	5.43	3.81	130
June	12.1	9.58	8.67	22.5	9.57	41.6	2.88	1.43	0.599	1.85	1.06	5.97	0.854	172
July	22.9	11.2	44.4	217	41.2	194	48.1	5.92	1.73	15.7	1.69	5.77	4.44	81.5
Aug	17.6	10.9	17.1	87.0	15.7	114	0.851	1.66	<0.2	6.15	1.81	5.74	1.95	195
Sept	14.0	9.17	14.2	62.8	19.1	79.7	1.52	1.86	0.290	4.18	1.39	5.86	1.59	229
Oct	26.4	14.9	17.6	177	18.7	190	3.50	4.88	0.893	11.9	2.16	5.67	3.48	26.5
Nov	127	20.0	87.1	2160	5.04	1834	33.5	52.9	13.2	162	4.77	5.32	31.8	48.6
Dec	164	<0.3	161	2579	5.19	2831	38.1	68.3	7.12	227	1.58	5.80	37.2	13.7
Annual	31.9	15.0	26.6	288	23.4	285	11.3	9.76	3.78	25.0	2.04	5.69	5.13	1185
Max.	188	57.1	161	2836	198	2831	228	107	75.1	235	8.51	6.92	41.5	
Min.	5.68	<0.3	2.49	1.74	2.58	21.5	<0.3	<0.2	<0.2	<0.3	0.120	5.07	0.360	

Wet deposition amount

2021	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	2.50	0.846	1.86	28.3	2.13	27.4	0.615	1.34	0.743	2.90	0.0214
Feb	4.10	1.24	2.64	50.8	1.76	47.5	1.00	2.05	1.02	4.85	0.263
Mar	4.57	2.92	2.77	29.1	2.96	27.3	3.63	1.00	0.413	3.12	0.220
Apr	3.13	2.29	2.85	11.6	4.41	13.8	0.461	0.979	0.680	1.07	0.129
May	3.82	2.29	2.86	23.3	3.22	25.4	0.508	1.09	0.541	2.59	0.479
June	2.08	1.65	1.49	3.88	1.65	7.18	0.496	0.246	0.103	0.318	0.183
July	1.87	0.914	3.62	17.7	3.36	15.8	3.92	0.482	0.141	1.28	0.138
Aug	3.43	2.13	3.33	17.0	3.06	22.3	0.166	0.324	0.0108	1.20	0.353
Sept	3.20	2.10	3.24	14.4	4.36	18.2	0.347	0.426	0.0664	0.955	0.319
Oct	0.699	0.395	0.467	4.70	0.495	5.04	0.0927	0.129	0.0237	0.316	0.0573
Nov	6.16	0.972	4.23	105	0.245	89.1	1.63	2.57	0.644	7.88	0.232
Dec	2.25	<0.01	2.20	35.3	0.0712	38.8	0.522	0.936	0.0975	3.11	0.0217
Annual	37.8	17.8	31.6	341	27.7	338	13.4	11.6	4.48	29.6	2.42

Data completeness

2021	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	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 3.51 Monthly results

Site: Imsil

Country: R of Korea

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	24.7	20.6	45.1	62.5	50.8	67.9	3.22	18.7	17.2	7.53	0.319	6.50	2.52	20.0
Feb	38.4	32.5	67.3	89.6	73.0	97.0	3.33	28.5	26.5	10.7	0.277	6.56	3.77	14.0
Mar	12.6	10.3	16.0	17.4	14.8	37.3	1.14	4.68	3.87	1.88	0.937	6.03	0.946	101
Apr	15.0	12.4	17.1	67.4	16.1	44.3	56.5	4.06	3.11	0.735	1.06	5.98	1.72	41.0
May	16.3	14.7	27.6	12.1	18.1	26.3	1.14	15.2	14.6	2.70	0.458	6.34	1.11	103
June	9.70	8.73	11.1	11.6	9.32	16.2	1.75	8.47	8.12	1.15	0.797	6.10	0.688	92.0
July	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Oct	7.36	5.55	29.2	5.71	28.8	30.0	0.585	0.746	0.327	<0.3	0.718	6.14	0.872	40.5
Nov	25.4	12.3	30.1	220	30.7	217	5.17	5.83	1.54	14.2	0.409	6.39	4.33	106
Dec	94.2	30.5	227	835	88.9	1056	14.4	47.3	24.4	68.0	0.183	6.74	16.7	5.0
Annual	17.1	12.3	25.9	70.9	22.5	80.5	6.64	8.88	7.24	5.28	0.655	6.18	1.96	522
Max.	126	65.4	289	1014	167	1107	176	63.4	60.0	82.7	1.82	7.64	19.6	
Min.	0.968	0.740	6.75	2.10	3.93	3.78	0.407	<0.2	<0.2	<0.3	0.0229	5.74	0.290	

Wet deposition amount

2021	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	0.493	0.411	0.901	1.25	1.02	1.36	0.0644	0.374	0.344	0.151	<0.01
Feb	0.537	0.455	0.942	1.25	1.02	1.36	0.0466	0.400	0.370	0.150	<0.01
Mar	1.27	1.04	1.61	1.76	1.50	3.77	0.115	0.473	0.391	0.190	0.0946
Apr	0.616	0.506	0.701	2.76	0.660	1.82	2.32	0.167	0.127	0.0301	0.0433
May	1.67	1.51	2.82	1.24	1.85	2.69	0.117	1.56	1.50	0.276	0.0469
June	0.893	0.803	1.02	1.06	0.857	1.49	0.161	0.779	0.747	0.106	0.0733
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct	0.298	0.225	1.18	0.231	1.17	1.22	0.0237	0.0302	0.0132	<0.01	0.0291
Nov	2.69	1.31	3.19	23.3	3.25	23.0	0.548	0.618	0.163	1.51	0.0434
Dec	0.471	0.153	1.13	4.18	0.445	5.28	0.0722	0.236	0.122	0.340	<0.01
Annual	8.94	6.41	13.5	37.0	11.8	42.0	3.47	4.63	3.78	2.76	0.342

Data completeness

2021	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	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
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	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 3.52 Monthly results

Site: Mondy

Country: Russia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	--	--	--	--	--	--	--	--	--	--	--	--	--	0
July	4.89	4.26	2.70	5.40	93.7	10.4	5.10	2.20	1.97	1.20	0.155	6.81	1.69	2.9
Aug	7.53	7.33	3.94	2.44	29.2	3.36	2.09	5.63	5.56	1.32	4.01	5.40	0.841	17.9
Sept	5.73	5.62	2.76	2.43	32.5	1.88	4.55	3.07	3.03	1.11	1.83	5.74	0.724	34.4
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	3.50	3.31	6.10	<0.5	8.90	3.04	1.30	15.0	14.9	2.10	0.631	6.20	0.638	3.4
Annual	6.11	5.94	3.31	2.45	33.1	2.82	3.64	4.50	4.44	1.24	2.34	5.63	0.802	58.6
Max.	11.9	11.7	12.0	5.40	95.1	10.4	6.60	16.0	15.9	3.70	6.76	6.81	1.69	
Min.	3.29	3.16	1.30	<0.5	1.20	0.870	0.300	2.20	1.97	0.400	0.155	5.17	0.396	

Wet deposition amount

2021	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
July	0.0142	0.0123	<0.01	0.0157	0.272	0.0303	0.0148	<0.01	<0.01	<0.01	<0.01
Aug	0.135	0.131	0.0706	0.0437	0.523	0.0602	0.0375	0.101	0.0995	0.0236	0.0718
Sept	0.197	0.193	0.0948	0.0837	1.12	0.0647	0.157	0.106	0.104	0.0382	0.0628
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	0.0119	0.0113	0.0207	<0.01	0.0303	0.0103	<0.01	0.0510	0.0508	<0.01	<0.01
Annual	0.358	0.348	0.194	0.143	1.94	0.166	0.213	0.264	0.260	0.0725	0.137

Data completeness

2021	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
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	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 3.53 Monthly results

Site: Listvyanka

Country: Russia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	23.2	22.6	45.5	6.44	11.0	10.4	3.18	36.5	36.2	8.93	3.44	5.46	1.79	10.7
Feb	18.3	17.5	38.4	5.15	16.0	12.7	8.62	26.0	25.7	7.69	3.46	5.46	1.75	3.3
Mar	24.8	24.0	29.6	6.76	23.2	14.9	10.6	28.0	27.7	7.66	1.79	5.75	1.92	4.6
Apr	28.4	27.5	24.8	7.95	29.1	14.1	12.5	20.9	20.5	5.95	9.13	5.04	1.61	8.0
May	20.4	20.1	12.8	1.78	18.2	4.44	3.27	5.29	5.20	1.86	22.2	4.65	1.39	126
June	19.2	18.7	7.64	4.37	12.8	7.34	6.79	8.66	8.50	3.64	14.7	4.83	1.25	72.4
July	10.3	10.0	3.21	1.30	4.46	4.00	2.72	2.88	2.79	1.47	12.2	4.91	0.813	200
Aug	17.6	17.5	7.67	2.00	33.4	2.40	2.22	5.60	5.55	1.48	12.0	4.92	1.24	77.1
Sept	18.4	18.2	9.86	2.39	18.9	4.56	5.69	9.47	9.37	2.51	8.57	5.07	1.05	41.8
Oct	21.6	21.4	13.3	2.20	16.2	2.17	3.84	11.0	11.0	3.70	14.1	4.85	1.37	7.0
Nov	14.3	13.9	22.8	0.828	14.0	5.93	1.71	16.5	16.3	3.46	4.06	5.39	1.15	3.8
Dec	15.9	15.5	41.7	2.46	14.3	6.20	2.43	22.2	22.1	4.44	6.88	5.16	1.47	9.2
Annual	16.2	15.9	9.44	2.27	14.7	4.78	3.76	6.76	6.66	2.29	14.0	4.85	1.14	563
Max.	75.0	74.4	60.9	29.6	312	31.7	28.1	57.4	57.1	13.5	35.5	6.16	4.97	
Min.	3.70	3.17	<0.5	<0.5	<0.8	<0.3	<0.3	<0.2	<0.2	<0.3	0.692	4.45	0.502	

Wet deposition amount

2021	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	0.249	0.242	0.487	0.0689	0.118	0.112	0.0340	0.390	0.388	0.0955	0.0368
Feb	0.0602	0.0577	0.127	0.0170	0.0527	0.0419	0.0284	0.0857	0.0848	0.0254	0.0114
Mar	0.114	0.110	0.136	0.0311	0.107	0.0685	0.0487	0.129	0.127	0.0352	<0.01
Apr	0.227	0.220	0.198	0.0636	0.233	0.113	0.100	0.167	0.164	0.0476	0.0730
May	2.56	2.52	1.61	0.224	2.29	0.558	0.410	0.664	0.653	0.233	2.79
June	1.39	1.35	0.553	0.317	0.930	0.531	0.491	0.627	0.616	0.264	1.07
July	2.05	2.00	0.642	0.260	0.892	0.801	0.544	0.576	0.559	0.293	2.44
Aug	1.36	1.35	0.591	0.154	2.57	0.185	0.171	0.432	0.428	0.114	0.929
Sept	0.771	0.759	0.412	0.100	0.789	0.191	0.238	0.396	0.392	0.105	0.358
Oct	0.151	0.150	0.0931	0.0154	0.113	0.0152	0.0269	0.0770	0.0767	0.0259	0.0989
Nov	0.0543	0.0529	0.0867	<0.01	0.0532	0.0225	<0.01	0.0625	0.0621	0.0131	0.0154
Dec	0.146	0.143	0.384	0.0226	0.131	0.0570	0.0223	0.205	0.203	0.0408	0.0633
Annual	9.12	8.96	5.32	1.28	8.28	2.70	2.12	3.81	3.75	1.29	7.88

Data completeness

2021	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	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 3.54 Monthly results

Site: Irkutsk

Country: Russia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	25.3	24.4	22.6	15.9	30.8	16.1	5.39	33.5	33.1	7.48	1.50	5.82	1.83	30.0
Feb	31.3	29.9	27.7	20.3	33.3	24.5	9.34	42.5	42.0	8.11	0.954	6.02	2.21	12.7
Mar	147	141	60.7	75.9	108	100	19.1	156	154	26.0	6.35	5.20	8.78	1.0
Apr	76.5	72.6	41.9	69.6	79.4	64.9	16.4	75.8	74.4	19.8	0.905	6.04	4.73	14.5
May	30.1	29.7	10.5	4.88	25.0	6.46	6.60	13.5	13.4	5.09	16.2	4.79	1.67	89.9
June	14.2	14.0	8.28	3.52	19.1	2.97	2.23	7.24	7.17	3.09	7.77	5.11	0.972	106
July	19.9	19.8	4.79	1.87	12.7	1.64	2.69	7.60	7.56	2.21	12.0	4.92	1.07	151
Aug	31.2	31.0	7.91	2.63	35.9	2.67	3.67	8.74	8.68	2.68	15.8	4.80	1.56	109
Sept	16.3	16.0	4.54	2.17	13.4	3.42	5.95	7.63	7.56	2.51	10.3	4.99	0.977	51.6
Oct	100	101	10.3	30.2	89.6	14.0	70.1	47.3	47.0	43.2	0.531	6.27	4.78	7.0
Nov	84.2	81.5	25.3	37.0	43.0	38.8	8.36	98.3	97.4	17.2	0.369	6.43	4.27	8.0
Dec	41.0	39.3	30.6	28.3	40.0	27.9	3.06	71.5	70.9	11.9	0.676	6.17	3.04	10.2
Annual	26.0	25.6	9.95	6.92	25.0	7.00	5.18	15.4	15.3	4.63	10.9	4.96	1.51	591
Max.	393	357	168	802	478	890	91.8	524	511	156	39.8	7.48	31.6	
Min.	4.66	4.55	<0.5	0.761	2.42	0.870	<0.3	0.998	0.970	0.410	0.0331	4.40	0.378	

Wet deposition amount

2021	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	0.758	0.732	0.679	0.478	0.924	0.482	0.162	1.00	0.994	0.225	0.0449
Feb	0.398	0.380	0.352	0.258	0.424	0.312	0.119	0.541	0.534	0.103	0.0121
Mar	0.147	0.141	0.0607	0.0759	0.108	0.100	0.0191	0.156	0.154	0.0260	<0.01
Apr	1.11	1.05	0.608	1.01	1.15	0.941	0.238	1.10	1.08	0.288	0.0131
May	2.70	2.67	0.945	0.438	2.24	0.581	0.593	1.21	1.20	0.458	1.45
June	1.51	1.49	0.881	0.375	2.04	0.316	0.237	0.770	0.763	0.329	0.827
July	3.01	2.99	0.725	0.283	1.92	0.248	0.407	1.15	1.14	0.334	1.82
Aug	3.39	3.38	0.861	0.286	3.90	0.291	0.399	0.950	0.944	0.292	1.72
Sept	0.839	0.828	0.234	0.112	0.693	0.176	0.307	0.394	0.390	0.129	0.533
Oct	0.706	0.711	0.0724	0.212	0.631	0.0983	0.494	0.333	0.331	0.304	<0.01
Nov	0.674	0.652	0.202	0.296	0.344	0.310	0.0669	0.786	0.779	0.138	<0.01
Dec	0.417	0.400	0.311	0.288	0.407	0.284	0.0311	0.727	0.721	0.121	<0.01
Annual	15.4	15.1	5.89	4.09	14.8	4.14	3.06	9.12	9.03	2.74	6.44

Data completeness

2021	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	73.3	73.3	87.0	87.0	100	100	100	100	100	100	100	100	100	100
Feb	96.9	96.9	100	100	100	100	100	100	100	100	100	100	100	100
Mar	80.0	80.0	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	80.3	80.3	80.3	80.3	99.2	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	98.0	100	100	98.0	98.0	98.0	98.0	98.0	98.0	100	100	100	100
Nov	68.6	68.6	68.6	68.6	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	94.5	94.5	95.3	95.3	99.8	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.55 Monthly results

Site: Primorskaya

Country: Russia

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	27.4	26.2	30.6	36.0	40.5	21.1	6.02	26.9	26.5	6.48	0.814	6.09	1.79	46.8
Feb	32.1	29.9	30.1	41.2	35.3	37.6	17.9	21.6	20.8	7.52	1.01	6.00	2.06	13.5
Mar	54.4	51.2	38.3	72.6	65.1	51.9	12.8	50.7	49.6	13.0	0.680	6.17	3.21	31.3
Apr	38.3	35.4	27.4	58.7	51.2	48.9	11.4	28.9	27.8	9.91	0.987	6.01	2.36	48.7
May	23.4	20.3	24.8	52.2	47.3	50.5	11.4	22.6	21.5	9.31	0.823	6.08	2.12	76.5
June	17.7	17.2	10.8	16.5	41.2	8.27	1.90	7.80	7.62	1.90	1.43	5.84	0.979	102
July	11.1	10.9	14.0	15.5	48.2	3.90	2.00	3.00	2.92	1.60	2.19	5.66	0.900	21.2
Aug	10.0	9.40	10.6	14.2	33.3	10.1	3.01	2.20	1.98	1.28	1.84	5.74	0.799	130
Sept	14.9	13.5	22.2	103	92.5	23.2	5.31	4.78	4.28	4.68	6.17	5.21	2.30	112
Oct	25.9	23.2	28.1	121	91.2	43.7	15.7	19.3	18.3	6.63	5.05	5.30	2.90	34.8
Nov	26.9	22.1	33.6	106	34.4	80.5	7.06	13.7	12.0	8.04	4.94	5.31	2.47	106
Dec	*	*	*	*	*	*	*	*	*	*	2.43	5.61	*	2.8
Annual	21.8	19.8	22.2	59.3	51.4	34.3	6.69	13.8	13.1	5.56	2.77	5.56	1.85	726
Max.	210	189	101	453	314	354	57.3	134	133	60.1	22.4	7.51	10.7	
Min.	5.90	3.82	2.70	9.00	11.1	3.00	0.500	0.500	0.303	0.400	0.0309	4.65	0.400	

Wet deposition amount

2021	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	1.28	1.22	1.43	1.68	1.89	0.988	0.281	1.26	1.24	0.303	0.0381
Feb	0.434	0.403	0.407	0.556	0.476	0.508	0.242	0.292	0.281	0.102	0.0136
Mar	1.70	1.60	1.20	2.27	2.04	1.62	0.401	1.59	1.55	0.406	0.0213
Apr	1.87	1.72	1.34	2.86	2.49	2.38	0.554	1.41	1.36	0.483	0.0481
May	1.79	1.56	1.90	3.99	3.62	3.86	0.871	1.73	1.64	0.712	0.0630
June	1.81	1.76	1.10	1.69	4.21	0.846	0.194	0.798	0.779	0.194	0.146
July	0.235	0.230	0.297	0.329	1.02	0.0827	0.0424	0.0636	0.0618	0.0339	0.0464
Aug	1.30	1.22	1.38	1.84	4.33	1.32	0.392	0.286	0.257	0.167	0.239
Sept	1.68	1.52	2.49	11.6	10.4	2.60	0.596	0.537	0.481	0.525	0.693
Oct	0.900	0.808	0.979	4.20	3.18	1.52	0.545	0.671	0.638	0.231	0.176
Nov	2.86	2.34	3.57	11.2	3.65	8.54	0.750	1.46	1.27	0.853	0.525
Dec	*	*	*	*	*	*	*	*	*	*	<0.01
Annual	15.9	14.4	16.1	43.1	37.3	24.9	4.86	10.0	9.49	4.04	2.01

Data completeness

2021	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	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	100	100	82.3	100
Feb	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	100	100	51.9	100
Mar	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
Apr	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	93.8	100	100	93.8	100
May	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	99.5	99.5	94.1	100
June	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	100	100	92.9	100
July	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	100	100	35.8	100
Aug	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	100	100	98.6	100
Sept	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	100	100	92.3	100
Oct	93.1	93.1	93.1	93.1	93.1	93.1	93.1	93.1	93.1	93.1	96.0	96.0	93.1	100
Nov	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	100	100	98.0	100
Dec	0	0	0	0	0	0	0	0	0	0	100	100	0	100
Annual	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	99.8	99.8	91.1	100

Terms and abbreviations are given in Table 3.5.

Table 3.56 Monthly results

Site: Bangkok

Country: Thailand

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	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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 ⁺
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	***	***	***	***	***	***	***	***	***	***	***
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.
2021	%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 3.57 Monthly results

Site: Samutprakarn

Country: Thailand

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	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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 ⁺
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	***	***	***	***	***	***	***	***	***	***	***
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.
2021	%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: Pathumthani

Country: Thailand

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	75.0	73.2	42.9	41.6	135	29.1	270	29.8	29.2	5.83	3.09	5.51	3.68	7.0
Mar	104	99.4	4.46	95.5	101	78.0	126	258	257	23.2	0.741	6.13	10.4	0.5
Apr	9.26	9.11	32.1	5.99	44.9	2.53	1.66	4.85	4.79	1.35	4.03	5.39	1.28	151
May	10.4	10.0	32.8	8.61	41.9	5.54	1.56	7.90	7.78	1.61	9.10	5.04	1.60	128
June	6.83	6.51	12.5	9.54	44.5	5.31	3.31	5.89	5.77	1.02	0.469	6.33	1.04	110
July	<0.3	<0.3	<0.5	<0.5	29.5	2.46	0.720	2.74	2.69	1.02	1.33	5.88	0.623	67.5
Aug	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Sept	11.6	11.5	37.1	12.9	16.8	1.79	0.700	3.96	3.92	0.825	3.39	5.47	0.894	234
Oct	5.48	5.31	16.2	6.51	23.7	2.86	3.52	4.99	4.93	1.28	0.793	6.10	0.607	147
Nov	8.87	8.63	11.5	6.99	34.7	3.93	1.22	4.99	4.91	0.367	0.747	6.13	0.777	34.2
Dec	7.56	5.21	6.74	19.6	29.8	39.0	2.08	7.59	6.74	1.71	0.324	6.49	1.08	4.0
Annual	8.95	8.75	25.1	8.72	32.6	3.64	4.02	5.41	5.33	1.18	3.26	5.49	1.03	883
Max.	104	99.4	169	248	180	78.0	309	258	257	32.0	53.7	7.63	10.4	
Min.	<0.3	<0.3	<0.5	<0.5	<0.8	<0.3	<0.3	<0.2	<0.2	<0.3	0.0234	4.27	0.250	

Wet deposition amount

2021	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	0.525	0.513	0.301	0.291	0.943	0.204	1.89	0.209	0.204	0.0408	0.0216
Mar	0.0521	0.0497	<0.01	0.0477	0.0506	0.0390	0.0629	0.129	0.128	0.0116	<0.01
Apr	1.40	1.37	4.84	0.903	6.77	0.381	0.250	0.731	0.722	0.203	0.607
May	1.33	1.29	4.21	1.11	5.38	0.712	0.201	1.01	0.999	0.207	1.17
June	0.748	0.713	1.37	1.04	4.87	0.582	0.362	0.645	0.632	0.111	0.0514
July	<0.01	<0.01	<0.01	<0.01	1.99	0.166	0.0486	0.185	0.181	0.0689	0.0899
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sept	2.70	2.69	8.65	3.02	3.92	0.418	0.164	0.925	0.916	0.193	0.791
Oct	0.808	0.782	2.39	0.960	3.50	0.421	0.519	0.735	0.726	0.188	0.117
Nov	0.303	0.295	0.393	0.239	1.19	0.134	0.0418	0.171	0.168	0.0126	0.0256
Dec	0.0302	0.0208	0.0270	0.0783	0.119	0.156	<0.01	0.0303	0.0270	<0.01	<0.01
Annual	7.90	7.72	22.2	7.69	28.7	3.21	3.55	4.77	4.70	1.04	2.87

Data completeness

2021	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	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
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 3.59 Monthly results

Site: Khanchanaburi

Country: Thailand

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	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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 ⁺
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	***	***	***	***	***	***	***	***	***	***	***
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.
2021	%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 3.60 Monthly results

Site: Hanoi

Country: Vietnam

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	*	*	*	*	*	*	*	*	*	*	*	*	*	3.3
Feb	61.2	60.3	61.2	11.2	119	14.6	4.71	37.7	37.4	5.23	0.567	6.25	3.17	62.5
Mar	181	179	181	40.9	283	31.0	28.1	104	103	32.1	8.30	5.08	9.29	30.1
Apr	54.1	53.5	57.3	17.0	74.6	10.1	4.50	45.8	45.5	7.40	1.93	5.71	2.75	201
May	60.3	59.4	60.3	15.9	95.3	13.9	6.79	38.7	38.4	7.29	1.89	5.72	2.97	120
June	66.1	64.9	63.1	31.7	137	19.6	10.3	38.8	38.4	7.89	0.754	6.12	3.61	199
July	34.2	33.8	32.1	8.00	34.5	7.65	8.65	34.8	34.7	5.58	8.39	5.08	2.11	238
Aug	42.6	42.1	43.8	18.7	89.6	7.47	3.02	27.2	27.1	4.39	1.29	5.89	2.33	276
Sept	18.9	18.4	21.0	7.14	36.9	8.45	3.61	14.9	14.8	4.68	0.738	6.13	1.19	435
Oct	23.6	22.8	25.0	9.50	30.2	13.2	3.88	26.1	25.8	2.92	1.97	5.70	1.42	414
Nov	81.5	78.9	71.8	28.1	40.2	44.0	7.20	88.2	87.2	10.2	0.447	6.35	3.67	14.3
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	39.9	39.2	40.5	14.1	66.0	11.6	5.56	30.8	30.5	5.59	2.28	5.64	2.21	1994
Max.	244	242	244	65.1	448	71.5	52.5	180	180	37.2	18.6	7.01	12.5	
Min.	9.63	9.32	9.63	3.32	11.5	3.00	1.20	7.30	7.19	0.411	0.0989	4.73	0.587	

Wet deposition amount

2021	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	*	*	*	*	*	*	*	*	*	*	*
Feb	3.83	3.77	3.83	0.699	7.43	0.913	0.294	2.36	2.34	0.327	0.0354
Mar	5.45	5.39	5.45	1.23	8.51	0.934	0.845	3.12	3.10	0.968	0.250
Apr	10.9	10.8	11.5	3.43	15.0	2.04	0.906	9.21	9.16	1.49	0.388
May	7.22	7.12	7.22	1.91	11.4	1.67	0.814	4.63	4.60	0.874	0.226
June	13.2	12.9	12.6	6.32	27.4	3.91	2.06	7.73	7.65	1.57	0.150
July	8.15	8.04	7.64	1.91	8.22	1.82	2.06	8.30	8.26	1.33	2.00
Aug	11.8	11.6	12.1	5.17	24.8	2.06	0.834	7.52	7.47	1.21	0.355
Sept	8.24	8.02	9.16	3.11	16.1	3.68	1.57	6.51	6.43	2.04	0.321
Oct	9.76	9.43	10.4	3.93	12.5	5.47	1.61	10.8	10.7	1.21	0.818
Nov	1.17	1.13	1.03	0.402	0.575	0.630	0.103	1.26	1.25	0.145	<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	79.5	78.1	80.8	28.1	132	23.1	11.1	61.4	60.9	11.1	4.55

Data completeness

2021	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	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Feb	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
Mar	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	100
Apr	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
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	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	99.6	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

Terms and abbreviations are given in Table 3.5.

Table 3.61 Monthly results

Site: Hoa Binh

Country: Vietnam

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	86.3	84.6	92.8	27.3	119	28.3	15.0	57.1	56.5	12.6	4.30	5.37	4.38	10.0
Feb	38.9	38.8	42.5	15.7	67.2	2.31	5.04	22.4	22.3	1.85	17.3	4.76	2.38	27.0
Mar	241	237	231	74.8	251	65.1	38.2	193	192	44.4	0.533	6.27	11.5	7.6
Apr	20.3	19.9	22.8	12.7	16.7	6.72	3.68	21.0	20.9	5.09	7.57	5.12	1.32	96.1
May	21.5	21.3	32.8	12.4	18.0	3.64	1.14	26.2	26.1	2.35	13.0	4.89	1.68	167
June	34.7	34.1	69.0	18.9	64.0	9.83	7.88	39.4	39.2	8.21	1.59	5.80	2.47	328
July	40.0	39.4	47.8	15.0	91.9	10.4	3.61	19.9	19.7	4.15	2.83	5.55	2.27	400
Aug	41.5	40.8	40.0	16.9	89.0	11.0	3.79	20.9	20.6	5.40	1.01	6.00	2.14	315
Sept	31.0	30.5	31.8	11.9	38.2	7.65	6.54	25.9	25.8	3.48	1.68	5.78	1.57	393
Oct	20.1	19.5	21.8	14.0	18.2	11.3	1.82	20.9	20.6	1.45	3.64	5.44	1.20	437
Nov	20.1	17.9	45.8	7.36	14.7	36.0	2.12	18.1	17.4	3.58	2.58	5.59	1.39	8.4
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	0.1
Annual	32.4	31.8	40.3	15.1	54.1	9.65	4.44	25.5	25.3	4.33	3.49	5.46	1.90	2189
Max.	344	336	233	98.8	293	127	72.3	226	223	92.8	36.4	7.02	13.7	
Min.	12.4	12.0	6.90	1.74	6.50	0.739	0.460	9.15	9.05	0.900	0.0966	4.44	0.780	

Wet deposition amount

2021	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	0.863	0.846	0.928	0.273	1.19	0.283	0.150	0.571	0.565	0.126	0.0430
Feb	1.05	1.05	1.15	0.424	1.81	0.0622	0.136	0.604	0.602	0.0500	0.468
Mar	1.83	1.80	1.76	0.569	1.91	0.494	0.290	1.47	1.46	0.337	<0.01
Apr	1.95	1.92	2.19	1.22	1.61	0.645	0.353	2.02	2.01	0.489	0.728
May	3.58	3.54	5.47	2.07	3.00	0.606	0.191	4.36	4.35	0.391	2.17
June	11.4	11.2	22.6	6.22	21.0	3.23	2.58	12.9	12.8	2.69	0.522
July	16.0	15.8	19.1	6.02	36.8	4.17	1.45	7.97	7.88	1.66	1.13
Aug	13.0	12.8	12.6	5.33	28.0	3.46	1.19	6.57	6.50	1.70	0.317
Sept	12.2	12.0	12.5	4.70	15.0	3.01	2.57	10.2	10.1	1.37	0.659
Oct	8.80	8.50	9.54	6.14	7.93	4.92	0.797	9.12	9.01	0.636	1.59
Nov	0.169	0.151	0.385	0.0618	0.124	0.302	0.0178	0.152	0.146	0.0300	0.0217
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	70.8	69.6	88.2	33.0	118	21.1	9.72	55.9	55.5	9.47	7.65

Data completeness

2021	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	EC	Precip. %PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	100
Mar	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	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	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	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 3.62 Monthly results

Site: Cuc Phuong

Country: Vietnam

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	168	154	385	234	343	231	64.7	301	296	49.8	0.126	6.90	18.5	6.3
Feb	20.5	19.1	63.6	34.8	56.8	22.3	17.3	39.6	39.1	15.3	0.316	6.50	2.38	52.8
Mar	67.6	53.0	114	292	170	243	36.6	84.4	79.2	34.4	0.261	6.58	8.11	63.5
Apr	38.3	34.4	71.3	53.0	81.9	64.2	21.5	90.3	88.9	21.6	0.373	6.43	4.44	156
May	8.60	5.65	20.0	30.5	16.9	49.0	11.9	96.9	95.9	13.2	0.257	6.59	3.47	75.4
June	6.92	5.17	8.57	16.3	30.6	29.0	7.01	20.1	19.5	7.07	0.266	6.58	1.50	288
July	5.96	4.46	11.0	25.1	71.7	24.9	1.79	26.2	25.7	11.4	1.33	5.88	1.80	306
Aug	5.83	4.24	15.5	16.9	13.6	26.4	2.19	37.9	37.4	16.5	0.446	6.35	1.68	122
Sept	11.7	10.3	12.2	25.2	29.1	22.6	4.43	16.7	16.2	13.6	0.807	6.09	1.46	430
Oct	17.3	15.6	22.9	29.6	38.7	27.3	7.20	18.6	18.0	13.1	0.547	6.26	1.54	391
Nov	54.1	58.8	104	84.0	48.7	39.5	13.8	71.8	71.0	14.7	18.4	4.73	3.63	10.9
Dec	97.3	91.9	161	105	258	89.1	11.4	127	125	26.8	0.501	6.30	7.60	13.2
Annual	16.3	13.9	26.4	37.4	49.1	38.1	8.16	34.1	33.3	13.9	0.744	6.13	2.22	1915
Max.	168	154	385	558	343	483	160	301	296	51.4	25.1	7.30	18.5	
Min.	4.22	2.63	5.48	7.20	8.57	7.48	0.384	8.97	8.79	5.47	0.0501	4.60	0.830	

Wet deposition amount

2021	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	1.06	0.971	2.42	1.48	2.16	1.45	0.407	1.89	1.86	0.314	<0.01
Feb	1.08	1.01	3.36	1.84	3.00	1.18	0.916	2.09	2.07	0.808	0.0167
Mar	4.29	3.36	7.25	18.5	10.8	15.4	2.32	5.36	5.03	2.19	0.0165
Apr	5.97	5.36	11.1	8.26	12.8	10.0	3.36	14.1	13.9	3.37	0.0583
May	0.648	0.426	1.51	2.30	1.28	3.69	0.899	7.31	7.23	0.994	0.0194
June	1.99	1.49	2.46	4.68	8.81	8.35	2.02	5.77	5.59	2.03	0.0763
July	1.82	1.36	3.38	7.69	21.9	7.62	0.548	8.03	7.86	3.48	0.407
Aug	0.713	0.519	1.90	2.07	1.67	3.23	0.267	4.64	4.57	2.02	0.0546
Sept	5.02	4.44	5.24	10.8	12.5	9.70	1.90	7.16	6.95	5.86	0.347
Oct	6.74	6.10	8.95	11.6	15.1	10.7	2.82	7.28	7.05	5.10	0.214
Nov	0.590	0.641	1.13	0.916	0.530	0.431	0.151	0.783	0.774	0.160	0.201
Dec	1.28	1.21	2.12	1.39	3.41	1.18	0.150	1.67	1.65	0.353	<0.01
Annual	31.1	26.6	50.5	71.6	94.0	72.9	15.6	65.4	63.8	26.6	1.42

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	100
May	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	100
June	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
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	98.9	98.9	98.9	98.9	98.9	98.9	98.9	98.9	98.9	98.9	98.9	98.9	98.9	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	62.4	100	100	62.4	62.4	62.4	62.4	62.4	62.4	100	100	100	100
Dec	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
Annual	99.1	98.9	99.1	99.1	98.9	98.9	98.9	98.9	98.9	98.9	99.1	99.1	99.1	100

Terms and abbreviations are given in Table 3.5.

Table 3.63 Monthly results

Site: Da Nang

Country: Vietnam

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	14.4	8.70	4.79	105	32.2	95.3	7.87	34.0	31.9	11.5	1.45	5.84	2.80	34.7
Feb	15.3	9.89	<0.5	99.1	61.2	89.1	55.1	94.3	92.3	15.3	0.741	6.13	4.91	31.9
Mar	83.2	67.9	20.5	440	158	255	65.9	97.3	91.8	86.1	1.38	5.86	11.7	14.6
Apr	12.1	8.66	1.90	599	4.55	57.5	527	49.8	48.5	42.9	0.759	6.12	10.6	24.1
May	*	*	*	*	*	*	*	*	*	*	*	*	*	2.1
June	29.9	27.5	8.16	316	30.0	39.7	260	65.5	64.6	15.5	1.16	5.94	6.96	38.5
July	18.1	<0.3	43.3	458	25.8	297	40.1	140	133	69.9	1.20	5.92	10.2	12.4
Aug	27.7	17.6	5.43	239	5.22	167	9.80	120	117	50.1	0.832	6.08	6.21	57.4
Sept	7.83	3.60	2.63	108	6.46	70.0	5.65	25.7	24.2	11.4	1.96	5.71	2.06	817
Oct	8.18	6.08	2.08	60.2	16.0	34.9	12.5	34.2	33.5	10.8	1.25	5.90	1.78	817
Nov	25.3	18.8	7.58	192	51.7	108	19.4	33.4	31.1	29.2	1.64	5.79	4.23	255
Dec	14.2	9.19	4.65	118	20.2	82.5	7.76	17.7	16.0	25.3	1.93	5.72	2.54	478
Annual	12.2	8.04	3.70	116	18.6	68.8	19.2	32.2	30.7	17.4	1.62	5.79	2.63	2584
Max.	83.2	67.9	43.3	599	158	297	527	171	169	86.1	2.14	6.20	11.7	
Min.	5.44	<0.3	<0.5	36.8	4.43	23.6	2.20	12.6	11.9	7.77	0.631	5.67	1.04	

Wet deposition amount

2021	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	0.501	0.302	0.166	3.64	1.12	3.31	0.273	1.18	1.11	0.397	0.0504
Feb	0.487	0.316	<0.01	3.16	1.95	2.84	1.76	3.01	2.95	0.487	0.0236
Mar	1.21	0.991	0.300	6.42	2.30	3.72	0.962	1.42	1.34	1.26	0.0202
Apr	0.292	0.209	0.0459	14.4	0.110	1.39	12.7	1.20	1.17	1.03	0.0183
May	*	*	*	*	*	*	*	*	*	*	*
June	1.15	1.06	0.314	12.2	1.15	1.53	10.0	2.52	2.49	0.595	0.0446
July	0.224	<0.01	0.537	5.68	0.320	3.68	0.497	1.73	1.65	0.866	0.0149
Aug	1.59	1.01	0.311	13.7	0.299	9.60	0.562	6.90	6.70	2.87	0.0477
Sept	6.39	2.95	2.14	88.5	5.28	57.2	4.62	21.0	19.8	9.29	1.60
Oct	6.68	4.97	1.70	49.2	13.1	28.5	10.3	28.0	27.4	8.85	1.02
Nov	6.47	4.81	1.94	49.1	13.2	27.6	4.96	8.53	7.93	7.47	0.418
Dec	6.78	4.40	2.22	56.6	9.67	39.5	3.71	8.49	7.63	12.1	0.922
Annual	31.5	20.8	9.56	300	48.1	178	49.6	83.2	79.4	44.8	4.19

Data completeness

2021	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	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	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	0	0	0	0	0	0	0	0	0	0	0	0	0	100
June	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	100
July	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	100
Aug	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	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	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	100

Terms and abbreviations are given in Table 3.5.

Table 3.64 Monthly results

Site: Can Tho

Country: Vietnam

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	*	*	*	*	*	*	*	*	*	*	5.86	5.23	1.62	12.0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	17.7	17.0	4.63	31.5	20.8	11.7	6.58	12.8	12.6	6.00	3.35	5.47	1.23	146
May	19.1	18.1	3.73	31.8	18.6	16.4	5.33	12.2	11.8	7.03	1.82	5.74	1.26	286
June	19.9	19.0	3.84	30.0	19.9	14.6	6.67	13.1	12.8	7.26	0.876	6.06	1.19	561
July	22.3	21.4	4.26	29.2	19.0	13.9	6.25	12.9	12.6	6.89	0.691	6.16	1.24	642
Aug	17.7	16.8	3.91	26.7	20.0	15.1	6.28	12.8	12.4	5.53	0.854	6.07	1.12	155
Sept	21.6	20.9	3.98	27.2	20.5	11.7	7.36	12.7	12.4	6.44	0.938	6.03	1.22	250
Oct	18.0	17.2	2.85	32.1	17.4	14.4	7.08	13.1	12.8	7.01	0.795	6.10	1.13	218
Nov	23.3	22.5	4.10	31.7	15.8	13.1	5.41	14.5	14.2	8.99	0.940	6.03	1.16	133
Dec	20.1	19.3	4.30	27.7	19.3	13.1	5.52	13.6	13.4	8.44	0.683	6.17	1.29	134
Annual	20.3	19.5	3.95	29.8	19.2	14.0	6.36	13.0	12.7	7.01	1.09	5.96	1.21	2536
Max.	25.9	25.1	5.64	35.7	23.8	18.2	8.16	18.2	17.9	10.3	5.86	6.27	1.62	
Min.	15.3	14.2	2.42	23.0	14.3	10.2	4.13	9.89	9.50	4.92	0.537	5.23	1.00	

Wet deposition amount

2021	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	*	*	*	*	*	*	*	*	*	*	0.0703
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	2.58	2.48	0.676	4.59	3.04	1.70	0.961	1.87	1.83	0.877	0.490
May	5.46	5.18	1.07	9.10	5.31	4.68	1.52	3.49	3.38	2.01	0.520
June	11.1	10.6	2.16	16.8	11.1	8.18	3.74	7.35	7.17	4.07	0.491
July	14.3	13.8	2.73	18.8	12.2	8.94	4.01	8.27	8.07	4.42	0.444
Aug	2.74	2.60	0.606	4.13	3.10	2.33	0.973	1.98	1.93	0.857	0.132
Sept	5.39	5.21	0.994	6.78	5.11	2.93	1.84	3.16	3.10	1.61	0.234
Oct	3.92	3.73	0.620	6.97	3.79	3.14	1.54	2.85	2.79	1.53	0.173
Nov	3.09	2.99	0.545	4.22	2.11	1.74	0.720	1.93	1.89	1.20	0.125
Dec	2.69	2.58	0.575	3.71	2.58	1.75	0.739	1.83	1.79	1.13	0.0913
Annual	51.6	49.4	10.0	75.5	48.6	35.5	16.1	32.9	32.1	17.8	2.77

Data completeness

2021	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	0	0	0	0	0	0	0	0	0	0	100	100	100	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	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	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.65 Monthly results

Site: Ho Chi Minh

Country: Vietnam

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	24.7	23.4	9.27	49.2	29.5	20.8	9.30	17.8	17.4	11.9	1.17	5.93	1.48	30.0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	31.5	29.8	16.9	47.2	33.4	27.9	12.0	20.9	20.3	11.7	3.06	5.51	1.62	82.0
May	28.1	26.6	15.4	38.8	27.9	26.0	9.98	17.0	16.4	12.2	1.67	5.78	1.82	309
June	21.2	20.0	15.8	40.1	31.8	21.0	12.0	18.3	17.8	11.2	0.434	6.36	1.60	350
July	24.3	23.3	10.9	48.5	29.2	17.7	11.0	19.5	19.1	11.1	0.631	6.20	1.59	350
Aug	28.7	27.9	11.9	38.2	31.3	14.7	10.6	20.0	19.7	10.4	0.625	6.20	1.57	331
Sept	25.0	23.9	11.2	41.7	30.6	18.4	10.3	17.3	16.9	10.1	0.578	6.24	1.64	339
Oct	23.4	22.2	19.1	49.7	33.0	19.9	10.2	18.3	17.9	10.8	0.771	6.11	1.46	209
Nov	24.1	23.1	12.8	46.9	29.3	16.5	11.5	19.8	19.4	10.4	0.668	6.18	1.51	205
Dec	26.4	25.3	14.8	54.1	27.7	17.9	10.3	18.1	17.7	14.4	0.427	6.37	1.52	85.7
Annual	25.3	24.2	13.7	43.5	30.4	19.5	10.8	18.6	18.2	11.1	0.835	6.08	1.61	2289
Max.	35.2	34.2	20.9	54.9	39.3	27.9	15.2	25.1	24.8	15.5	5.62	6.44	1.90	
Min.	20.3	19.0	6.63	32.5	25.4	13.4	7.95	14.0	13.6	7.82	0.363	5.25	1.39	

Wet deposition amount

2021	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	0.741	0.703	0.278	1.47	0.885	0.624	0.279	0.535	0.521	0.358	0.0352
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	2.58	2.45	1.39	3.87	2.74	2.29	0.986	1.71	1.66	0.960	0.251
May	8.68	8.19	4.74	12.0	8.59	8.01	3.08	5.24	5.07	3.75	0.515
June	7.42	6.98	5.54	14.0	11.1	7.35	4.20	6.38	6.23	3.92	0.152
July	8.51	8.13	3.81	17.0	10.2	6.19	3.85	6.80	6.67	3.88	0.221
Aug	9.50	9.21	3.94	12.6	10.3	4.87	3.51	6.62	6.51	3.44	0.207
Sept	8.49	8.12	3.81	14.2	10.4	6.25	3.49	5.87	5.73	3.43	0.196
Oct	4.90	4.65	4.00	10.4	6.89	4.16	2.13	3.84	3.75	2.25	0.161
Nov	4.94	4.73	2.63	9.60	6.00	3.39	2.35	4.05	3.98	2.13	0.137
Dec	2.26	2.17	1.27	4.64	2.38	1.54	0.880	1.55	1.52	1.23	0.0366
Annual	58.0	55.3	31.4	99.7	69.5	44.7	24.8	42.6	41.6	25.4	1.91

Data completeness

2021	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	100	100	100	100	100	100	100	100	100	100	100	100	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	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 3.66 Monthly results

Site: Yen Bai

Country: Vietnam

Precipitation amount-weighted average concentration/ Precipitation amount

2021	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	88.1	86.2	115	25.3	68.7	32.7	10.2	99.7	99.0	8.85	1.67	5.78	4.44	27.8
Feb	71.0	70.1	87.4	25.6	164	16.5	14.5	34.6	34.3	6.67	0.746	6.13	4.05	46.9
Mar	43.4	42.3	44.5	29.8	73.8	18.3	10.5	28.5	28.1	5.04	3.33	5.48	2.55	37.4
Apr	56.8	55.9	50.6	23.8	123	14.2	4.52	24.6	24.2	3.27	5.02	5.30	3.03	157
May	78.8	77.9	77.3	22.1	149	14.5	10.4	45.7	45.4	7.62	1.86	5.73	3.99	228
June	17.5	17.0	12.9	5.28	32.9	7.45	1.70	6.62	6.45	0.986	2.24	5.65	0.886	117
July	34.2	33.6	25.0	14.5	59.9	10.4	3.26	19.2	18.9	2.70	1.61	5.79	1.70	188
Aug	15.9	15.6	15.3	6.59	19.0	6.17	3.00	12.4	12.3	1.67	1.69	5.77	0.856	104
Sept	25.2	24.7	20.8	9.02	32.5	9.78	2.33	15.2	15.0	3.98	5.53	5.26	1.37	209
Oct	14.4	14.2	11.6	6.60	28.0	2.68	2.48	9.66	9.60	0.825	1.30	5.89	0.765	212
Nov	52.1	51.2	50.7	12.7	128	14.7	3.19	13.5	13.1	1.36	0.843	6.07	2.54	83.8
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	40.5	39.8	37.8	14.3	75.2	10.8	4.85	22.5	22.3	3.48	2.60	5.59	2.10	1411
Max.	130	127	182	41.4	185	45.1	17.2	157	156	11.2	25.8	6.56	6.52	
Min.	8.98	8.71	5.23	1.21	14.3	0.783	0.501	3.13	2.97	<0.3	0.275	4.59	0.540	

Wet deposition amount

2021	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	2.45	2.40	3.19	0.703	1.91	0.909	0.282	2.77	2.75	0.246	0.0464
Feb	3.33	3.29	4.10	1.20	7.67	0.774	0.679	1.62	1.61	0.313	0.0350
Mar	1.62	1.58	1.66	1.11	2.76	0.683	0.392	1.07	1.05	0.189	0.125
Apr	8.92	8.78	7.94	3.74	19.4	2.23	0.710	3.86	3.81	0.514	0.788
May	17.9	17.7	17.6	5.02	33.8	3.30	2.37	10.4	10.3	1.73	0.424
June	2.04	1.98	1.51	0.616	3.83	0.868	0.198	0.771	0.752	0.115	0.260
July	6.43	6.31	4.69	2.73	11.3	1.97	0.614	3.60	3.56	0.507	0.303
Aug	1.66	1.62	1.59	0.686	1.98	0.642	0.313	1.29	1.28	0.174	0.176
Sept	5.28	5.16	4.36	1.89	6.81	2.05	0.489	3.18	3.14	0.833	1.16
Oct	3.06	3.02	2.47	1.40	5.95	0.570	0.528	2.05	2.04	0.175	0.276
Nov	4.37	4.29	4.25	1.07	10.7	1.23	0.267	1.13	1.10	0.114	0.0706
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	57.1	56.2	53.4	20.2	106	15.2	6.84	31.8	31.4	4.92	3.66

Data completeness

2021	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	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 3.67 Annual precipitation amount and precipitation amount-weighted average concentration in 2021

Country	Name of sites	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
		mm y ⁻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	μmol L ⁻¹		mS m ⁻¹
Cambodia	Phnom Penh	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	Haifu	1318	26.4	26.2	41.0	5.19	73.5	2.47	2.38	21.6	21.6	2.19	2.94	5.53	1.85
	Jinyunshan	1530	24.4	24.3	35.7	4.28	55.8	1.51	1.78	15.4	15.4	2.12	8.96	5.05	1.71
	Shizhan	827	34.7	33.6	12.9	25.8	69.5	17.9	3.52	95.0	94.6	1.25	0.0744	7.13	3.57
	Jiwozi	926	16.9	15.6	4.41	8.66	31.9	20.9	5.05	34.9	34.4	0.630	0.580	6.24	1.41
	Hongwen	443	22.0	19.3	37.9	33.2	46.2	45.3	10.6	35.3	34.4	6.44	4.63	5.33	2.42
	Xiaoping	739	12.6	12.2	30.1	12.1	34.8	7.52	2.55	6.93	6.77	2.19	13.6	4.87	1.35
	Xiang Zhou	2472	5.83	4.73	13.3	20.8	14.0	18.3	0.901	6.29	5.89	2.38	6.03	5.22	0.905
	Zhuxiandong	2398	7.98	6.52	19.1	27.7	18.4	24.2	1.63	8.47	7.95	3.49	3.56	5.45	1.02
	Wuzhishan	1157	2.69	2.27	6.20	7.41	13.2	6.83	3.40	3.37	3.23	1.36	0.623	6.21	0.525
	Lijiang	614	2.18	2.13	0.882	2.07	12.6	1.15	0.642	4.31	4.29	1.24	0.241	6.62	0.366
Indonesia	Jakarta	2115	27.2	26.2	24.6	20.2	30.6	15.9	2.43	8.42	8.08	3.06	12.6	4.90	1.81
	Serpong	2241	30.6	29.3	33.7	25.6	69.6	22.4	5.04	11.7	11.3	3.54	3.39	5.47	2.00
	Kototabang	2575	5.55	5.33	5.57	5.89	9.94	3.63	4.29	9.73	9.65	0.922	2.55	5.59	0.507
	Bandung	1775	30.6	30.1	19.7	7.67	53.2	7.05	2.54	17.1	16.9	2.81	3.22	5.49	1.59
	Maros	1604	5.33	4.57	5.11	14.3	3.52	12.6	1.91	22.7	22.4	1.65	0.568	6.25	0.659
	Membrana	2573	8.55	6.61	24.2	61.3	12.2	32.2	20.9	5.43	4.74	4.87	12.2	4.91	1.79
	Lombok	2069	9.52	8.35	5.10	20.2	16.6	19.5	6.93	6.65	6.23	4.14	5.15	5.29	0.968
Japan	Rishiri	1055	22.0	8.15	12.8	259	15.0	230	6.17	9.79	4.83	27.7	8.77	5.06	4.36
	Ochiishi	807	36.0	18.9	42.1	323	43.0	282	24.7	15.1	9.00	32.1	12.7	4.90	4.51
	Sado-seki	1530	117	33.6	18.9	1527	14.3	1389	43.3	53.1	23.1	188	18.6	4.73	27.9
	Happo	2674	4.65	4.34	6.90	6.37	7.25	5.25	0.426	2.45	2.34	0.962	5.53	5.26	0.541
	Ijira	4209	6.08	5.10	10.2	19.1	9.66	16.2	0.588	2.03	1.68	2.17	8.72	5.06	0.866
	Oki	1736	29.4	6.54	12.5	434	9.83	380	9.38	12.2	3.99	41.7	7.38	5.13	5.93
	Yusuhara	2811	4.99	3.90	6.04	21.2	4.78	17.9	1.09	1.96	1.58	2.54	7.15	5.15	0.763
	Hedo	2740	82.6	14.7	20.2	1353	23.8	1125	24.4	28.5	4.16	129	20.8	4.68	19.7
	Ogasawara	1880	11.8	1.90	2.36	190	1.68	164	2.99	3.97	0.485	17.4	5.17	5.29	2.80
	Tokyo	1839	6.96	5.79	11.7	22.8	17.6	19.4	0.502	2.62	2.20	2.26	6.71	5.17	0.941
	Niigata-maki	1777	17.9	6.46	13.5	218	11.9	189	4.55	6.81	2.72	21.6	10.1	5.00	3.67
	Tsushima	2231	10.3	8.16	11.3	40.6	9.17	35.0	1.20	1.92	1.16	4.11	13.0	4.89	1.46
Lao PDR	Vientiane	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	3772	9.56	9.27	27.8	8.76	18.9	4.88	1.53	4.06	3.95	0.743	20.8	4.68	1.50
	Danum Valley	3659	2.46	2.05	1.10	8.74	<0.8	6.84	2.43	1.89	1.74	0.714	5.78	5.24	0.506
	Kuching	4430	2.86	2.41	7.42	11.0	4.98	7.50	1.96	2.46	2.29	0.596	4.52	5.34	0.630
	Gunung Brinchang	571	2.13	1.89	4.36	7.04	2.93	4.66	1.85	2.74	2.64	0.332	5.59	5.25	0.481
Mongolia	Ulaanbaatar	178	*	*	*	*	62.5	17.4	1.57	49.2	48.8	3.33	2.08	5.68	2.10
	Terelj	191	*	*	*	*	55.6	111	4.22	31.3	29.1	3.14	2.00	5.70	4.04
Myanmar	Yangon	2075	5.31	4.37	15.7	16.8	19.0	15.7	7.66	2.60	2.26	29.5	0.182	6.74	0.807
Philippines	Metro Manila	2556	18.0	16.6	13.2	30.2	16.5	22.3	1.77	9.22	8.75	1.41	10.0	5.00	1.33
	Los Baños	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	***	***	***	***	***	***	***	***	***	***	***	***	***	***
R of Korea	Kanghwa	688	15.0	13.2	33.5	36.4	36.8	29.9	2.41	10.6	10.00	5.35	5.59	5.25	1.62
	Cheju	1185	31.9	15.0	26.6	288	23.4	285	11.3	9.76	3.78	25.0	2.04	5.69	5.13
	Imsil	522	17.1	12.3	25.9	70.9	22.5	80.5	6.64	8.88	7.24	5.28	0.655	6.18	1.96
Russia	Mondy	58.6	6.11	5.94	3.31	2.45	33.1	2.82	3.64	4.50	4.44	1.24	2.34	5.63	0.802
	Listvyanka	563	16.2	15.9	9.44	2.27	14.7	4.78	3.76	6.76	6.66	2.29	14.0	4.85	1.14
	Irkutsk	591	26.0	25.6	9.95	6.92	25.0	7.00	5.18	15.4	15.3	4.63	10.9	4.96	1.51
	Primorskaya	726	21.8	19.8	22.2	59.3	51.4	34.3	6.69	13.8	13.1	5.56	2.77	5.56	1.85
Thailand	Bangkok	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Samutprakarn	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Pathumthani	883	8.95	8.75	25.1	8.72	32.6	3.64	4.02	5.41	5.33	1.18	3.26	5.49	1.03
	Khanchanaburi	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	1994	39.9	39.2	40.5	14.1	66.0	11.6	5.56	30.8	30.5	5.59	2.28	5.64	2.21
	Hoa Binh	2189	32.4	31.8	40.3	15.1	54.1	9.65	4.44	25.5	25.3	4.33	3.49	5.46	1.90
	Cuc Phuong	1915	16.3	13.9	26.4	37.4	49.1	38.1	8.16	34.1	33.3	13.9	0.744	6.13	2.22
	Da Nang	2584	12.2	8.04	3.70	116	18.6	68.8	19.2	32.2	30.7	17.4	1.62	5.79	2.63
	Can Tho	2536	20.3	19.5	3.95	29.8	19.2	14.0	6.36	13.0	12.7	7.01	1.09	5.96	1.21
	Ho Chi Minh	2289	25.3	24.2	13.7	43.5	30.4	19.5	10.8	18.6	18.2	11.1	0.835	6.08	1.61
	Yen Bai	1411	40.5	39.8	37.8	14.3	75.2	10.8	4.85	22.5	22.3	3.48	2.60	5.59	2.10

Terms and abbreviations are given in Table 3.5.

Table 3.68 Annual wet depositions in 2021

Country	Name of sites	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	***	***	***	***	***	***	***	***	***	***	***
China	Haifu	34.7	34.6	54.1	6.84	96.8	3.26	3.14	28.5	28.4	2.89	3.88
	Jinyunshan	37.3	37.2	54.6	6.55	85.4	2.31	2.72	23.6	23.6	3.25	13.7
	Shizhan	28.7	27.8	10.7	21.3	57.5	14.8	2.91	78.6	78.3	1.03	0.0616
	Jiwozi	15.6	14.4	4.08	8.02	29.5	19.3	4.67	32.3	31.9	0.583	0.537
	Hongwen	9.75	8.54	16.8	14.7	20.5	20.1	4.69	15.7	15.2	2.85	2.05
	Xiaoping	9.34	9.01	22.3	8.94	25.8	5.56	1.89	5.13	5.01	1.62	10.1
	Xiang Zhou	14.4	11.7	32.9	51.5	34.5	45.3	2.23	15.5	14.6	5.87	14.9
	Zhuxiandong	19.1	15.6	45.9	66.4	44.1	58.0	3.91	20.3	19.1	8.36	8.55
	Wuzhishan	3.11	2.63	7.17	8.57	15.2	7.90	3.93	3.89	3.73	1.57	0.720
	Lijiang	1.34	1.31	0.542	1.27	7.75	0.705	0.394	2.65	2.63	0.759	0.148
Indonesia	Jakarta	57.4	55.4	52.0	42.7	64.8	33.5	5.14	17.8	17.1	6.47	26.7
	Serpong	68.6	65.6	75.4	57.4	156	50.2	11.3	26.3	25.2	7.93	7.59
	Kototabang	14.3	13.7	14.3	15.2	25.6	9.35	11.0	25.0	24.8	2.37	6.58
	Bandung	54.3	53.5	34.9	13.6	94.4	12.5	4.51	30.3	30.1	4.99	5.72
	Maros	8.55	7.33	8.19	23.0	5.64	20.3	3.06	36.4	35.9	2.64	0.910
	Jembrana	22.0	17.0	62.2	158	31.4	82.7	53.8	14.0	12.2	12.5	31.4
	Lombok	19.7	17.3	10.6	41.7	34.4	40.4	14.3	13.8	12.9	8.56	10.7
Japan	Rishiri	23.2	8.60	13.5	273	15.8	243	6.52	10.3	5.09	29.2	9.26
	Ochiishi	29.0	15.3	34.0	260	34.7	228	20.0	12.2	7.26	25.9	10.3
	Sado-seki	179	51.4	28.9	2335	21.8	2124	66.2	81.2	35.3	288	28.4
	Happo	12.4	11.6	18.5	17.0	19.4	14.1	1.14	6.55	6.25	2.57	14.8
	Ijira	25.6	21.5	42.9	80.3	40.7	68.1	2.47	8.54	7.07	9.11	36.7
	Oki	51.1	11.3	21.7	754	17.1	659	16.3	21.2	6.92	72.3	12.8
	Yusuhara	14.0	11.0	17.0	59.7	13.4	50.2	3.06	5.51	4.43	7.14	20.1
	Hedo	226	40.4	55.4	3707	65.3	3083	66.9	78.0	11.4	354	56.9
	Ogasawara	22.1	3.57	4.43	358	3.15	308	5.62	7.46	0.911	32.7	9.72
	Tokyo	12.8	10.6	21.5	41.9	32.4	35.7	0.922	4.82	4.04	4.16	12.3
	Niigata-maki	31.7	11.5	23.9	387	21.2	336	8.08	12.1	4.83	38.4	17.9
	Tsushima	22.9	18.2	25.1	90.5	20.4	78.1	2.67	4.27	2.58	9.18	28.9
Lao PDR	Vientiane	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	36.1	35.0	105	33.0	71.4	18.4	5.78	15.3	14.9	2.80	78.3
	Danum Valley	9.00	7.50	4.01	32.0	1.61	25.0	8.88	6.92	6.38	2.61	21.2
	Kuching	12.7	10.7	32.8	48.8	22.0	33.2	8.66	10.9	10.2	2.64	20.0
	Gunung Brinchang	1.22	1.08	2.49	4.02	1.67	2.66	1.06	1.56	1.51	0.189	3.20
Mongolia	Ulaanbaatar	*	*	*	*	11.1	3.10	0.278	8.73	8.66	0.591	0.369
	Terelj	*	*	*	*	10.6	21.2	0.805	5.98	5.55	0.600	0.381
Myanmar	Yangon	11.0	9.06	32.6	34.9	39.3	32.5	15.9	5.40	4.70	61.3	0.378
Philippines	Metro Manila	45.9	42.5	33.9	77.3	42.1	57.0	4.54	23.6	22.4	3.59	25.6
	Los Baños	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	***	***	***	***	***	***	***	***	***	***	***
R of Korea	Kanghwa	10.3	9.04	23.0	25.0	25.3	20.6	1.66	7.32	6.87	3.68	3.85
	Cheju	37.8	17.8	31.6	341	27.7	338	13.4	11.6	4.48	29.6	2.42
	Imsil	8.94	6.41	13.5	37.0	11.8	42.0	3.47	4.63	3.78	2.76	0.342
Russia	Mondy	0.358	0.348	0.194	0.143	1.94	0.166	0.213	0.264	0.260	0.0725	0.137
	Listvyanka	9.12	8.96	5.32	1.28	8.28	2.70	2.12	3.81	3.75	1.29	7.88
	Irkutsk	15.4	15.1	5.89	4.09	14.8	4.14	3.06	9.12	9.03	2.74	6.44
	Primorskaya	15.9	14.4	16.1	43.1	37.3	24.9	4.86	10.0	9.49	4.04	2.01
Thailand	Bangkok	***	***	***	***	***	***	***	***	***	***	***
	Samutprakarn	***	***	***	***	***	***	***	***	***	***	***
	Pathumthani	7.90	7.72	22.2	7.69	28.7	3.21	3.55	4.77	4.70	1.04	2.87
	Khanchanaburi	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	79.5	78.1	80.8	28.1	132	23.1	11.1	61.4	60.9	11.1	4.55
	Hoa Binh	70.8	69.6	88.2	33.0	118	21.1	9.72	55.9	55.5	9.47	7.65
	Cuc Phuong	31.1	26.6	50.5	71.6	94.0	72.9	15.6	65.4	63.8	26.6	1.42
	Da Nang	31.5	20.8	9.56	300	48.1	178	49.6	83.2	79.4	44.8	4.19
	Can Tho	51.6	49.4	10.0	75.5	48.6	35.5	16.1	32.9	32.1	17.8	2.77
	Ho Chi Minh	58.0	55.3	31.4	99.7	69.5	44.7	24.8	42.6	41.6	25.4	1.91
	Yen Bai	57.1	56.2	53.4	20.2	106	15.2	6.84	31.8	31.4	4.92	3.66

Terms and abbreviations are given in Table 3.5.

Table 3.69 Data completeness for annual summaries in 2021 (%PCL, %TP)

Country	Name of sites	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	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	Haifu	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
	Jinyunshan	100	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	100	100
	Jiwozi	100	100	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	100	100
	Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuxiandong	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Wuzhishan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Lijiang	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Serpong	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Kototabang	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Bandung	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Maros	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Jembrana	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Lombok	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Japan	Rishiri	99.2	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.8	82.8	82.8
	Ochiishi	97.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
	Sado-seki	2.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9
	Happo	100	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	98.7	98.7	98.7
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Oki	73.4	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	56.3	56.3	56.3
	Yusuhara	100	98.8	98.7	98.8	98.8	98.7	98.7	98.7	98.7	98.7	98.7	98.6	98.6	98.6
	Hedo	16.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Ogasawara	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	98.7	98.7	98.7
	Tokyo	99.7	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.4	87.4	87.4
	Niigata-maki	99.7	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.6	89.6	89.6
	Tsushima	99.7	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	94.9	94.9	94.9
Lao PDR	Vientiane	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	100	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3
	Danum Valley	100	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4	80.4
	Kuching	100	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
	Gunung Brinchang	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mongolia	Ulaanbaatar	100	0.0	0.0	0.0	0.0	100	100	100	100	100	100	100	100	100
	Terelj	100	0.0	0.0	0.0	0.0	100	100	100	100	100	100	100	100	100
Myanmar	Yangon	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Philippines	Metro Manila	88.9	100	100	100	100	100	100	100	100	100	100	98.7	98.7	98.7
	Los Baños	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	***	***	***	***	***	***	***	***	***	***	***	***	***	***
R of Korea	Kanghwa	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Cheju	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Imsil	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Russia	Mondy	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	100	94.5	94.5	95.3	95.3	99.8	100	100	100	100	100	100	100	100
	Primorskaya	100	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	99.8	99.8	91.1
Thailand	Bangkok	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Samutprakarn	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Pathumthani	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Khanchanaburi	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	100	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
	Hoa Binh	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
	Cuc Phuong	100	99.1	98.9	99.1	99.1	98.9	98.9	98.9	98.9	98.9	98.9	99.1	99.1	99.1
	Da Nang	100	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5
	Can Tho	100	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	100	100	100
	Ho Chi Minh	100	100	100	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	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.70 Results of ion balance and conductivity agreement check in 2021

Country	Name of sites	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	***	***	***	***	***	***	***	***	***	***
China	Haifu*	117	117	116	99.1	117	117	100	117	116	99.1
	Jinyunshan*	133	133	124	93.2	133	132	99.2	133	124	93.2
	Shizhan*	56	56	56	100	56	55	98.2	56	55	98.2
	Jiwozi*	41	41	40	97.6	41	41	100	41	40	97.6
	Hongwen*	29	29	8	27.6	29	28	96.6	29	7	24.1
	Xiaoping*	54	54	47	87.0	54	54	100	54	47	87.0
	Xiang Zhou*	66	66	34	51.5	66	64	97.0	66	34	51.5
	Zhuxiandong*	89	89	53	59.6	89	88	98.9	89	53	59.6
	Wuzhishan*	71	71	20	28.2	71	40	56.3	71	11	15.5
	Lijiang*	58	58	14	24.1	58	18	31.0	58	10	17.2
Indonesia	Jakarta	38	38	19	50.0	38	26	68.4	38	16	42.1
	Serpong*	89	89	88	98.9	89	89	100	89	88	98.9
	Kototabang	46	46	23	50.0	46	43	93.5	46	21	45.7
	Bandung	81	81	59	72.8	81	80	98.8	81	59	72.8
	Maros	16	16	2	12.5	16	12	75.0	16	2	12.5
	Jembrana	43	43	29	67.4	43	34	79.1	43	23	53.5
	Lombok	37	37	13	35.1	37	31	83.8	37	11	29.7
Japan	Rishiri	155	127	121	95.3	127	123	96.9	127	117	92.1
	Ochiishi	3	1	1	100	1	1	100	1	1	100
	Sado-seki	10	6	6	100	6	6	100	6	6	100
	Happo	200	172	163	94.8	172	166	96.5	172	158	91.9
	Ijira	50	46	46	100	46	46	100	46	46	100
	Oki	139	76	76	100	76	76	100	76	76	100
	Yusuhara*	169	157	148	94.3	157	157	100	157	148	94.3
	Hedo	2	2	2	100	2	2	100	2	2	100
	Ogasawara*	193	131	130	99.2	131	131	100	131	130	99.2
	Tokyo*	154	102	97	95.1	102	102	100	102	97	95.1
	Niigata-maki*	162	153	153	100	153	153	100	153	153	100
	Tsushima	122	106	105	99.1	106	102	96.2	106	102	96.2
Lao PDR	Vientiane	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya*	48	48	48	100	48	47	97.9	48	47	97.9
	Danum Valley*	44	43	33	76.7	43	34	79.1	43	27	62.8
	Kuching*	43	43	38	88.4	43	42	97.7	43	38	88.4
	Gunung Brinchang*	11	11	6	54.5	11	9	81.8	11	6	54.5
Mongolia	Ulaanbaatar	32	0	0	N/A	0	0	N/A	0	0	N/A
	Terelj	35	0	0	N/A	0	0	N/A	0	0	N/A
Myanmar	Yangon	28	28	1	3.6	28	5	17.9	28	0	0
Philippines	Metro Manila*	38	34	14	41.2	34	26	76.5	34	11	32.4
	Los Baños	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	***	***	***	***	***	***	***	***	***	***
R of Korea	Kanghwa	74	74	68	91.9	74	74	100	74	68	91.9
	Cheju	78	78	67	85.9	78	78	100	78	67	85.9
	Imsil	54	54	49	90.7	54	54	100	54	49	90.7
Russia	Mondy*	9	9	9	100	9	9	100	9	9	100
	Listvyanka*	53	53	49	92.5	53	52	98.1	53	49	92.5
	Irkutsk*	101	90	80	88.9	90	85	94.4	90	78	86.7
	Primorskaya	108	54	33	61.1	54	54	100	54	33	61.1
Thailand	Bangkok	***	***	***	***	***	***	***	***	***	***
	Samutprakarn	***	***	***	***	***	***	***	***	***	***
	Pathumthani*	69	69	23	33.3	69	31	44.9	69	16	23.2
	Khanchanaburi	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi*	38	33	28	84.8	33	33	100	33	28	84.8
	Hoa Binh*	35	35	33	94.3	35	35	100	35	33	94.3
	Cuc Phuong*	39	32	32	100	32	31	96.9	32	31	96.9
	Da Nang*	38	28	25	89.3	28	28	100	28	25	89.3
	Can Tho*	32	31	26	83.9	31	31	100	31	26	83.9
	Ho Chi Minh*	31	31	23	74.2	31	31	100	31	23	74.2
	Yen Bai*	30	30	30	100	30	30	100	30	30	100

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

Terms and abbreviations are given in Table 3.5.

Table 3.71 Annual precipitation from 2007 to 2021

unit: mm y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	1374	1834	1326	1851	1277	1617	1345	1561	1103	1277	1379	***	***	***	***
China	Guanyinqiao	1299														
	Haifu		1010	1066	977	810	1010	1026	1417	1220	1270	1217	1117	1224	1279	1318
	Jinyunshan	1645	1213	1098	979	848	1005	1127	1490	1288	1217	1268	935	1037	1231	1530
	Shizhan	527	385	592	459	659	393	441	623	594	415	577	471	465	438	827
	Jiwozi	100	438	628	1155	971	390	649	568	447	369	508	547	582	450	926
	Hongwen	1347	945	737	1530	843	924	1403	1129	1015	1771	538	978	1027	318	443
	Xiaoping	1044	2000	1134	1518	1531	1291	1979	1364	1557	1851	676	840	1013	795	739
	Xiang Zhou	1442	2815	2010	1857	1259	1518	2421	1673	1431	2344	1905	2067	1988	1783	2472
	Zhuxiandong	***	2311	1580	1853	1146	***	***	***	1598	2356	1817	2109	2105	2115	2398
	Wuzhishan													1495	833	1157
	Lijiang													508	998	614
Indonesia	Jakarta	2171	1717	1557	2120	990	2722	2331	3168	2807	1976	1307	1709	1500	2976	2115
	Serpong	2015	2370	1344	1426	830	894	2324	2882	1770	2929	3197	2117	2199	3132	2241
	Kototabang	2772	2481	2656	2370	2193	2639	2120	2496	2503	2163	2437	2905	2134	2808	2575
	Bandung	1969	2334	2683	2606	1530	2084	2346	2033	2012	2699	1921	1747	1689	1320	1775
	Maros		3037	3237	2663	3632	2451	4033	2763	2479	1973	2301	3339	1663	1685	1604
	Jembrana													1589	2234	2573
	Lombok													1604	1635	2069
Japan	Rishiri	883	828	1054	1072	1232	1172	1170	1033	1092	1299	938	1087	713	1248	1055
	Ochiishi	866	730	1580	1085	818	871	1059	838	827	1138	836	1124	830	638	807
	Tappi	1055	824	1337	1555	1144	1178	1070	1194	1114	1222	1129	1649			
	Sado-seki	1163	1021	1037	1368	1387	1296	1576	1409	867	999	1262	1573	959	1346	1530
	Happo	2329	1645	2352	2621	3076	2002	2658	2453	2242	2446	3121	2758	2484	2608	2674
	Ijira	2263	2250	2876	3847	3068	2862	2724	3044	3135	3151	2919	3725	2777	3486	4209
	Oki	1160	1110	1123	1452	1534	1296	1395	1053	1061	1519	992	1308	1095	1503	1736
	Banryu	1273	1268	1735	1471	1432	1208	2024	1516	1458	1829	1471	1662			
	Yusuhara	2373	2189	2068	2476	3401	3048	2485	3529	3046	2744	2594	4022	3102	2842	2811
	Hedo	2701	1961	1975	2643	1766	2837	1612	2442	1762	1822	1623	2632	2566	1943	2740
	Ogasawara	1567	1674	1675	1856	1297	1572	1265	1532	1586	1153	1654	960	1868	1662	1880
	Tokyo	1080	1860	1727	1656	1388	1635	1609	1807	1641	1609	1280	1296	1641	1401	1839
	Niigata-maki													1522	2103	1777
	Tsushima													2461	2399	2231
Lao PDR	Vientiane	1399	1668	181	***	***	1322	***	1273	921	713	1337	829	700	***	***
Malaysia	Petaling Jaya	3021	3747	2968	3517	3607	3412	3570	3708	3751	3432	3125	3848	***	3722	3772
	Tanah Rata	2968	3925	3077	2451	3293	2846	2771	2895	2684	2366	3016	2607	***	2875	
	Danum Valley	2988	2999	3391	2370	3787	2958	3202	2848	2025	2987	2964	2489	***	2290	3659
	Kuching		4286	4671	4645	4632	3796	4110	3656	4428	5655	3828	3804	***	4095	4430
	Gunung Brinchang															571
Mongolia	Ulaanbaatar	126	155	228	153	163	170	154	***	150	160	160	170	33.7	161	178
	Terelj	185	206	111	130	144	117	90.8	***	100	106	105	149	***	117	191
Myanmar	Yangon	3981	6375	3010	2280	3151	2570	2692	2872	2432	2180	2813	2940	2962	2235	2075
Philippines	Metro Manila	3505	2381	3782	2676	3657	4461	3516	2628	2499	2519	***	***	2367	2519	2556
	Los Baños	3097	1894	2900	2068	2384	2102	2394	2073	1559	1756	***	***	***	***	***
	Mt.Sto.Tomas	3379	5078	4727	3610	4608	5730	4392	3641	6108	4426	***	***	***	***	***
Republic of Korea	Kanghwa	883	1546	1266	1570	1476	748	898	427	589	837	588	628	502	***	688
	Cheju	1244	843	1039	1003	1076	1199	636	1195	1452	1121	714	1035	791	***	1185
	Imsil	1344	854	1069	1642	1493	1400	1220	1101	719	838	761	1171	1096	***	522
Russia	Mondy	351	206	119	90.2	73.5	105	330	123	136	222	191	362	182	58.5	58.6
	Listvyanka	408	391	312	327	478	343	278	279	335	316	315	225	430	416	563
	Irkutsk	478	527	430	375	329	443	277	388	291	481	502	442	402	484	591
	Primorskaya	989	553	864	673	621	922	723	643	1157	925	635	1023	880	808	726
Thailand	Bangkok	1579	1776	2072	2023	2171	1799	1330	1011	1593	1631	1592	1144	630	1427	***
	Samutprakarn	1871	1734	1989	1880	2103	953	1115	991	1442	1810	1815	1471	899	1086	***
	Pathumthani	1381	1670	1314	1763	1562	1563	1181	1059	1071	1069	1365	1322	804	1423	883
	Khanchanaburi	1704	1962	1998	1626	1941	2390	1501	979	1093	1059	1178	994	652	***	***
	Mae Hia	937	1286	1052	1167	1614	1111	1433	527	747	743	1234	818	754		
	Sakaerat	1386	1722	1259	1627	1509	1126	1443	427	1385	1083	1692	1129	1141		
Vietnam	Hanoi	1659	2267	1609	1236	1817	1798	1945	1661	1273	1661	2071	1900	1290	1577	1994
	HoaBinh	1949	1978	1357	1370	1760	1915	2008	1303	1616	1438	1895	2799	1529	2163	2189
	Cuc Phuong				1654	1853	2018	1898	1702	1461	1937	2236	2521	1571	1953	1915
	Da Nang			2966	1690	3639	1682	2315	2219	1891	2723	2244	2597	2142	3065	2584
	Can Tho								1840	2205	1670	1907	2608	2370	1654	2536
	Ho Chi Minh								1916	1420	2553	3444	2480	2262	2529	2289
	Yen Bai									1514	1815	2397	1866	1593	1691	1411

Terms and abbreviations are given in Table 3.5.

Table 3.72 Precipitation amount-weighted annual average concentrations of SO₄²⁻ from 2007 to 2021

unit: $\mu\text{mol L}^{-1}$																
Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	22.5	11.6	11.6	7.37	9.04	10.5	7.99	6.27	7.04	5.37	11.3	***	***	***	***
China	Guanyinqiao	130														
	Haifu		144	99.3	139	142	102	106	84.4	50.3	46.9	41.0	41.2	33.5	25.8	26.4
	Jinyunshan	90.4	120	114	151	141	124	81.4	60.4	43.9	40.0	36.5	36.3	35.3	30.9	24.4
	Shizhan	183	191	136	100.0	110	109	141	113	82.8	62.5	72.5	47.0	30.3	44.6	34.7
	Jiwozi	182	145	93.5	31.8	62.6	94.5	52.6	69.3	31.6	19.5	35.8	26.6	62.5	15.0	16.9
	Hongwen	75.5	31.7	26.1	26.7	31.3	32.2	21.9	27.0	18.5	22.8	31.7	17.7	45.2	30.6	22.0
	Xiaoping	28.0	29.2	28.2	27.3	24.9	23.4	22.7	29.6	17.3	13.7	14.6	13.1	12.7	11.7	12.6
	Xiang Zhou	21.7	16.5	18.2	19.8	15.5	14.9	19.1	14.3	11.6	16.0	14.1	12.1	10.2	8.70	5.83
	Zhuxiandong	***	21.5	21.0	17.1	20.4	***	***	***	23.3	18.1	14.1	15.7	11.8	10.6	7.98
	Wuzhishan													6.78	4.21	2.69
Lijiang													0.460	37.0	2.18	
Indonesia	Jakarta	27.9	22.7	19.4	21.9	28.7	20.6	21.9	22.2	17.1	31.1	17.3	34.8	25.4	15.4	27.2
	Serpong	30.5	27.8	23.1	24.4	33.6	29.0	26.5	23.2	31.5	25.9	25.5	33.6	33.8	26.3	30.6
	Kototabang	6.99	2.91	4.72	6.33	7.77	6.04	6.22	8.52	8.30	5.70	4.48	5.59	6.58	4.33	5.55
	Bandung	26.4	28.0	29.2	27.0	30.8	26.5	30.7	38.8	30.1	31.9	35.0	31.8	43.1	33.3	30.6
	Maros		5.38	6.96	10.8	8.26	8.77	6.44	7.56	6.19	10.4	6.34	5.83	6.99	4.90	5.33
	Jembrana													9.30	8.99	8.55
Lombok													11.6	9.17	9.52	
Japan	Rishiri	28.3	29.4	25.9	23.4	21.2	27.8	23.2	20.0	18.2	11.8	24.6	22.5	21.8	18.2	22.0
	Ochiishi	21.3	18.7	16.7	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	29.6	28.3	23.1	21.3	27.5	22.3	33.1	26.5	24.7	22.5	22.1	17.4			
	Sado-seki	34.9	31.0	33.0	32.3	24.5	29.8	33.5	32.0	34.7	21.4	19.6	15.6	23.1	18.8	117
	Happo	12.2	10.9	10.1	6.11	7.00	11.6	8.88	8.00	7.06	5.12	4.66	4.74	5.84	4.12	4.65
	Ijira	19.0	18.2	15.4	11.1	13.0	13.6	12.3	12.0	11.7	10.8	10.1	7.43	9.90	7.18	6.08
	Oki	36.3	35.6	37.8	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	27.9	25.8	20.9	21.0	21.1	25.9	17.3	21.6	18.3	16.9	16.2	11.6			
	Yusuhara	9.50	10.2	11.7	9.64	7.02	10.7	9.07	6.92	6.52	7.58	19.8	5.28	6.46	6.75	4.99
	Hedo	14.4	14.2	13.1	20.9	20.5	31.2	22.2	14.3	23.9	17.5	28.0	12.8	12.5	19.3	82.6
	Ogasawara	12.7	8.97	16.5	15.0	15.7	10.2	13.5	12.1	20.8	9.57	12.8	3.99	12.8	7.55	11.8
	Tokyo	17.1	19.6	16.0	10.9	15.9	15.6	12.2	13.9	11.7	9.36	11.3	10.6	11.0	8.34	6.96
	Niigata-maki													20.7	14.3	17.9
	Tsushima													10.5	10.5	10.3
Lao PDR	Vientiane	4.67	5.06	4.05	***	***	2.41	***	***	3.19	3.66	*	*	*	***	***
Malaysia	Petaling Jaya	13.8	17.5	13.2	17.1	22.5	17.0	17.8	21.4	21.4	20.2	13.5	15.5	***	11.0	9.56
	Tanah Rata	3.52	3.28	3.27	3.25	5.05	4.59	4.77	6.19	6.86	3.92	3.53	4.23	***	5.10	
	Danum Valley	2.29	2.49	2.82	5.08	1.96	2.28	3.17	2.58	3.54	1.65	2.70	3.22	***	7.38	2.46
	Kuching		4.14	3.78	3.57	4.07	4.67	5.01	7.14	4.68	4.07	4.00	4.28	***	7.52	2.86
	Gunung Brinchang															2.13
Mongolia	Ulaanbaatar	37.1	27.9	19.9	22.2	28.1	***	56.6	***	122	129	34.6	32.1	346	38.8	*
	Terelj	25.0	16.5	16.5	30.5	23.6	***	48.5	***	104	142	13.5	26.7	***	47.9	*
Myanmar	Yangon	***	***	8.01	4.52	6.63	7.48	7.96	4.55	4.62	9.19	11.6	8.09	8.77	6.24	5.31
Philippines	Metro Manila	22.3	24.9	13.6	20.3	18.7	24.1	15.1	18.0	19.0	21.7	***	***	10.2	11.4	18.0
	Los Baños	8.38	18.0	8.82	7.39	8.57	12.6	6.60	9.13	13.4	15.4	***	***	***	***	***
	Mt.Sto.Tomas	5.74	3.47	5.04	4.94	4.69	7.26	7.71	4.62	4.02	5.52	***	***	***	***	***
Republic of Korea	Kanghwa	41.2	27.9	29.2	26.3	27.2	27.2	36.1	29.3	29.4	18.8	23.5	14.2	26.2	***	15.0
	Cheju	37.9	26.2	25.3	19.3	25.5	36.7	40.6	17.2	17.3	43.1	31.6	23.4	21.1	***	31.9
	Imsil	28.8	21.0	19.6	19.5	20.7	19.4	18.5	15.2	20.2	13.8	18.6	10.6	15.3	***	17.1
Russia	Mondy	9.31	7.13	7.82	6.80	4.53	7.16	3.58	5.47	6.45	3.13	6.43	4.37	4.68	3.62	6.11
	Listvyanka	17.1	21.3	19.3	20.7	22.1	21.4	18.1	17.4	21.0	15.0	22.5	21.2	19.4	14.2	16.2
	Irkutsk	33.6	38.5	31.2	33.5	34.4	37.9	36.6	23.2	42.2	23.6	25.7	31.1	28.2	22.6	26.0
	Primorskaya	30.8	40.6	22.6	31.9	14.0	20.8	29.2	32.1	21.4	24.0	34.2	29.9	18.7	26.3	21.8
Thailand	Bangkok	17.2	18.0	12.7	12.0	10.7	10.7	7.09	8.43	7.53	14.1	17.0	15.1	11.6	9.50	***
	Samutprakarn	14.8	15.7	15.1	15.6	7.67	10.2	7.67	9.61	7.24	11.8	8.90	10.3	10.6	7.43	***
	Pathumthani	12.0	10.6	8.89	8.01	9.45	7.93	9.41	8.23	11.6	10.2	8.91	7.17	10.7	5.61	8.95
	Khanchanaburi	2.47	3.78	3.60	1.79	5.11	3.72	1.23	3.59	2.34	9.80	3.33	2.66	2.94	***	***
	Mae Hia	6.00	4.96	4.30	3.32	3.24	4.76	4.13	8.39	4.12	5.45	6.21	4.17	7.08		
	Sakaerat	6.44	7.36	6.44	7.04	5.30	6.64	7.49	10.8	6.53	6.94	4.93	9.62	7.03		
Vietnam	Hanoi	33.6	20.2	27.4	35.4	30.7	28.8	25.9	39.3	39.5	35.8	34.6	44.5	67.8	86.0	39.9
	HoaBinh	17.0	13.6	16.1	26.3	18.0	17.1	19.7	25.2	20.0	26.3	18.9	21.9	15.0	39.8	32.4
	Cuc Phuong			18.5	20.3	37.6	24.3	26.9	18.5	18.8	16.7	16.2	13.5	22.6	19.5	16.3
	Da Nang			18.8	16.4	21.1	19.6	24.2	15.8	11.4	11.7	16.5	13.9	24.6	11.2	12.2
	Can Tho								8.73	30.7	15.9	16.2	22.7	25.7	24.0	20.3
	Ho Chi Minh								24.2	47.6	19.2	23.4	25.6	31.7	24.0	25.3
	Yen Bai									22.6	43.6	26.2	25.4	24.4	47.7	40.5

Terms and abbreviations are given in Table 3.5.

Table 3.73 Precipitation amount-weighted annual average concentrations of nss-SO₄²⁻ from 2007 to 2021

															unit: $\mu\text{mol L}^{-1}$	
Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	22.0	8.67	11.2	7.18	8.83	10.3	7.80	5.81	6.66	5.11	11.0	***	***	***	***
China	Guanyinqiao	130														
	Haifu		144	99.0	138	142	101	106	84.0	50.1	46.5	40.7	40.9	33.3	25.6	26.2
	Jinyunshan	90.0	120	113	151	140	124	81.2	60.1	43.8	39.8	36.4	36.2	35.1	30.8	24.3
	Shizhan	182	190	135	99.5	109	109	132	105	75.9	59.2	70.8	45.8	29.6	43.3	33.6
	Jiwozi	177	140	92.0	31.4	62.1	91.8	45.8	61.8	26.0	19.0	33.8	25.1	57.2	13.7	15.6
	Hongwen	74.0	30.3	24.6	25.5	30.2	31.2	21.0	25.8	17.4	21.3	29.5	16.3	44.9	27.7	19.3
	Xiaoping	27.2	27.8	27.3	26.2	24.2	22.9	22.0	29.0	16.7	13.3	14.2	12.7	12.6	11.0	12.2
	Xiang Zhou	20.5	14.4	15.8	18.6	13.5	12.1	15.9	12.5	8.60	14.7	11.0	8.04	8.94	7.28	4.73
	Zhuxiandong	***	19.0	18.3	15.9	17.7	***	***	***	19.3	16.2	12.6	10.3	10.3	8.35	6.52
	Wuzhishan														6.26	3.80
Lijiang														0.407	36.9	2.13
Indonesia	Jakarta	27.0	22.1	18.8	21.4	28.0	19.8	20.9	20.9	16.3	29.8	16.7	33.8	24.8	14.5	26.2
	Serpong	29.8	27.2	22.5	23.9	33.0	28.4	25.6	22.1	30.7	25.1	24.8	32.5	32.8	25.5	29.3
	Kototabang	6.47	2.61	4.38	6.04	7.38	5.47	5.71	8.18	8.63	4.96	4.27	5.39	6.30	4.10	5.33
	Bandung	26.0	27.5	28.5	26.4	30.1	25.8	29.9	38.0	29.6	31.2	33.9	30.4	40.4	32.5	30.1
	Maros		4.43	6.18	10.0	7.36	7.65	5.28	6.24	5.99	5.58	3.71	5.01	5.86	3.97	4.57
	Jembrana														8.10	7.18
Lombok														10.2	7.61	8.35
Japan	Rishiri	19.7	14.5	15.3	13.6	12.9	10.5	11.3	10.2	9.80	7.61	12.2	12.2	10.9	9.83	8.15
	Ochiishi	10.1	8.41	5.88	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	15.7	16.4	11.5	14.5	18.5	13.8	17.6	17.1	11.5	12.3	10.7	7.83			
	Sado-seki	21.3	18.3	13.7	13.4	15.3	15.3	13.9	15.0	15.1	10.9	10.6	7.60	9.88	8.30	33.6
	Happo	12.0	10.7	9.82	5.88	6.80	11.0	8.63	7.68	6.71	4.83	4.36	4.42	5.63	3.86	4.34
	Ijira	17.7	17.3	14.6	10.3	12.1	12.4	11.4	11.1	10.8	10.1	9.20	6.55	9.11	6.36	5.10
	Oki	19.7	16.4	15.2	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	23.1	21.4	15.0	15.3	14.6	20.3	13.1	16.4	12.8	11.9	10.9	8.21			
	Yusuhara	8.69	9.69	10.9	9.11	6.28	9.66	8.47	6.61	5.28	7.10	16.7	4.40	5.64	6.19	3.90
	Hedo	6.58	6.73	5.55	5.79	8.26	6.30	8.58	6.03	5.04	5.47	5.94	3.12	4.66	5.60	14.7
	Ogasawara	4.85	3.81	5.21	3.02	3.56	3.35	4.99	4.20	2.39	4.09	2.09	1.23	2.10	4.48	1.90
	Tokyo	15.0	18.4	14.5	9.86	13.6	13.8	10.8	12.8	10.6	8.49	8.89	8.51	7.50	7.41	5.79
	Niigata-maki													10.1	7.51	6.46
	Tsushima													8.69	8.59	8.16
	Lao PDR	Vientiane	4.53	4.88	3.50	***	***	***	***	***	3.02	3.56	*	*	*	***
Malaysia	Petaling Jaya	13.6	17.2	12.9	16.8	22.2	16.8	17.5	21.1	21.0	19.9	13.2	15.2	***	10.6	9.27
	Tanah Rata	3.43	3.21	3.19	3.17	4.93	4.50	4.64	6.02	6.69	3.77	3.38	4.08	***	4.80	
	Danum Valley	2.04	2.30	2.47	4.32	1.72	2.11	2.86	2.25	3.22	1.46	2.56	2.91	***	6.61	2.05
	Kuching		3.82	3.33	3.17	3.53	4.35	4.56	6.58	3.91	3.33	3.44	3.76	***	6.89	2.41
	Gunung Brinchang															1.89
Mongolia	Ulaanbaatar	36.8	27.3	19.6	22.0	27.7	***	52.0	***	***	119	33.3	29.6	339	35.0	*
	Terelj	24.5	15.8	16.0	29.8	23.2	***	47.7	***	***	127	12.7	23.9	***	44.3	*
Myanmar	Yangon	***	***	6.90	3.90	5.72	6.15	7.33	3.51	4.09	8.24	10.7	6.77	7.67	5.40	4.37
Philippines	Metro Manila	21.1	23.4	12.6	18.9	17.4	23.1	13.4	16.5	17.6	20.7	***	***	9.10	10.8	16.6
	Los Baños	7.32	16.9	7.77	6.02	7.40	11.3	5.22	8.20	12.4	14.0	***	***	***	***	***
	Mt.Sto.Tomas	5.40	3.17	4.54	4.56	4.43	6.64	7.31	4.24	3.49	4.62	***	***	***	***	***
Republic of Korea	Kanghwa	38.5	25.6	26.5	24.7	25.0	24.4	34.3	26.7	26.7	17.1	21.9	12.4	15.4	***	13.2
	Cheju	31.8	18.2	22.1	13.1	16.4	14.1	23.2	10.2	11.2	19.3	15.9	7.55	15.5	***	15.0
	Imsil	27.9	19.0	16.6	16.6	18.4	16.3	16.7	13.4	17.3	11.8	16.5	8.33	13.0	***	12.3
Russia	Mondy	9.12	7.02	7.69	6.63	4.30	6.90	3.49	5.34	6.35	3.05	6.27	4.24	4.56	3.32	5.94
	Listvyanka	17.0	21.2	19.1	20.5	21.8	21.1	17.7	17.1	20.9	14.7	22.3	20.8	19.1	14.0	15.9
	Irkutsk	33.0	37.9	30.1	32.4	33.4	37.3	35.8	22.7	41.4	23.2	25.2	30.6	27.7	22.0	25.6
	Primorskaya	29.6	39.3	21.8	30.4	13.2	19.4	27.6	31.1	19.9	22.5	32.6	28.6	17.4	24.2	19.8
Thailand	Bangkok	16.8	17.4	12.1	11.5	10.3	10.3	6.36	7.88	7.04	13.5	16.7	14.5	11.0	8.54	***
	Samutprakarn	14.1	14.8	14.5	14.5	7.33	9.74	6.22	8.85	6.68	11.2	8.47	9.69	10.0	6.69	***
	Pathumthani	11.7	10.3	8.56	7.67	9.10	7.10	9.04	7.91	11.2	9.77	8.61	6.87	10.3	5.40	8.75
	Khanchanaburi	2.04	3.22	3.03	1.60	4.66	3.14	<1.0	3.20	2.00	9.19	3.05	2.17	2.61	***	***
	Mae Hia	5.82	4.81	4.14	3.16	3.05	4.53	3.83	8.17	3.85	5.04	5.85	3.74	6.59		
	Sakaerat	6.18	7.11	6.27	6.85	5.05	6.42	7.31	10.3	6.25	6.70	4.80	8.95	6.45		
Vietnam	Hanoi	33.1	19.6	26.8	35.0	30.3	28.6	25.4	38.9	39.0	35.2	33.6	43.9	66.3	84.5	39.2
	HoaBinh	16.8	13.4	15.9	26.0	17.9	16.9	19.5	25.1	19.8	26.1	18.7	21.8	14.2	39.3	31.8
	Cuc Phuong			17.8	19.6	36.8	23.1	25.3	17.9	18.3	15.9	15.1	12.7	21.2	18.4	13.9
	Da Nang			13.1	13.9	16.8	16.1	15.6	10.8	6.65	7.75	11.6	9.85	18.1	7.76	8.04
	Can Tho								7.80	28.9	15.1	15.6	22.1	24.6	22.9	19.5
	Ho Chi Minh								22.7	45.5	18.4	22.3	24.8	30.5	22.9	24.2
	Yen Bai									22.2	43.0	26.0	25.1	23.7	46.7	39.8

Terms and abbreviations are given in Table 3.5.

Table 3.74 Precipitation amount-weighted annual average concentrations of NO₃⁻ from 2007 to 2021

															unit: $\mu\text{mol L}^{-1}$		
Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Cambodia	PhnomPenh	8.26	9.40	10.3	8.37	8.85	10.7	7.65	8.51	10.4	7.66	10.9	***	***	***	***	
China	Guanyinqiao	48.8															
	Haifu		65.0	53.2	77.6	83.1	73.9	73.9	64.1	47.4	52.3	51.8	56.8	50.2	42.9	41.0	
	Jinyunshan	31.5	46.5	54.4	75.0	77.5	70.4	53.1	45.6	36.4	37.5	36.8	44.6	47.0	42.9	35.7	
	Shizhan	75.9	40.2	57.7	41.0	17.5	49.4	35.6	98.0	71.9	62.8	25.2	38.5	24.7	24.8	12.9	
	Jiwozi	66.8	103	27.4	12.2	8.24	47.4	8.77	13.8	28.6	5.56	2.55	15.1	37.8	4.81	4.41	
	Hongwen	37.6	22.9	23.4	29.0	23.6	35.2	20.9	26.4	26.2	31.4	43.7	27.1	39.3	50.0	37.9	
	Xiaoping	26.2	24.6	29.3	30.3	22.6	26.7	20.7	34.0	24.4	19.3	28.1	25.3	31.3	29.1	30.1	
	Xiang Zhou	16.6	12.3	17.7	23.9	15.7	15.2	20.4	20.9	18.8	18.2	18.1	17.1	21.6	22.6	13.3	
	Zhuxiandong	***	14.7	19.8	19.7	18.8	***	***	***	29.4	22.2	22.8	19.3	24.2	24.3	19.1	
	Wuzhishan													9.44	9.77	6.20	
Lijiang													4.42	29.7	0.882		
Indonesia	Jakarta	31.1	14.1	15.3	17.1	29.8	16.2	21.8	20.0	15.3	34.2	18.9	44.3	25.6	16.2	24.6	
	Serpong	30.4	30.3	25.4	29.8	35.5	31.5	39.5	36.2	48.1	31.7	31.1	48.0	40.1	29.7	33.7	
	Kototabang	3.57	2.79	<0.5	2.37	5.05	4.65	2.86	7.48	3.60	4.16	3.78	7.47	7.60	4.61	5.57	
	Bandung	21.6	20.7	22.8	17.9	28.0	21.6	22.0	27.2	23.6	22.6	25.9	23.9	35.8	27.9	19.7	
	Maros		3.51	5.36	6.35	7.51	9.05	3.65	6.10	6.29	8.79	3.48	7.51	3.16	3.08	5.11	
	Jembrana													9.64	23.8	24.2	
Lombok													12.5	8.19	5.10		
Japan	Rishiri	15.6	14.7	17.3	14.3	14.1	13.4	13.4	10.2	10.8	10.2	18.7	19.3	17.1	14.1	12.8	
	Ochiishi	9.57	8.44	5.42	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	21.6	22.4	13.4	17.5	19.8	17.4	25.2	24.1	14.3	17.6	19.5	12.2				
	Sado-seki	25.8	23.9	16.6	18.1	19.7	20.0	19.4	19.3	20.8	18.7	18.6	14.1	18.1	13.2	18.9	
	Happo	9.82	11.0	8.56	6.51	8.17	11.6	8.32	7.80	6.78	5.79	5.96	6.49	8.06	5.54	6.90	
	Ijira	21.8	24.1	18.4	15.1	15.1	16.7	14.8	14.7	16.7	16.4	15.4	10.4	13.6	11.1	10.2	
	Oki	23.8	19.3	20.2	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	29.2	24.6	20.0	22.6	19.5	27.8	16.2	21.7	18.0	17.9	22.2	13.6				
	Yusuhara	7.19	8.98	7.83	7.70	5.75	8.57	7.03	4.87	7.55	6.96	26.3	4.37	5.64	5.75	6.04	
	Hedo	6.41	6.90	6.43	6.38	7.69	7.17	8.58	6.88	7.05	7.40	8.76	4.99	6.62	6.83	20.2	
	Ogasawara	4.88	3.75	3.39	3.07	2.93	2.88	3.82	3.11	2.41	3.87	2.81	2.08	2.27	2.68	2.36	
	Tokyo	19.5	24.4	18.1	15.3	21.7	18.8	16.1	16.8	16.3	11.8	14.0	15.4	12.7	13.9	11.7	
	Niigata-maki													16.9	13.7	13.5	
	Tsushima													6.76	11.4	11.3	
Lao PDR	Vientiane	6.90	5.96	9.73	***	***	5.55	***	***	4.12	4.07	*	*	*	***	***	
Malaysia	Petaling Jaya	26.6	36.1	46.4	49.5	52.8	43.8	33.5	35.8	43.6	44.1	28.8	36.4	***	25.8	27.8	
	Tanah Rata	4.17	4.53	5.19	4.40	2.21	3.78	3.78	4.82	7.63	5.97	7.89	5.83	***	6.67		
	Danum Valley	0.676	1.37	1.65	1.42	1.05	0.956	1.97	0.738	1.88	0.888	<0.5	0.945	***	<0.5	1.10	
	Kuching		4.98	4.55	4.91	5.00	3.82	4.52	5.29	3.61	4.16	4.64	5.25	***	3.30	7.42	
	Gunung Brinchang															4.36	
Mongolia	Ulaanbaatar	26.0	20.1	19.1	21.4	16.8	***	30.9	***	34.6	36.7	30.4	24.4	56.8	43.5	*	
	Terelj	18.3	18.3	21.0	27.6	18.0	***	31.8	***	24.0	48.9	43.5	25.5	***	40.0	*	
Myanmar	Yangon	***	***	7.23	4.96	6.30	8.31	6.72	4.80	8.25	14.9	18.3	9.98	22.1	16.5	15.7	
Philippines	Metro Manila	14.1	21.1	8.68	50.5	14.4	18.2	13.9	16.0	13.4	36.4	***	***	13.1	11.3	13.2	
	Los Baños	6.25	7.97	8.01	31.4	8.35	11.9	7.80	8.22	8.81	38.5	***	***	***	***	***	
	Mt.Sto.Tomas	5.47	3.92	3.94	4.29	2.56	6.10	8.47	5.07	3.49	5.76	***	***	***	***	***	
Republic of Korea	Kanghwa	39.0	31.0	18.9	31.8	27.7	36.4	43.2	36.9	50.5	29.6	41.9	28.6	32.0	***	33.5	
	Cheju	15.1	26.5	18.6	22.7	27.9	19.3	30.3	18.2	21.6	31.8	39.7	20.5	39.2	***	26.6	
	Imsil	18.1	22.6	22.3	29.0	27.7	26.2	26.2	28.0	33.8	22.7	34.8	21.1	22.9	***	25.9	
Russia	Mondy	8.51	7.48	7.90	8.11	4.30	7.99	5.03	4.65	5.29	5.75	9.75	5.30	7.69	3.45	3.31	
	Listvyanka	20.4	15.4	16.4	20.2	30.6	19.3	15.7	13.2	15.5	15.0	19.3	17.8	16.0	11.4	9.44	
	Irkutsk	18.3	17.1	16.8	22.3	20.7	18.3	16.3	12.3	20.7	13.4	14.4	13.2	16.2	11.2	9.95	
	Primorskaya	19.1	33.1	18.6	21.9	37.8	23.4	18.5	7.66	25.4	22.3	35.0	26.4	21.2	18.4	22.2	
Thailand	Bangkok	28.0	31.2	28.1	26.8	20.6	27.6	12.9	15.3	16.2	31.8	20.2	38.0	28.7	28.6	***	
	Samutprakarn	16.6	17.4	20.0	15.4	9.81	12.5	5.07	13.0	9.97	18.3	15.7	18.7	19.9	13.9	***	
	Pathumthani	22.8	21.5	16.6	20.4	19.2	18.8	18.6	14.8	29.1	26.3	28.4	18.3	28.1	17.8	25.1	
	Khanchanaburi	2.94	5.02	4.55	3.76	7.27	6.86	1.93	4.68	4.28	4.93	4.95	4.03	3.20	***	***	
	Mae Hia	7.97	9.11	8.44	7.30	7.26	7.91	9.89	11.7	8.36	12.9	10.1	8.86	14.8			
	Sakaerat	11.4	11.5	12.7	14.6	9.97	11.2	10.4	24.5	12.8	13.5	10.6	13.6	13.4			
Vietnam	Hanoi	15.6	9.76	16.6	20.8	21.7	25.2	26.3	30.6	35.1	28.5	34.8	46.3	77.6	76.4	40.5	
	HoaBinh	10.5	10.2	12.9	15.5	14.4	15.4	18.8	25.2	22.3	24.8	22.2	16.4	24.4	42.4	40.3	
	Cuc Phuong			10.9	23.2	27.8	20.1	16.7	10.2	13.4	11.4	14.0	9.19	21.3	18.6	26.4	
	Da Nang			11.4	7.02	15.8	4.79	5.41	5.29	<0.5	2.78	5.39	<0.5	1.88	1.94	3.70	
	Can Tho								8.38	11.7	3.31	3.83	3.07	16.7	3.88	3.95	
	Ho Chi Minh								17.9	18.0	7.42	10.8	4.90	18.3	8.78	13.7	
	Yen Bai									17.8	40.3	24.5	28.9	39.5	74.7	37.8	

Terms and abbreviations are given in Table 3.5.

Table 3.75 Precipitation amount-weighted annual average concentrations of Cl⁻ from 2007 to 2021unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	12.6	8.68	10.3	4.93	5.89	6.67	7.53	9.08	9.01	6.45	6.09	***	***	***	***
China	Guanyinqiao	13.8														
	Haifu		13.8	11.0	16.2	14.3	11.4	12.7	11.1	7.78	8.34	7.80	8.89	6.82	6.35	5.19
	Jinyunshan	8.70	15.4	16.1	16.1	11.9	11.6	7.21	5.70	5.09	4.75	5.34	4.47	4.92	4.69	4.28
	Shizhan	39.9	33.6	26.2	22.9	10.7	16.0	50.8	21.1	17.8	14.4	8.93	22.1	13.3	19.5	25.8
	Jiwozi	44.1	33.8	27.9	14.6	11.1	31.3	33.9	23.0	14.2	0.787	16.7	14.5	23.9	16.1	8.66
	Hongwen	39.0	31.2	32.3	15.0	25.4	23.9	19.3	28.6	25.7	31.2	71.7	62.7	72.3	49.1	33.2
	Xiaoping	14.6	18.6	20.1	13.9	17.1	14.5	13.0	13.8	18.5	10.6	21.5	22.5	10.0	14.3	12.1
	Xiang Zhou	30.9	34.8	44.9	22.4	29.8	43.4	46.1	23.8	60.2	23.6	61.1	73.3	24.4	28.1	20.8
	Zhuxiandong	***	45.6	51.4	21.7	18.8	***	***	***	72.4	33.5	29.3	102	28.8	44.6	27.7
	Wuzhishan													7.43	8.42	7.41
	Lijiang													3.38	20.7	2.07
Indonesia	Jakarta	18.7	11.4	12.0	15.4	19.4	13.0	19.3	28.8	17.1	31.2	12.4	21.1	14.9	18.1	20.2
	Serpong	14.3	17.0	17.6	22.4	15.1	24.1	22.7	25.5	22.3	16.0	16.4	23.7	29.9	34.9	25.6
	Kototabang	13.8	3.88	10.7	9.91	13.9	9.72	27.3	10.6	8.28	33.4	6.28	4.85	5.89	5.03	5.89
	Bandung	7.53	8.33	11.8	8.60	12.4	10.6	15.6	14.7	9.49	9.63	14.9	13.7	21.5	13.1	7.67
	Maros		20.1	15.3	21.1	16.1	20.0	36.3	36.2	6.90	154	114	15.5	21.3	28.1	14.3
	Jembrana													31.4	60.7	61.3
	Lombok													23.6	23.3	20.2
Japan	Rishiri	161	268	193	184	156	332	222	184	160	79.8	234	194	209	157	259
	Ochiishi	219	194	205	266	180	307	486	112	201	161	258	88.7	77.7	134	323
	Tappi	262	226	217	124	167	162	289	176	283	195	215	185			
	Sado-seki	257	236	364	351	182	293	355	317	367	199	170	151	250	196	1527
	Happo	4.36	5.60	6.64	4.99	4.43	11.6	4.89	6.21	7.00	6.42	6.18	6.57	4.42	5.00	6.37
	Ijira	24.8	18.9	16.5	16.2	17.2	24.5	19.5	19.7	19.9	15.2	17.7	18.0	15.7	15.8	19.1
	Oki	312	371	436	471	552	411	579	617	473	384	555	473	189	264	434
	Banryu	89.2	82.5	114	107	125	103	80.8	102	107	92.1	99.8	65.0			
	Yusuhara	16.2	10.0	13.9	11.0	14.7	21.8	13.4	6.95	27.4	9.97	60.4	16.6	16.7	11.2	21.2
	Hedo	146	138	141	284	232	496	263	157	368	236	429	186	153	271	1353
	Ogasawara	154	98.8	227	211	241	134	166	154	370	106	208	52.8	203	60.8	190
	Tokyo	41.1	23.7	27.8	19.4	45.9	35.8	27.7	23.1	22.2	17.2	47.5	39.7	65.8	18.4	22.8
	Niigata-maki													210	131	218
	Tsushima													34.7	35.9	40.6
Lao PDR	Vientiane	7.42	7.41	6.19	***	***	4.46	***	***	4.97	5.28	*	*	*	***	***
Malaysia	Petaling Jaya	5.70	7.50	7.89	9.26	8.36	7.98	7.66	8.89	10.3	10.3	10.0	9.75	***	9.04	8.76
	Tanah Rata	1.70	1.47	2.26	1.91	2.95	3.19	2.96	3.49	3.75	3.30	3.35	4.09	***	4.36	
	Danum Valley	4.90	6.10	6.79	17.1	5.70	4.16	7.52	6.50	7.47	4.90	4.60	7.29	***	14.6	8.74
	Kuching		6.35	8.41	8.04	11.5	6.78	8.82	11.0	14.5	14.5	11.5	10.9	***	14.2	11.0
	Gunung Brinchang															7.04
Mongolia	Ulaanbaatar	9.38	10.1	9.63	8.49	7.46	***	4.08	***	5.15	4.63	3.56	4.41	13.4	4.60	*
	Terelj	10.3	9.22	9.95	10.6	9.81	***	6.94	***	7.91	9.71	8.67	5.77	***	5.60	*
Myanmar	Yangon	***	***	25.0	13.2	15.8	26.6	27.1	19.5	34.4	31.3	35.2	21.8	20.8	22.7	16.8
Philippines	Metro Manila	27.9	28.7	24.6	20.6	29.8	20.2	28.7	26.1	27.3	31.4	***	***	23.3	10.3	30.2
	Los Baños	24.4	18.8	25.0	25.3	26.2	21.6	25.8	18.3	92.0	25.2	***	***	***	***	***
	Mt.Sto.Tomas	7.38	5.24	8.31	5.07	4.41	6.50	7.11	4.21	7.79	5.46	***	***	***	***	***
Republic of Korea	Kanghwa	57.7	45.6	60.2	43.9	48.5	67.5	36.3	61.6	161	50.1	55.7	42.3	216	***	36.4
	Cheju	104	136	63.7	114	147	455	344	124	109	444	280	293	76.4	***	288
	Imsil	22.4	36.6	51.9	44.4	25.3	88.8	22.8	30.7	46.8	29.9	32.1	27.6	28.4	***	70.9
Russia	Mondy	3.94	4.22	3.29	3.39	5.28	5.95	3.69	3.57	3.68	1.66	5.29	2.39	1.95	2.20	2.45
	Listvyanka	4.29	5.13	3.02	3.43	6.63	3.28	5.85	3.65	5.45	3.09	4.12	2.93	4.19	3.61	2.27
	Irkutsk	13.2	15.9	24.9	23.8	22.0	15.1	19.2	9.86	23.9	9.90	10.2	10.0	10.6	9.05	6.92
	Primorskaya	18.6	25.6	14.7	29.4	67.4	29.9	42.7	25.0	25.4	33.4	37.1	21.5	34.6	31.5	59.3
Thailand	Bangkok	8.23	11.3	7.65	9.33	7.98	8.33	7.24	9.22	7.36	11.1	8.16	14.4	11.8	12.0	***
	Samutprakarn	11.2	12.8	8.45	16.2	7.61	9.92	9.16	11.3	9.66	9.41	8.30	10.9	11.4	13.5	***
	Pathumthani	6.64	6.61	6.23	5.77	6.82	15.9	6.85	7.88	9.96	8.65	7.48	6.98	9.62	6.09	8.72
	Khanchanaburi	6.62	10.3	8.84	3.30	8.86	11.6	2.89	6.90	5.69	9.04	5.92	7.60	6.88	***	***
	Mae Hia	5.85	4.59	4.91	3.58	2.88	4.14	5.94	5.39	3.87	7.39	5.73	7.19	7.55		
	Sakaerat	5.11	5.93	4.62	4.81	4.80	6.36	6.34	11.1	6.99	6.57	4.08	5.08	5.26		
Vietnam	Hanoi	11.8	8.74	9.65	10.9	8.56	6.58	9.93	10.4	14.8	11.4	14.6	23.0	25.2	48.3	14.1
	HoaBinh	6.30	4.22	5.38	6.35	4.30	4.65	6.18	4.24	5.25	7.94	14.6	9.84	9.31	21.4	15.1
	Cuc Phuong				24.3	15.5	20.3	25.2	11.7	21.3	17.1	35.6	30.2	38.8	39.3	37.4
	Da Nang			110	50.4	93.5	83.1	174	92.9	72.8	70.2	80.9	97.8	167	171	116
	Can Tho								27.4	41.2	36.1	29.2	30.4	23.9	28.9	29.8
	Ho Chi Minh								44.8	52.0	37.3	47.5	36.3	36.9	43.2	43.5
	Yen Bai									7.48	14.3	17.3	12.4	14.0	31.2	14.3

Terms and abbreviations are given in Table 3.5.

Table 3.76 Precipitation amount-weighted annual average concentrations of NH₄⁺ from 2007 to 2021

unit: $\mu\text{mol L}^{-1}$																
Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	19.7	11.8	13.1	22.6	21.9	21.6	13.5	13.9	18.1	19.5	22.2	***	***	***	***
China	Guanyinqiao	140														
	Haifu		148	105	141	145	116	142	116	95.2	98.7	96.3	103	91.5	74.5	73.5
	Jinyunshan	75.2	98.8	110	124	117	124	90.1	70.6	62.6	65.8	60.0	79.3	70.6	62.5	55.8
	Shizhan	206	164	169	187	60.8	109	238	170	194	118	147	127	136	160	69.5
	Jiwozi	11.2	31.6	52.0	17.3	23.1	26.6	55.5	32.8	65.7	2.87	1.07	15.5	34.2	37.9	31.9
	Hongwen	38.5	34.7	46.6	39.8	42.3	43.2	18.3	25.7	29.2	37.2	33.8	25.0	28.3	31.9	46.2
	Xiaoping	52.7	33.0	45.8	42.9	38.9	30.4	25.3	38.9	37.8	24.6	29.5	23.5	19.9	25.9	34.8
	Xiang Zhou	19.4	19.5	22.1	24.4	20.7	29.1	17.7	23.8	19.1	29.6	24.5	24.2	22.7	23.3	14.0
	Zhuxiandong	***	18.6	25.6	22.7	24.8	***	***	***	24.3	42.4	25.7	23.6	23.0	21.6	18.4
	Wuzhishan													14.7	20.0	13.2
	Lijiang													11.0	2.44	12.6
Indonesia	Jakarta	24.2	25.4	17.7	23.0	33.7	23.1	17.2	17.6	18.9	37.5	24.0	47.9	29.6	24.5	30.6
	Serpong	44.3	47.2	43.0	52.3	62.2	71.1	83.0	65.5	63.0	55.6	50.5	69.4	67.4	69.6	69.6
	Kototabang	18.2	7.55	2.69	2.83	10.0	8.47	6.93	12.1	1903	4.94	5.59	7.35	7.80	6.87	9.94
	Bandung	47.9	44.8	48.3	32.1	60.8	53.8	47.4	55.4	56.7	58.1	62.4	61.9	73.2	69.1	53.2
	Maros		8.85	12.7	10.1	9.30	14.1	6.75	7.19	20.7	53.7	5.22	10.9	2.61	1.61	3.52
	Jembrana													16.8	14.4	12.2
	Lombok													16.9	20.9	16.6
Japan	Rishiri	25.9	23.6	17.7	15.7	14.0	11.4	12.9	12.5	13.3	10.4	22.3	22.3	19.0	19.1	15.0
	Ochiishi	7.84	6.45	8.40	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	17.7	18.2	10.5	15.0	16.9	13.8	19.1	22.7	13.0	15.4	15.9	10.3			
	Sado-seki	25.2	21.7	12.5	11.9	14.6	15.5	18.1	18.2	19.3	16.0	20.0	10.9	16.2	11.3	14.3
	Happo	11.1	10.1	9.73	5.88	6.06	10.7	8.94	8.08	7.84	4.77	4.33	5.57	8.54	5.58	7.25
	Ijira	20.7	18.0	18.2	12.2	14.1	14.7	13.4	13.4	13.5	14.3	12.5	9.12	12.7	10.7	9.66
	Oki	15.7	15.7	17.0	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	22.3	19.2	16.3	21.6	15.7	21.5	13.8	17.3	14.9	15.0	16.3	9.62			
	Yusuhara	7.45	7.52	8.25	6.60	4.83	7.55	7.16	4.91	4.04	6.04	21.9	3.15	5.39	5.94	4.78
	Hedo	7.49	6.11	6.43	9.31	9.13	18.8	9.94	8.28	11.0	8.05	7.04	3.19	4.93	8.05	23.8
	Ogasawara	7.70	3.43	4.82	5.29	4.54	5.18	6.04	3.88	2.64	4.85	2.30	2.02	2.47	3.51	1.68
	Tokyo	27.7	29.9	26.2	19.2	25.4	24.3	22.9	23.1	20.1	17.2	18.2	21.7	17.6	21.8	17.6
	Niigata-maki													16.3	12.5	11.9
	Tsushima													8.61	12.8	9.17
Lao PDR	Vientiane	10.9	8.39	17.3	***	***	***	***	***	7.78	7.50	*	*	*	***	***
Malaysia	Petaling Jaya	19.1	20.8	7.57	4.60	4.86	1.29	16.2	27.4	25.5	13.0	17.0	19.8	***	20.2	18.9
	Tanah Rata	3.91	3.10	5.41	4.05	14.3	5.67	2.42	3.44	7.54	3.51	3.13	2.04	***	10.9	
	Danum Valley	1.32	9.76	3.44	4.89	1.90	<0.8	<0.8	0.915	4.21	<0.8	<0.8	1.75	***	<0.8	<0.8
	Kuching		4.61	4.94	1.94	5.03	6.16	2.87	9.38	5.49	2.45	3.48	5.24	***	2.26	4.98
	Gunung Brinchang															2.93
Mongolia	Ulaanbaatar	87.1	53.3	46.7	54.7	45.9	***	62.2	***	***	40.7	48.9	57.4	75.1	49.6	62.5
	Terelj	38.8	51.1	41.0	35.0	39.4	***	5.37	***	***	60.2	41.9	31.0	***	22.5	55.6
Myanmar	Yangon	***	***	16.2	14.6	14.9	17.7	17.0	16.6	22.3	17.1	13.6	19.5	17.0	21.0	19.0
Philippines	Metro Manila	33.6	62.2	21.1	53.1	183	273	41.2	61.6	86.1	112	***	***	28.6	21.4	16.5
	Los Baños	16.8	19.6	11.7	38.2	29.4	67.8	22.3	55.9	54.9	84.8	***	***	***	***	***
	Mt.Sto.Tomas	8.69	10.5	14.1	4.65	0.822	3.42	4.71	13.5	9.57	7.79	***	***	***	***	***
Republic of Korea	Kanghwa	58.4	35.4	30.5	26.5	43.3	49.4	78.5	60.2	99.0	58.1	84.4	38.6	42.3	***	36.8
	Cheju	28.8	26.2	45.2	26.8	28.0	33.4	35.9	25.5	28.2	40.3	38.3	25.7	45.4	***	23.4
	Imsil	40.0	29.9	35.2	31.2	37.7	39.5	40.5	33.4	50.6	36.1	51.6	26.8	35.7	***	22.5
Russia	Mondy	30.1	9.86	20.2	17.5	9.14	19.0	2.71	3.60	13.5	4.97	10.4	8.38	9.51	5.19	33.1
	Listvyanka	15.6	18.9	13.4	18.3	17.2	26.7	9.85	13.7	36.8	14.4	20.6	13.8	18.8	11.8	14.7
	Irkutsk	33.9	34.4	36.4	34.5	32.7	34.1	29.5	23.9	73.0	22.2	20.4	21.0	29.8	23.7	25.0
	Primorskaya	29.6	50.6	28.8	42.7	54.1	27.0	39.6	42.3	25.7	22.7	46.8	33.0	23.9	22.8	51.4
Thailand	Bangkok	57.8	53.8	64.9	37.8	40.2	44.1	46.3	52.3	60.7	63.6	54.6	52.9	35.5	44.2	***
	Samutprakarn	47.1	56.4	41.0	28.1	27.8	34.1	37.7	48.6	46.0	43.3	48.5	40.1	31.6	30.6	***
	Pathumthani	34.4	29.7	33.0	28.0	38.1	37.9	44.9	35.3	45.3	53.1	41.3	35.6	49.4	31.3	32.6
	Khanchanaburi	13.9	10.1	26.1	8.90	13.0	8.95	6.80	14.0	10.7	16.2	14.1	6.33	4.51	***	***
	Mae Hia	18.8	19.9	20.2	19.3	13.5	19.6	19.3	26.8	17.6	29.3	26.2	15.1	33.2		
	Sakaerat	18.3	21.1	22.9	24.6	24.3	25.7	23.8	42.3	31.3	34.0	23.3	63.3	68.9		
Vietnam	Hanoi	48.3	30.6	50.6	52.4	52.8	60.2	53.4	68.0	64.9	61.4	52.6	56.9	29.9	98.6	66.0
	HoaBinh	21.3	17.1	31.4	28.3	27.8	30.0	25.3	45.6	38.3	56.9	20.0	29.0	12.0	41.2	54.1
	Cuc Phuong			6.30	9.90	19.2	23.9	25.5	20.5	30.0	20.1	8.72	5.39	19.7	16.4	49.1
	Da Nang			13.5	8.67	21.5	21.3	24.6	14.5	8.73	5.43	20.9	14.1	41.7	21.2	18.6
	Can Tho								18.3	21.3	22.7	21.5	12.3	17.6	16.1	19.2
	Ho Chi Minh								24.3	29.4	28.8	38.4	20.7	22.8	30.1	30.4
	Yen Bai									30.5	91.5	33.6	39.0	18.2	66.2	75.2

Terms and abbreviations are given in Table 3.5.

Table 3.77 Precipitation amount-weighted annual average concentrations of Na⁺ from 2007 to 2021unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	8.25	10.3	6.95	3.10	3.55	3.65	3.10	7.60	6.28	4.23	4.45	***	***	***	***
China	Guanyinqiao	5.92														
	Haifu		6.99	4.20	7.56	9.87	6.04	7.29	6.36	3.61	6.18	4.42	4.98	4.01	3.55	2.47
	Jinyunshan	6.20	10.3	7.70	8.17	6.12	6.28	3.92	4.50	2.23	2.55	2.95	1.81	2.00	2.02	1.51
	Shizhan	15.6	24.4	13.4	7.30	17.7	5.59	138	126	113	53.6	28.7	20.6	12.1	20.4	17.9
	Jiwozi	85.8	81.1	25.2	6.47	7.86	44.5	112	125	92.5	8.39	33.7	24.6	88.3	20.8	20.9
	Hongwen	24.1	22.9	24.5	19.4	18.1	16.3	14.3	19.8	18.6	27.2	35.7	24.0	4.99	48.1	45.3
	Xiaoping	12.4	22.5	16.4	18.8	10.9	8.45	12.1	8.77	11.0	6.54	6.87	6.55	1.44	10.5	7.52
	Xiang Zhou	19.4	34.6	40.2	19.8	32.3	45.9	54.2	30.7	52.9	22.5	52.2	67.2	20.3	23.5	18.3
	Zhuxiandong	***	40.7	45.3	19.9	45.0	***	***	***	66.9	34.1	26.2	89.3	24.0	38.1	24.2
	Wuzhishan													8.68	7.39	6.83
	Lijiang													8.65	0.580	1.15
Indonesia	Jakarta	15.8	9.95	9.31	7.92	11.7	12.7	16.2	21.4	2.01	21.0	9.76	16.7	9.40	15.5	15.9
	Serpong	11.7	10.5	10.2	8.32	10.1	10.9	14.0	18.8	14.6	14.4	12.1	17.7	17.0	13.1	22.4
	Kototabang	8.65	5.33	6.12	5.25	6.54	9.63	8.51	5.67	0.779	21.1	3.46	3.40	4.75	7.43	3.63
	Bandung	6.65	8.62	11.8	9.74	12.2	10.8	13.6	12.9	8.58	11.2	18.7	23.1	44.8	14.7	7.05
	Maros		15.7	13.3	13.2	14.9	19.9	19.3	29.1	3.67	118	104	13.5	18.7	15.4	12.6
	Jembrana													19.9	30.0	32.2
	Lombok													22.8	25.9	19.5
Japan	Rishiri	143	247	176	162	139	292	200	162	140	69.7	207	170	182	139	230
	Ochiishi	186	171	182	232	155	274	421	97.2	178	138	219	77.6	67.4	117	282
	Tappi	234	197	199	114	150	141	257	156	237	169	189	159			
	Sado-seki	227	215	321	320	153	246	328	282	327	175	150	134	220	175	1389
	Happo	3.13	4.12	5.14	3.76	3.34	9.57	4.07	5.31	5.84	4.83	4.96	5.41	3.54	4.21	5.25
	Ijira	20.8	15.4	13.5	13.0	13.8	19.3	15.1	15.6	15.8	12.4	14.6	14.6	13.1	13.7	16.2
	Oki	275	324	376	409	480	357	505	545	412	332	486	405	163	229	380
	Banryu	78.6	72.2	98.8	94.2	108	92.2	69.1	86.9	91.1	81.9	87.8	56.7			
	Yusuhara	13.5	8.61	12.0	8.82	12.3	18.1	9.90	5.19	22.9	7.97	48.7	14.5	13.8	9.34	17.9
	Hedo	129	124	127	254	204	418	227	137	313	201	368	160	130	228	1125
	Ogasawara	133	86.2	188	208	202	114	141	131	306	90.9	180	46.7	178	51.1	164
	Tokyo	34.5	19.5	23.5	17.3	37.7	29.5	22.8	18.9	18.0	14.4	40.3	34.5	57.7	15.3	19.4
	Niigata-maki													176	113	189
	Tsushima													30.0	31.2	35.0
Lao PDR	Vientiane	2.38	2.91	9.14	***	***	***	***	***	2.78	1.52	*	*	*	***	***
Malaysia	Petaling Jaya	3.61	4.22	4.59	4.99	4.56	3.85	4.29	5.04	6.20	6.14	6.04	5.33	***	5.51	4.88
	Tanah Rata	1.54	1.20	1.58	1.29	1.99	1.51	2.17	2.82	2.74	2.72	2.47	2.48	***	5.02	
	Danum Valley	4.15	3.22	5.83	13.8	5.52	2.87	5.14	5.42	5.40	3.30	2.52	5.16	***	12.7	6.84
	Kuching		5.39	7.35	6.67	9.08	5.21	7.54	9.25	12.9	12.7	9.28	8.49	***	10.5	7.50
	Gunung Brinchang															4.66
Mongolia	Ulaanbaatar	5.25	3.59	4.88	3.50	5.65	***	78.8	***	***	172	21.9	41.5	110	77.7	17.4
	Terelj	9.42	5.47	7.60	11.1	6.07	***	17.0	***	***	206	13.5	49.5	***	60.8	111
Myanmar	Yangon	***	***	18.5	12.9	15.0	22.1	15.8	17.3	8.77	15.7	15.0	21.9	18.3	14.0	15.7
Philippines	Metro Manila	20.2	24.6	20.2	22.3	21.4	16.7	28.0	24.5	23.4	17.4	***	***	18.0	10.4	22.3
	Los Baños	17.6	19.1	17.4	22.7	19.4	22.2	22.8	15.4	17.6	22.4	***	***	***	***	***
	Mt.Sto.Tomas	5.68	5.11	8.26	6.30	4.31	10.3	6.70	6.30	8.71	14.8	***	***	***	***	***
Republic of Korea	Kanghwa	44.3	39.3	45.1	27.0	35.8	50.7	29.6	43.2	45.0	28.5	27.8	30.4	180	***	29.9
	Cheju	101	133	53.6	103	152	375	290	116	101	394	261	264	93.4	***	285
	Imsil	15.0	32.0	50.3	48.2	37.4	51.8	30.3	29.8	47.1	33.8	36.2	38.5	38.1	***	80.5
Russia	Mondy	3.13	1.84	2.28	2.81	3.86	4.32	1.36	2.25	1.61	1.38	2.58	2.11	1.92	5.00	2.82
	Listvyanka	2.57	2.49	3.82	3.60	5.42	4.20	6.68	4.80	2.96	2.80	3.26	3.01	3.06	4.45	4.78
	Irkutsk	9.94	10.0	18.7	18.4	16.8	9.96	12.8	8.62	12.7	7.42	7.99	8.80	6.70	9.98	7.00
	Primorskaya	19.8	22.9	12.8	23.9	13.7	23.1	25.5	15.8	24.8	25.2	26.0	21.9	20.0	33.8	34.3
Thailand	Bangkok	7.08	9.77	9.79	8.79	6.46	6.07	12.0	9.17	7.97	11.0	5.83	11.4	8.83	15.9	***
	Samutprakarn	12.2	15.4	10.0	18.6	5.70	7.89	25.3	12.6	9.33	8.87	7.10	9.95	9.65	12.3	***
	Pathumthani	5.77	5.96	5.58	7.46	5.87	14.1	5.96	5.31	6.92	6.41	4.83	5.10	6.57	3.64	3.64
	Khanchanaburi	7.05	9.23	9.49	3.11	7.45	9.71	5.46	6.41	5.91	10.4	4.70	8.17	5.45	***	***
	Mae Hia	2.93	2.61	2.69	2.72	3.21	3.80	5.63	3.65	4.48	7.01	6.14	7.89	8.18		
	Sakaerat	4.45	4.20	2.73	3.21	4.04	3.71	2.96	8.85	4.59	4.02	2.08	11.0	9.64		
Vietnam	Hanoi	8.20	9.59	9.17	7.28	6.17	4.19	7.69	7.24	9.00	11.4	16.4	11.2	26.4	23.9	11.6
	HoaBinh	3.20	3.07	3.39	4.86	2.46	3.03	4.13	3.16	3.80	4.40	3.99	2.79	12.2	8.27	9.65
	Cuc Phuong			11.2	12.0	13.6	20.0	26.7	10.7	8.76	12.7	17.6	13.4	23.4	17.5	38.1
	Da Nang			94.6	41.3	70.2	63.2	144	82.1	79.6	65.7	81.0	68.1	108	57.8	68.8
	Can Tho								15.4	29.4	12.6	9.61	9.73	18.1	17.9	14.0
	Ho Chi Minh								25.0	34.6	13.5	17.4	14.2	20.4	18.4	19.5
	Yen Bai									5.40	8.96	3.68	3.65	11.7	16.0	10.8

Terms and abbreviations are given in Table 3.5.

Table 3.78 Precipitation amount-weighted annual average concentrations of K⁺ from 2007 to 2021unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	3.64	10.3	1.50	0.861	1.15	0.761	1.06	2.69	1.98	2.11	1.22	***	***	***	***
China	Guanyinqiao	8.81														
	Haifu		11.5	7.72	10.0	9.38	6.57	12.8	9.28	5.99	4.66	4.80	6.21	3.45	2.71	2.38
	Jinyunshan	6.78	9.54	8.71	10.4	10.4	7.64	5.49	4.42	3.40	3.37	3.60	2.75	3.20	2.60	1.78
	Shizhan	19.3	13.3	10.2	32.4	13.4	5.69	28.1	251	5.32	3.76	4.60	10.9	7.50	7.55	3.52
	Jiwozi	28.0	29.0	13.7	4.89	7.28	9.74	10.2	16.4	6.63	4.58	13.0	19.3	64.1	13.4	5.05
	Hongwen	3.73	2.12	2.26	2.24	1.99	2.86	1.90	1.42	5.99	5.34	35.0	37.8	14.3	9.74	10.6
	Xiaoping	7.31	10.2	2.33	1.94	2.80	3.47	1.66	1.45	8.40	5.59	12.4	14.4	2.51	2.71	2.55
	Xiang Zhou	8.27	1.65	2.10	2.21	3.74	9.20	8.24	6.89	4.41	3.68	2.56	3.05	1.49	1.22	0.901
	Zhuxiandong	***	4.50	2.56	3.29	5.92	***	***	***	8.30	5.80	2.24	4.65	1.87	2.15	1.63
	Wuzhishan													2.87	2.68	3.40
	Lijiang													1.53	0.768	0.642
Indonesia	Jakarta	11.2	3.51	2.22	2.23	2.28	2.86	2.83	3.62	12.5	10.5	2.38	2.83	1.38	3.53	2.43
	Serpong	2.76	2.21	1.75	3.20	3.15	4.33	4.91	5.64	7.81	4.85	3.78	6.02	11.9	14.5	5.04
	Kototabang	8.40	3.40	9.35	4.43	3.96	5.52	19.3	10.4	4949	11.5	1.86	2.06	2.87	3.86	4.29
	Bandung	2.03	2.31	4.08	4.22	4.77	3.36	7.97	5.63	3.54	2.89	4.22	4.48	4.65	5.06	2.54
	Maros		5.76	3.89	2.52	1.86	3.50	1.84	19.1	1786	15.1	6.27	2.83	3.00	11.3	1.91
	Jembrana													3.81	19.7	20.9
	Lombok													3.28	6.77	6.93
Japan	Rishiri	4.13	6.58	4.31	4.28	3.44	6.41	4.61	4.10	3.62	2.07	6.01	4.83	5.24	4.30	6.17
	Ochiishi	4.58	3.81	4.09	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	5.66	5.36	4.95	3.50	4.34	3.96	6.21	3.97	5.56	4.47	4.72	3.87			
	Sado-seki	5.88	7.16	7.96	8.08	4.45	6.62	7.69	7.51	9.69	7.55	4.71	3.33	5.81	4.27	43.3
	Happo	0.605	0.585	0.670	0.356	0.447	0.865	0.581	0.746	0.681	0.457	0.376	0.423	0.558	0.509	0.426
	Ijira	1.15	0.630	0.678	0.426	0.535	0.609	0.589	0.611	0.699	0.498	0.576	0.462	0.523	0.490	0.588
	Oki	9.12	11.9	10.1	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	3.06	2.54	3.00	5.43	3.39	3.26	2.33	2.65	2.54	2.28	2.41	1.66			
	Yusuhara	0.637	0.424	0.768	0.613	0.465	1.07	0.387	0.701	0.758	0.508	1.83	0.664	0.793	0.719	1.09
	Hedo	3.31	3.18	3.29	6.19	4.94	10.6	5.48	3.31	7.24	4.51	8.02	3.52	3.03	5.15	24.4
	Ogasawara	3.17	2.61	4.55	5.02	4.95	2.71	3.64	3.12	8.10	2.22	4.14	1.10	4.41	1.43	2.99
	Tokyo	1.40	1.14	1.10	0.989	1.29	0.888	0.711	0.628	0.641	0.539	1.11	0.842	1.37	0.541	0.502
	Niigata-maki													4.80	2.70	4.55
	Tsushima													0.882	1.10	1.20
Lao PDR	Vientiane	1.69	1.69	0.930	***	***	***	***	***	1.74	0.958	*	*	*	***	***
Malaysia	Petaling Jaya	0.984	1.19	1.51	1.50	1.31	1.33	1.14	1.47	1.70	1.83	1.55	1.90	***	1.97	1.53
	Tanah Rata	0.646	0.433	0.991	1.06	2.03	1.68	1.75	1.62	2.37	1.22	1.93	1.36	***	4.70	
	Danum Valley	1.08	2.53	1.59	3.24	1.73	1.21	1.01	2.16	2.39	1.01	1.29	2.64	***	2.95	2.43
	Kuching		0.647	0.695	0.650	0.854	0.924	0.695	3.26	1.44	1.13	1.43	1.54	***	1.92	1.96
	Gunung Brinchang															1.85
Mongolia	Ulaanbaatar	1.28	2.81	2.53	2.72	3.98	***	3.88	***	***	0.620	1.29	1.01	2.01	1.64	1.57
	Terelj	3.80	6.46	4.10	5.43	5.00	***	7.98	***	***	7.09	3.40	3.65	***	3.48	4.22
Myanmar	Yangon	***	***	6.46	2.07	1.66	6.78	2.66	4.69	13.3	3.35	10.4	4.38	7.01	4.64	7.66
Philippines	Metro Manila	5.38	15.6	3.99	17.0	23.5	26.3	6.45	9.79	13.1	14.2	***	***	4.13	1.47	1.77
	Los Baños	4.92	2.91	9.08	7.43	6.82	8.14	6.37	8.18	73.4	13.8	***	***	***	***	***
	Mt.Sto.Tomas	2.29	0.702	1.95	1.41	0.821	0.885	0.752	1.26	1.63	0.889	***	***	***	***	***
Republic of Korea	Kanghwa	10.8	5.40	8.97	7.78	3.62	6.39	3.27	13.4	106	13.3	16.5	5.01	7.91	***	2.41
	Cheju	7.18	10.4	9.75	7.96	6.54	15.7	12.0	11.3	13.8	15.2	7.43	6.53	2.87	***	11.3
	Imsil	14.3	5.61	10.9	10.3	3.89	47.5	6.33	9.82	9.19	3.39	8.80	2.18	1.33	***	6.64
Russia	Mondy	2.47	2.02	3.29	2.62	4.98	9.05	2.30	2.01	3.40	1.05	1.94	1.27	0.982	0.937	3.64
	Listvyanka	1.28	3.38	2.07	1.66	2.42	2.00	4.36	3.11	2.10	1.71	3.64	2.01	3.04	3.53	3.76
	Irkutsk	7.77	8.99	26.6	5.52	4.59	4.99	5.19	2.97	4.51	3.10	2.92	3.06	4.06	3.72	5.18
	Primorskaya	6.18	8.99	4.40	5.84	6.75	5.09	5.55	5.14	7.79	19.1	10.1	8.36	8.03	9.07	6.69
Thailand	Bangkok	1.57	2.03	1.98	2.58	1.82	1.52	1.91	1.38	1.75	1.70	1.24	2.26	3.89	3.88	***
	Samutprakarn	2.88	6.12	2.77	17.0	1.11	1.52	5.23	2.33	1.93	1.71	1.36	1.63	1.92	2.13	***
	Pathumthani	1.61	1.50	1.61	1.85	1.96	1.64	2.13	1.87	1.84	2.09	2.13	1.35	2.14	1.51	4.02
	Khanchanaburi	0.708	1.15	1.21	0.710	2.21	1.57	0.955	1.22	0.838	1.51	1.43	1.72	1.04	***	***
	Mae Hia	2.87	2.63	1.47	1.21	1.45	1.26	1.48	1.77	1.24	3.17	2.71	1.90	3.64		
	Sakaerat	1.38	1.24	1.31	0.940	1.20	1.26	0.813	2.63	1.52	1.59	0.512	6.95	6.12		
Vietnam	Hanoi	2.70	2.77	1.57	2.78	2.27	3.00	2.64	3.75	3.72	3.63	7.09	8.06	8.12	6.51	5.56
	HoaBinh	2.24	3.24	2.72	2.88	2.40	1.50	7.10	2.77	2.87	2.59	2.88	3.89	1.85	2.46	4.44
	Cuc Phuong			14.0	5.61	3.31	6.06	8.57	4.72	4.68	5.77	3.41	4.00	5.38	4.33	8.16
	Da Nang			6.27	3.41	14.0	11.5	17.9	13.8	11.9	3.39	9.85	15.6	18.1	89.7	19.2
	Can Tho								7.45	7.17	6.07	5.44	6.27	12.7	7.05	6.36
	Ho Chi Minh								10.6	12.0	6.62	10.4	8.29	11.0	9.79	10.8
	Yen Bai									4.03	4.98	6.20	3.27	2.59	4.59	4.85

Terms and abbreviations are given in Table 3.5.

Table 3.79 Precipitation amount-weighted annual average concentrations of Ca²⁺ from 2007 to 2021

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

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	19.2	32.6	20.4	8.33	9.30	10.7	9.57	9.47	11.6	14.3	9.74	***	***	***	***
China	Guanyinqiao	75.2														
	Haifu		65.3	43.2	69.2	68.5	57.9	69.5	54.6	43.0	67.3	53.5	43.0	25.7	22.0	21.6
	Jinyunshan	55.1	68.3	66.7	68.7	65.1	59.2	31.2	26.0	21.7	38.0	51.9	34.2	22.8	19.3	15.4
	Shizhan	116	150	138	105	91.2	128	325	92.7	89.7	35.0	68.3	61.9	50.9	46.1	95.0
	Jiwozi	347	266	93.7	40.7	91.6	203	133	149	57.7	36.8	95.1	56.3	161	63.8	34.9
	Hongwen	54.9	14.1	13.2	9.11	14.1	17.5	21.9	25.5	16.3	13.1	28.3	26.5	60.8	413	35.3
	Xiaoping	16.7	15.6	9.04	8.37	11.7	20.0	22.7	42.4	9.17	6.39	15.1	8.12	7.45	4.79	6.93
	Xiang Zhou	4.71	5.43	4.91	7.40	17.5	10.8	43.4	17.0	15.9	10.8	10.0	10.6	8.15	7.13	6.29
	Zhuxiandong	***	13.6	7.40	16.4	19.1	***	***	***	25.2	17.3	13.9	17.7	10.8	12.1	8.47
	Wuzhishan													10.3	3.75	3.37
	Lijiang													23.1	2.78	4.31
Indonesia	Jakarta	13.9	4.36	12.6	10.3	11.1	12.0	14.1	15.0	7.47	25.2	17.6	16.5	10.6	7.50	8.42
	Serpong	7.37	7.97	5.17	9.25	10.9	9.29	14.0	13.0	19.7	13.9	12.1	21.2	17.5	8.52	11.7
	Kototabang	4.70	4.86	5.47	4.77	5.90	7.85	9.55	3.93	1.99	3.83	11.6	8.57	30.9	5.25	9.73
	Bandung	9.50	11.3	15.3	13.5	20.9	13.3	19.6	22.8	17.6	15.2	14.4	18.2	19.6	24.5	17.1
	Maros		8.39	8.11	9.58	6.49	16.1	10.4	27.9	16.8	13.8	14.4	14.0	20.3	8.08	22.7
	Jembrana													7.88	20.3	5.43
	Lombok													15.7	7.98	6.65
Japan	Rishiri	5.83	8.72	10.1	6.89	5.63	8.44	7.33	5.78	5.27	3.60	8.15	8.45	7.35	6.66	9.79
	Ochiishi	6.96	5.29	5.20	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	11.0	10.3	6.41	8.54	8.01	8.02	14.1	7.45	7.99	7.45	6.78	6.07			
	Sado-seki	11.8	10.3	11.1	12.7	8.28	11.4	10.4	9.49	11.3	11.4	6.67	7.86	8.74	5.63	53.1
	Happo	2.91	2.70	4.66	2.40	2.57	4.14	2.77	2.31	1.70	0.750	1.77	2.12	2.24	1.92	2.45
	Ijira	3.63	2.20	2.74	2.48	1.97	2.50	2.74	1.65	2.00	1.88	2.20	1.86	2.36	1.61	2.03
	Oki	13.6	10.9	14.6	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	7.36	7.41	5.45	8.02	5.85	6.65	3.92	4.75	5.37	5.17	5.13	3.30			
	Yusuhara	1.96	1.69	1.97	1.79	2.27	2.39	2.16	1.60	1.02	1.14	5.19	0.848	1.32	1.10	1.96
	Hedo	4.92	4.18	4.47	7.98	6.04	11.5	6.89	4.25	8.24	5.37	9.70	5.31	3.79	6.38	28.5
	Ogasawara	4.36	2.55	5.20	5.82	5.56	3.46	4.60	3.98	8.13	2.60	4.54	1.28	4.63	1.59	3.97
	Tokyo	4.99	4.09	3.42	3.98	4.84	4.21	4.35	3.81	3.56	2.48	3.34	3.46	4.01	3.20	2.62
	Niigata-maki													7.18	5.36	6.81
	Tsushima													1.35	1.58	1.92
Lao PDR	Vientiane	3.04	5.77	5.50	***	***	***	***	***	4.00	2.21	*	*	*	***	***
Malaysia	Petaling Jaya	3.94	3.94	4.97	5.40	3.97	3.96	6.13	6.02	6.70	6.48	4.18	6.96	***	4.32	4.06
	Tanah Rata	1.05	0.772	1.03	1.22	2.08	2.37	2.91	2.68	2.00	2.18	2.25	2.76	***	5.94	
	Danum Valley	0.513	0.353	1.01	3.82	0.887	0.800	1.44	1.41	2.28	0.987	1.48	2.52	***	7.13	1.89
	Kuching		1.91	1.79	2.60	3.15	3.42	4.20	6.12	4.35	3.35	3.86	4.28	***	18.5	2.46
	Gunung Brinchang															2.74
Mongolia	Ulaanbaatar	41.2	42.9	42.2	34.3	33.9	***	95.3	***	***	29.1	41.8	23.5	39.0	45.9	49.2
	Terelj	13.6	17.9	35.8	42.3	20.4	***	69.1	***	***	16.8	15.9	15.3	***	62.5	31.3
Myanmar	Yangon	***	***	9.66	6.37	6.89	7.79	1.07	14.1	88.7	5.55	10.5	16.6	14.2	9.86	2.60
Philippines	Metro Manila	10.4	13.7	6.41	12.8	12.9	13.9	11.5	14.5	17.4	20.5	***	***	14.7	16.3	9.22
	Los Baños	5.19	3.75	5.08	20.1	6.38	9.40	6.40	6.99	8.77	11.8	***	***	***	***	***
	Mt.Sto.Tomas	23.4	3.09	5.87	22.7	7.84	14.0	8.58	8.06	6.85	13.4	***	***	***	***	***
Republic of Korea	Kanghwa	12.4	10.8	5.19	7.02	4.39	8.64	8.72	8.94	9.52	3.85	6.73	3.20	7.07	***	10.6
	Cheju	10.6	10.5	4.08	6.72	6.60	11.2	13.6	4.12	4.64	16.2	12.8	6.64	4.56	***	9.76
	Imsil	13.7	6.92	3.88	5.74	6.81	4.31	2.95	3.50	5.16	2.70	3.71	1.64	2.66	***	8.88
Russia	Mondy	6.91	7.97	5.19	9.20	9.02	12.1	4.61	7.02	8.36	5.42	8.67	5.35	5.09	3.46	4.50
	Listvyanka	9.02	8.18	12.6	12.6	16.1	11.7	11.9	12.8	9.97	7.94	12.2	12.4	8.05	7.30	6.76
	Irkutsk	26.5	29.5	29.2	32.2	34.7	31.3	33.0	26.5	30.5	17.0	22.5	27.8	17.6	14.1	15.4
	Primorskaya	14.0	19.4	11.7	16.9	13.7	12.2	18.0	18.1	13.1	13.1	20.9	14.7	12.1	18.2	13.8
Thailand	Bangkok	13.6	16.1	10.0	11.2	10.5	13.5	25.2	14.5	16.9	15.9	11.3	27.1	29.2	18.0	***
	Samutprakarn	11.0	13.8	13.2	7.78	5.95	8.39	19.9	14.6	6.23	9.28	7.96	8.67	10.6	6.70	***
	Pathumthani	8.50	11.6	9.19	9.17	12.1	20.6	29.1	22.5	16.6	13.7	12.3	7.97	10.3	4.37	5.41
	Khanchanaburi	3.03	4.59	4.93	1.80	4.04	17.5	3.26	4.07	3.63	5.17	3.63	3.54	4.25	***	***
	Mae Hia	8.03	6.68	5.69	4.40	2.60	7.77	10.6	9.72	4.11	10.7	8.57	7.01	10.3		
	Sakaerat	3.75	3.35	2.53	2.21	1.88	3.74	1.96	8.73	6.83	8.24	4.60	35.1	55.9		
Vietnam	Hanoi	18.1	11.8	12.0	23.7	14.6	15.0	16.2	24.8	36.7	22.8	35.3	40.6	80.0	83.0	30.8
	HoaBinh	9.33	14.5	9.44	21.1	12.5	11.1	16.9	13.4	10.1	13.1	23.1	13.7	17.6	43.6	25.5
	Cuc Phuong			24.8	38.3	32.2	30.6	24.4	23.1	19.4	27.1	24.0	18.0	24.2	20.8	34.1
	Da Nang			6.35	8.87	10.0	16.9	21.5	27.3	34.4	38.5	33.9	36.5	92.2	93.3	32.2
	Can Tho								12.8	26.8	11.9	10.6	14.4	15.8	14.2	13.0
	Ho Chi Minh								26.0	44.3	12.1	14.8	18.2	26.5	15.7	18.6
	Yen Bai									15.9	20.3	23.1	20.8	27.4	52.9	22.5

Terms and abbreviations are given in Table 3.5.

Table 3.80 Precipitation amount-weighted annual average concentrations of nss-Ca²⁺ from 2007 to 2021

		unit: $\mu\text{mol L}^{-1}$															
Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Cambodia	PhnomPenh	19.1	32.5	20.3	8.26	9.23	10.7	9.50	9.31	11.5	14.2	9.64	***	***	***	***	
China	Guanyinqiao	75.1															
	Haifu		65.2	43.2	69.0	68.2	57.7	69.3	54.5	43.0	67.1	53.4	42.9	25.6	22.0	21.6	
	Jinyunshan	55.0	68.1	66.5	68.6	64.9	59.0	31.1	25.9	21.7	38.0	51.9	34.2	22.7	19.2	15.4	
	Shizhan	116	149	138	105	90.8	128	322	90.0	87.2	33.9	67.7	61.4	50.6	45.6	94.6	
	Jiwozi	345	264	93.2	40.6	91.4	202	130	146	55.7	36.6	94.4	55.7	160	63.4	34.4	
	Hongwen	54.4	13.6	12.7	8.70	13.7	17.1	21.6	25.1	15.9	12.6	27.5	26.0	60.7	412	34.4	
	Xiaoping	16.4	15.1	8.69	7.96	11.5	19.9	22.4	42.2	8.94	6.24	14.9	7.98	7.41	4.56	6.77	
	Xiang Zhou	4.33	4.68	4.04	6.97	16.8	9.76	42.2	16.4	14.7	10.4	8.88	9.14	7.71	6.62	5.89	
	Zhuxiandong	***	12.7	6.44	15.9	18.1	***	***	***	23.7	16.6	13.3	15.8	10.3	11.3	7.95	
	Wuzhishan													10.2	3.61	3.23	
	Lijiang													22.9	2.77	4.29	
Indonesia	Jakarta	13.6	4.14	12.4	10.2	10.8	11.7	13.8	14.5	7.43	24.7	17.3	16.1	10.4	7.16	8.08	
	Serpong	7.19	7.75	5.03	9.07	10.7	9.05	13.7	12.6	19.4	13.6	11.8	20.8	17.1	8.26	11.3	
	Kototabang	4.51	4.76	5.34	4.65	5.76	7.64	9.37	3.81	2.03	3.53	11.6	8.50	30.8	5.09	9.65	
	Bandung	9.36	11.1	15.1	13.3	20.6	13.1	19.3	22.6	17.4	15.0	14.0	17.7	18.7	24.2	16.9	
	Maros		8.05	7.83	9.30	6.17	15.7	9.98	27.2	16.7	11.5	12.2	13.7	19.9	7.75	22.4	
	Jembrana													7.45	19.7	4.74	
Lombok													15.2	7.43	6.23		
Japan	Rishiri	2.76	3.40	6.39	3.44	2.63	2.20	3.06	2.31	2.29	2.10	3.68	4.78	3.42	3.65	4.83	
	Ochiishi	2.96	1.66	1.38	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	6.01	6.09	2.26	6.16	4.87	4.44	8.53	4.17	3.02	3.80	2.71	2.63				
	Sado-seki	6.87	5.67	4.20	5.94	4.99	6.19	3.83	3.47	4.33	7.67	3.43	4.96	3.98	1.87	23.1	
	Happo	2.85	2.61	4.55	2.32	2.49	3.93	2.69	2.20	1.58	0.646	1.67	2.01	2.16	1.83	2.34	
	Ijira	3.18	1.87	2.46	2.21	1.70	2.09	2.43	1.34	1.66	1.61	1.88	1.54	2.08	1.31	1.68	
	Oki	7.68	3.94	6.44	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	5.66	5.85	3.32	5.99	3.52	4.66	2.42	2.87	3.49	3.45	3.23	2.08				
	Yusuhara	1.67	1.51	1.71	1.65	2.04	2.00	1.95	1.49	0.530	0.969	4.14	0.558	1.03	0.909	1.58	
	Hedo	2.13	1.50	1.75	2.50	1.63	2.44	1.99	1.29	1.48	1.12	2.08	1.90	1.06	1.47	4.16	
	Ogasawara	1.50	0.862	1.16	1.35	1.20	1.01	1.56	1.15	1.51	0.638	0.647	0.302	0.784	0.504	0.485	
	Tokyo	4.24	3.67	2.91	3.60	4.03	3.57	3.86	3.40	3.17	2.17	2.47	2.72	2.76	2.87	2.20	
	Niigata-maki													3.40	2.93	2.72	
	Tsushima													0.717	0.912	1.16	
Lao PDR	Vientiane	2.99	5.70	5.30	***	***	***	***	***	3.94	2.18	*	*	*	***	***	
Malaysia	Petaling Jaya	3.86	3.85	4.87	5.29	3.87	3.88	6.04	5.91	6.56	6.34	4.05	6.84	***	4.20	3.95	
	Tanah Rata	1.02	0.753	1.01	1.19	2.04	2.33	2.87	2.63	1.94	2.12	2.20	2.71	***	5.83		
	Danum Valley	0.453	0.315	0.919	3.59	0.794	0.750	1.34	1.32	2.18	0.920	1.43	2.41	***	6.86	1.74	
	Kuching		1.81	1.66	2.45	2.95	3.32	4.04	5.93	4.07	3.07	3.71	4.10	***	18.2	2.29	
	Gunung Brinchang															2.64	
Mongolia	Ulaanbaatar	41.1	42.9	42.1	34.2	33.8	***	93.6	***	***	25.4	41.3	22.6	36.6	44.4	48.8	
	Terelj	13.4	17.7	35.6	42.1	20.2	***	68.8	***	***	13.7	15.6	14.4	***	61.3	29.1	
Myanmar	Yangon	***	***	9.26	6.09	6.57	7.32	0.792	13.8	88.5	5.22	10.2	16.1	13.8	9.56	2.26	
Philippines	Metro Manila	9.96	13.2	5.98	12.3	12.4	13.5	10.9	14.0	16.9	20.2	***	***	14.3	16.1	8.75	
	Los Baños	4.82	3.34	4.71	19.7	5.96	8.92	5.94	6.67	8.42	11.3	***	***	***	***	***	
	Mt.Sto.Tomas	23.3	2.98	5.69	22.5	7.75	13.8	8.43	7.92	6.66	13.1	***	***	***	***	***	
Republic of Korea	Kanghwa	11.5	10.0	4.23	6.44	3.66	7.54	8.09	8.13	8.55	3.24	6.15	2.56	3.19	***	10.00	
	Cheju	8.43	7.63	3.03	4.70	3.72	3.15	7.33	1.79	2.52	7.72	7.59	2.29	2.88	***	3.78	
	Imsil	13.3	6.23	2.83	4.79	6.02	3.40	2.29	2.90	4.19	2.01	2.98	1.17	2.07	***	7.24	
Russia	Mondy	6.84	7.93	5.14	9.14	8.94	12.1	4.58	6.97	8.32	5.39	8.61	5.30	5.05	3.35	4.44	
	Listvyanka	8.96	8.12	12.5	12.5	16.0	11.7	11.7	12.7	9.91	7.88	12.1	12.4	7.98	7.20	6.66	
	Irkutsk	26.3	29.2	28.8	31.8	34.4	31.1	32.7	26.3	30.2	16.8	22.4	27.6	17.5	13.9	15.3	
	Primorskaya	13.5	18.9	11.4	16.3	13.4	11.7	17.4	17.7	12.6	12.6	20.4	14.2	11.6	17.5	13.1	
Thailand	Bangkok	13.5	15.9	9.81	11.1	10.4	13.3	25.0	14.3	16.8	15.7	11.2	26.9	29.0	17.7	***	
	Samutprakarn	10.7	13.5	13.0	7.38	5.83	8.22	19.3	14.3	6.02	9.09	7.81	8.46	10.4	6.44	***	
	Pathumthani	8.38	11.5	9.07	9.03	12.0	20.3	27.0	22.4	16.5	13.6	12.2	7.86	10.2	4.30	5.33	
	Khanchanaburi	2.88	4.39	4.72	1.73	3.88	17.3	3.14	3.93	3.50	4.95	3.53	3.36	4.13	***	***	
	Mae Hia	7.97	6.63	5.63	4.36	2.54	7.69	10.4	9.64	4.01	10.6	8.43	6.84	10.1			
	Sakaerat	3.66	3.26	2.48	2.15	1.81	3.66	1.90	8.57	6.73	8.16	4.55	34.9	55.7			
Vietnam	Hanoi	17.9	11.6	11.8	23.5	14.5	15.0	16.1	24.6	36.5	22.5	35.0	40.3	79.4	82.5	30.5	
	HoaBinh	9.26	14.4	9.37	21.0	12.5	11.0	16.9	13.3	10.0	13.0	23.1	13.7	17.3	43.4	25.3	
	Cuc Phuong			24.6	38.0	32.0	30.2	23.8	22.8	19.2	26.8	23.7	17.7	23.7	20.5	33.3	
	Da Nang			4.31	7.98	8.50	15.5	18.4	25.5	32.7	37.1	32.1	35.0	89.8	92.1	30.7	
	Can Tho								12.4	26.2	11.6	10.3	14.2	15.4	13.8	12.7	
	Ho Chi Minh								25.4	43.5	11.8	14.4	17.9	26.1	15.3	18.2	
	Yen Bai									15.8	20.1	23.0	20.7	27.1	52.5	22.3	

Terms and abbreviations are given in Table 3.5.

Table 3.81 Precipitation amount-weighted annual average concentrations of Mg²⁺ from 2007 to 2021

		unit: $\mu\text{mol L}^{-1}$															
Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Cambodia	PhnomPenh	3.27	3.45	2.00	0.717	1.22	1.22	1.12	1.63	2.56	1.44	1.41	***	***	***	***	
China	Guanyinqiao	8.04															
	Haifu		7.08	5.45	8.95	8.61	6.87	8.23	7.00	4.79	5.69	4.08	4.04	3.01	2.22	2.19	
	Jinyunshan	2.81	4.64	5.56	5.76	6.13	5.82	4.42	4.37	3.24	3.89	4.74	3.34	3.01	2.55	2.12	
	Shizhan	21.4	45.4	12.4	11.0	9.94	3.47	54.5	11.8	9.25	1.97	11.2	12.9	6.63	9.92	1.25	
	Jiwozi	48.8	77.3	20.2	7.17	9.65	44.4	22.3	21.6	11.1	12.6	19.7	16.0	22.5	6.32	0.630	
	Hongwen	6.18	4.92	4.08	2.00	4.22	4.69	3.36	4.27	4.20	4.89	7.19	4.77	4.18	14.5	6.44	
	Xiaoping	2.06	3.39	3.24	1.89	2.21	3.45	4.03	3.65	2.27	2.14	2.78	2.12	2.04	2.85	2.19	
	Xiang Zhou	2.38	3.97	4.52	2.57	4.39	6.90	14.0	7.21	7.19	4.02	5.64	6.39	3.56	3.82	2.38	
	Zhuxiandong	***	5.70	6.15	2.86	6.75	***	***	***	8.78	5.17	3.21	10.2	4.12	5.87	3.49	
	Wuzhishan													2.30	1.34	1.36	
	Lijiang													4.59	2.62	1.24	
Indonesia	Jakarta	2.21	1.67	1.97	2.23	3.45	2.96	2.62	3.64	1.81	4.50	2.95	3.37	1.88	2.52	3.06	
	Serpong	2.65	4.12	1.36	3.09	3.12	2.01	3.86	3.23	3.86	3.06	2.51	4.42	4.43	1.95	3.54	
	Kototabang	3.81	1.000	1.10	1.55	0.950	1.40	2.40	0.908	21.5	1.19	1.08	1.06	0.724	1.22	0.922	
	Bandung	1.68	4.40	4.13	4.43	5.78	3.17	6.33	7.51	5.61	3.50	3.80	3.92	4.83	5.09	2.81	
	Maros		2.56	1.86	2.17	2.50	7.03	2.81	13.6	30.0	2.92	2.24	2.51	2.59	2.10	1.65	
	Jembrana													2.63	4.74	4.87	
	Lombok													4.15	6.84	4.14	
Japan	Rishiri	17.0	30.0	19.9	18.6	15.4	32.3	22.5	18.1	16.2	7.96	24.2	19.9	21.5	15.9	27.7	
	Ochiishi	21.5	19.8	19.9	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	26.4	23.1	21.1	12.9	17.4	15.4	30.0	18.1	25.2	19.5	21.7	18.3				
	Sado-seki	26.1	23.5	36.2	37.7	19.0	29.4	36.9	32.5	37.3	20.8	17.1	15.4	25.3	19.7	188	
	Happo	0.676	0.697	1.16	0.810	0.896	2.30	1.37	1.27	1.33	0.861	1.23	1.03	0.808	0.853	0.962	
	Ijira	2.75	1.74	1.67	1.62	1.69	2.54	2.09	1.97	2.04	1.57	1.84	1.92	1.67	1.69	2.17	
	Oki	31.7	36.7	43.1	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	9.85	8.91	11.8	12.1	12.8	11.2	8.50	10.8	10.8	9.45	9.94	6.66				
	Yusuhara	1.80	1.11	1.61	1.56	2.56	2.84	2.40	1.82	2.77	1.21	6.01	1.78	1.72	1.05	2.54	
	Hedo	14.8	14.2	14.5	29.2	23.2	47.9	25.7	15.6	35.8	23.3	42.6	20.8	17.2	27.2	129	
	Ogasawara	15.0	10.6	21.9	24.5	23.6	13.6	17.0	15.2	34.5	10.5	21.3	5.45	20.3	5.89	17.4	
	Tokyo	4.22	2.78	2.97	2.40	4.79	3.78	3.04	2.54	2.45	1.85	4.92	4.15	6.71	2.18	2.26	
	Niigata-maki													20.4	13.0	21.6	
	Tsushima													3.27	3.50	4.11	
	Lao PDR	Vientiane	0.698	1.31	0.722	***	***	***	***	***	0.613	<0.3	*	*	*	***	***
Malaysia	Petaling Jaya	0.385	0.520	0.467	0.698	0.579	0.497	0.686	1.10	0.922	0.819	0.565	0.724	***	0.889	0.743	
	Tanah Rata	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.301	0.333	<0.3	<0.3	<0.3	<0.3	***	1.16		
	Danum Valley	0.402	0.528	0.549	1.48	0.541	<0.3	0.430	0.552	0.934	0.320	0.379	1.30	***	2.10	0.714	
	Kuching		<0.3	0.395	0.457	0.745	<0.3	0.588	1.12	1.21	0.949	0.718	0.607	***	1.49	0.596	
	Gunung Brinchang															0.332	
Mongolia	Ulaanbaatar	4.75	3.67	5.32	2.98	9.23	***	3.74	***	***	6.06	3.06	2.50	3.71	3.25	3.33	
	Terelj	2.07	3.00	5.45	5.54	7.35	***	4.97	***	***	2.19	1.32	1.46	***	9.00	3.14	
Myanmar	Yangon	***	***	2.84	1.80	3.02	6.56	12.3	3.41	5.87	4.58	3.46	4.72	4.00	2.78	29.5	
Philippines	Metro Manila	4.13	4.64	2.56	9.12	7.13	6.53	4.54	4.64	6.39	5.29	***	***	3.97	3.26	1.41	
	Los Baños	3.46	4.65	3.73	8.20	4.76	4.26	3.25	3.32	4.40	4.14	***	***	***	***	***	
	Mt.Sto.Tomas	2.08	0.346	1.53	3.34	1.61	2.90	1.69	1.35	3.44	2.78	***	***	***	***	***	
Republic of Korea	Kanghwa	6.74	2.75	5.27	3.64	3.18	5.50	3.30	3.27	3.60	1.19	2.33	1.09	16.2	***	5.35	
	Cheju	7.30	9.68	6.02	6.90	10.5	34.5	25.6	7.85	5.92	37.7	21.5	18.1	3.67	***	25.0	
	Imsil	3.57	1.99	3.88	4.68	2.02	3.05	1.87	1.77	3.30	1.55	1.91	0.648	0.797	***	5.28	
Russia	Mondy	1.78	1.98	1.17	1.81	2.60	4.06	0.877	1.18	2.15	0.864	1.75	1.07	0.948	0.549	1.24	
	Listvyanka	1.85	1.76	2.84	2.97	3.12	2.53	2.92	2.37	2.06	1.91	3.15	2.95	2.27	2.38	2.29	
	Irkutsk	6.27	6.44	7.55	6.75	7.29	6.49	6.38	3.68	5.51	3.97	4.70	5.32	4.20	3.85	4.63	
	Primorskaya	4.30	6.26	3.11	4.27	4.29	4.43	4.89	6.21	5.62	5.51	11.9	9.23	8.90	8.73	5.56	
Thailand	Bangkok	1.68	2.34	1.49	1.52	1.25	1.35	2.63	2.37	1.90	2.48	1.57	3.00	2.71	2.81	***	
	Samutprakarn	2.69	3.99	2.80	2.20	1.20	1.53	4.46	3.12	1.57	1.79	1.56	2.14	1.91	2.28	***	
	Pathumthani	1.28	1.70	1.24	1.38	1.57	3.14	2.59	1.91	1.88	2.10	1.41	1.14	1.98	1.02	1.18	
	Khanchanaburi	0.997	1.61	1.44	0.575	1.27	2.76	1.03	1.32	1.06	1.74	1.15	1.44	0.993	***	***	
	Mae Hia	1.24	1.78	2.73	0.451	<0.3	0.842	1.50	1.91	1.41	1.54	1.37	0.656	1.41			
	Sakaerat	1.78	1.22	1.27	0.703	<0.3	0.423	<0.3	1.31	2.17	4.25	1.76	8.17	9.26			
Vietnam	Hanoi	4.17	3.65	4.78	5.68	4.08	2.15	2.79	3.51	4.59	4.38	7.27	6.49	7.57	8.43	5.59	
	HoaBinh	2.76	1.60	1.85	5.56	2.39	2.17	2.69	2.72	2.44	2.52	1.97	3.11	2.17	5.14	4.33	
	Cuc Phuong			4.37	4.41	4.78	7.07	12.2	4.88	5.44	8.30	8.30	10.2	13.5	10.8	13.9	
	Da Nang			10.2	8.52	9.42	9.19	18.8	10.8	8.77	9.03	11.3	10.6	28.6	16.7	17.4	
	Can Tho								4.45	9.17	6.85	5.35	9.84	10.2	7.83	7.01	
	Ho Chi Minh								8.73	17.9	6.90	9.01	10.2	13.2	9.34	11.1	
	Yen Bai									2.68	3.24	1.66	3.39	2.33	9.32	3.48	

Terms and abbreviations are given in Table 3.5.

Table 3.82 Precipitation amount-weighted annual average concentrations of H⁺ from 2007 to 2021unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	0.203	1.45	0.649	1.07	1.10	0.694	0.662	0.621	0.717	0.389	0.667	***	***	***	***
China	Guanyinqiao	22.6														
	Haifu		63.5	60.3	71.0	65.9	57.5	30.1	12.1	3.81	0.655	1.47	5.10	3.73	3.41	2.94
	Jinyunshan	30.0	44.0	47.1	115	90.9	81.5	63.3	41.2	20.0	10.6	7.07	14.2	17.5	17.5	8.96
	Shizhan	3.03	0.402	0.297	0.211	0.535	0.552	0.117	0.247	0.220	0.206	0.256	0.171	0.150	0.120	0.0744
	Jiwozi	0.143	0.114	0.794	2.91	1.13	0.076	0.635	0.104	0.124	0.237	0.203	0.164	0.175	0.268	0.580
	Hongwen	16.2	25.7	30.2	26.6	22.5	30.9	13.2	8.39	12.7	12.1	4.56	2.30	0.853	0.391	4.63
	Xiaoping	25.4	27.9	34.1	26.5	15.3	15.7	9.92	19.6	11.3	18.5	1.27	14.6	18.6	17.2	13.6
	Xiang Zhou	23.3	11.7	13.4	14.1	8.81	7.73	5.83	9.91	2.77	6.78	10.5	8.66	11.3	8.13	6.03
	Zhuxiandong	***	13.1	17.7	11.3	16.7	***	***	***	3.29	6.88	8.49	6.98	9.55	6.82	3.56
	Wuzhishan													1.14	1.29	0.623
	Lijiang													0.529	0.374	0.241
Indonesia	Jakarta	27.5	22.5	23.5	18.6	28.2	17.4	16.9	19.6	14.4	11.3	12.9	20.4	14.7	6.52	12.6
	Serpong	25.8	23.9	19.3	17.5	19.7	12.4	8.63	7.23	11.4	6.56	6.34	6.10	10.5	7.37	3.39
	Kototabang	5.31	6.00	22.6	16.0	9.22	9.75	10.6	15.2	12.4	5.04	6.29	4.88	4.21	4.75	2.55
	Bandung	11.8	6.81	4.99	7.99	4.00	3.48	4.01	6.14	4.41	8.29	5.63	2.17	0.953	1.06	3.22
	Maros		2.35	4.64	6.16	4.43	2.41	3.41	5.88	5.77	5.77	4.88	4.21	11.5	4.00	0.568
	Jembrana													4.32	6.91	12.2
	Lombok													2.56	4.04	5.15
Japan	Rishiri	26.3	12.3	18.3	18.7	20.1	20.2	21.2	18.6	16.8	12.6	17.3	13.6	15.3	10.2	8.77
	Ochiishi	16.7	13.5	9.64	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	23.8	26.0	18.2	20.4	24.6	20.5	16.0	21.9	14.1	15.2	18.0	11.0			
	Sado-seki	31.4	27.9	17.7	19.8	20.8	18.6	18.2	19.7	21.8	13.9	12.7	10.9	12.6	13.6	18.6
	Happo	16.2	14.7	10.7	8.00	9.15	13.3	10.0	9.77	8.14	8.18	7.96	6.31	7.26	5.50	5.53
	Ijira	29.3	35.7	23.0	17.3	18.0	20.5	17.9	19.3	20.0	17.5	18.3	12.1	16.4	11.4	8.72
	Oki	23.1	25.0	19.4	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	32.3	29.3	22.1	19.8	21.8	33.5	22.8	27.9	22.2	15.4	17.1	13.5			
	Yusuhara	15.3	21.6	17.2	16.2	11.7	16.8	16.7	13.2	13.5	14.2	31.1	10.0	10.8	11.4	7.15
	Hedo	10.2	10.0	7.81	6.34	12.5	7.49	10.9	9.55	7.17	6.72	9.90	7.96	10.5	8.57	20.8
	Ogasawara	9.38	10.0	6.79	5.68	4.98	4.63	5.65	8.38	5.89	7.98	6.09	5.96	5.87	10.6	5.17
	Tokyo	16.3	24.8	17.7	11.2	14.9	14.4	8.83	14.8	16.3	11.4	12.7	11.8	9.99	7.95	6.71
	Niigata-maki													13.7	11.3	10.1
	Tsushima													10.2	11.9	13.0
Lao PDR	Vientiane	2.16	0.987	3.31	***	***	0.351	***	0.288	1.15	0.171	*	*	*	***	***
Malaysia	Petaling Jaya	27.6	37.2	45.2	54.4	69.4	61.4	38.0	38.2	40.8	54.9	30.9	31.6	***	22.4	20.8
	Tanah Rata	11.1	8.01	8.31	8.64	9.76	10.9	11.2	13.9	19.1	14.1	13.9	13.7	***	12.7	
	Danum Valley	8.03	6.02	6.00	5.99	6.20	6.58	5.33	4.87	6.15	5.56	6.08	4.97	***	6.04	5.78
	Kuching		5.55	5.47	5.25	3.73	4.84	5.17	4.60	4.88	7.14	6.10	5.62	***	2.51	4.52
	Gunung Brinchang															5.59
Mongolia	Ulaanbaatar	0.550	0.521	0.777	1.33	3.64	1.31	1.04	***	0.379	9.54	2.95	1.73	3.25	1.12	2.08
	Terelj	6.04	3.72	0.608	2.44	5.47	1.81	12.3	***	3.14	6.47	9.14	1.56	***	0.564	2.00
Myanmar	Yangon	2.66	0.392	0.346	0.384	0.347	0.323	0.352	0.199	0.216	0.178	0.204	0.264	0.294	0.550	0.182
Philippines	Metro Manila	5.33	2.84	5.87	2.25	2.27	6.03	2.85	0.736	0.528	3.05	***	***	3.94	2.50	10.0
	Los Baños	2.91	11.2	2.64	1.32	2.70	2.19	1.41	1.61	0.508	19.3	***	***	***	***	***
	Mt.Sto.Tomas	2.97	3.22	1.47	0.201	4.46	1.12	5.18	0.724	1.10	0.345	***	***	***	***	***
Republic of Korea	Kanghwa	24.0	28.4	25.9	39.0	23.0	24.4	26.3	13.4	20.2	16.4	36.4	13.2	20.9	***	5.59
	Cheju	30.7	21.5	7.79	9.19	6.80	4.95	4.18	1.61	2.15	7.94	5.27	1.36	2.53	***	2.04
	Imsil	1.85	13.1	8.06	13.5	5.42	7.82	6.01	5.17	8.04	3.15	5.04	2.00	4.60	***	0.655
Russia	Mondy	3.03	6.72	3.33	2.80	2.90	2.37	4.83	4.65	3.58	4.31	4.86	6.50	3.93	3.97	2.34
	Listvyanka	21.6	23.2	14.4	17.6	18.8	16.7	15.9	12.6	14.7	12.5	17.0	17.9	18.6	15.7	14.0
	Irkutsk	11.7	17.1	3.89	7.41	9.51	11.6	9.81	8.65	6.15	11.8	11.4	14.0	15.3	14.0	10.9
	Primorskaya	14.5	16.3	10.5	10.7	23.4	8.55	8.80	3.41	6.90	3.97	2.07	1.49	3.65	0.990	2.77
Thailand	Bangkok	8.96	5.29	8.07	8.48	8.97	2.08	2.52	0.0943	5.09	2.91	1.08	0.902	0.863	1.70	***
	Samutprakarn	2.46	5.08	7.40	4.82	1.27	0.679	1.06	0.310	2.53	3.57	1.37	3.01	1.76	0.880	***
	Pathumthani	15.6	9.24	7.05	5.82	9.99	3.60	3.90	3.09	5.12	4.01	4.55	7.57	3.47	1.89	3.26
	Khanchanaburi	1.66	2.19	2.18	2.03	3.21	0.964	4.72	1.61	3.44	1.04	1.72	1.73	0.835	***	***
	Mae Hia	1.12	1.04	1.20	0.676	5.14	0.789	0.909	0.527	2.28	2.49	2.77	3.07	7.04		
	Sakaerat	8.30	9.31	13.6	17.8	9.95	8.58	5.70	15.0	9.26	5.47	3.84	7.28	6.23		
Vietnam	Hanoi	2.61	1.43	2.15	1.16	5.03	2.39	2.21	1.83	0.649	2.52	0.292	3.04	11.2	0.650	2.28
	HoaBinh	8.71	3.25	5.13	4.26	3.65	2.35	0.911	3.60	5.07	2.31	6.02	5.51	4.94	1.87	3.49
	Cuc Phuong			10.3	5.88	9.09	3.68	3.77	3.00	4.78	1.57	8.43	3.57	3.51	5.64	0.744
	Da Nang			16.8	7.71	10.4	3.66	2.62	3.01	1.05	1.10	1.36	1.64	0.709	0.712	1.62
	Can Tho								0.550	1.68	1.43	1.08	1.34	1.18	1.41	1.09
	Ho Chi Minh								1.42	0.775	1.75	0.861	0.773	1.08	1.08	0.835
	Yen Bai									5.90	6.63	6.40	4.48	15.3	1.70	2.60

Terms and abbreviations are given in Table 3.5.

Table 3.83 Precipitation amount-weighted annual average pH from 2007 to 2021

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	6.69	5.84	6.19	5.97	5.96	6.16	6.18	6.21	6.14	6.41	6.18	***	***	***	***
China	Guanyinqiao	4.65														
	Haifu		4.20	4.22	4.15	4.18	4.24	4.52	4.92	5.42	6.18	5.83	5.29	5.43	5.47	5.53
	Jinyunshan	4.52	4.36	4.33	3.94	4.04	4.09	4.20	4.39	4.70	4.97	5.15	4.85	4.76	4.76	5.05
	Shizhan	5.52	6.40	6.53	6.68	6.27	6.26	6.93	6.61	6.66	6.69	6.59	6.77	6.82	6.92	7.13
	Jiwozi	6.85	6.94	6.10	5.54	5.95	7.12	6.20	6.98	6.91	6.63	6.69	6.79	6.76	6.57	6.24
	Hongwen	4.79	4.59	4.52	4.57	4.65	4.51	4.88	5.08	4.90	4.92	5.34	5.64	6.07	6.41	5.33
	Xiaoping	4.60	4.55	4.47	4.58	4.82	4.80	5.00	4.71	4.95	4.73	5.90	4.84	4.73	4.76	4.87
	Xiang Zhou	4.63	4.93	4.87	4.85	5.05	5.11	5.23	5.00	5.56	5.17	4.98	5.06	4.95	5.09	5.22
	Zhuxiandong	***	4.88	4.75	4.95	4.78	***	***	***	5.48	5.16	5.07	5.16	5.02	5.17	5.45
	Wuzhishan													5.94	5.89	6.21
	Lijiang													6.28	6.43	6.62
Indonesia	Jakarta	4.56	4.65	4.63	4.73	4.55	4.76	4.77	4.71	4.84	4.95	4.89	4.69	4.83	5.19	4.90
	Serpong	4.59	4.62	4.71	4.76	4.70	4.91	5.06	5.14	4.94	5.18	5.20	5.21	4.98	5.13	5.47
	Kototabang	5.27	5.22	4.65	4.80	5.04	5.01	4.97	4.82	4.91	5.30	5.20	5.31	5.38	5.32	5.59
	Bandung	4.93	5.17	5.30	5.10	5.40	5.46	5.40	5.21	5.36	5.08	5.25	5.66	6.02	5.97	5.49
	Maros		5.63	5.33	5.21	5.35	5.62	5.47	5.23	5.24	5.24	5.31	5.38	4.94	5.40	6.25
	Jembrana													5.36	5.16	4.91
	Lombok													5.59	5.39	5.29
Japan	Rishiri	4.58	4.91	4.74	4.73	4.70	4.70	4.67	4.73	4.77	4.90	4.76	4.87	4.82	4.99	5.06
	Ochiishi	4.78	4.87	5.02	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	4.62	4.59	4.74	4.69	4.61	4.69	4.80	4.66	4.85	4.82	4.74	4.96			
	Sado-seki	4.50	4.55	4.75	4.70	4.68	4.73	4.74	4.70	4.66	4.86	4.90	4.96	4.90	4.87	4.73
	Happo	4.79	4.83	4.97	5.10	5.04	4.88	5.00	5.01	5.09	5.09	5.10	5.20	5.14	5.26	5.26
	Ijira	4.53	4.45	4.64	4.76	4.75	4.69	4.75	4.71	4.70	4.76	4.74	4.92	4.79	4.94	5.06
	Oki	4.64	4.60	4.71	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	4.49	4.53	4.66	4.70	4.66	4.48	4.64	4.55	4.65	4.81	4.77	4.87			
	Yusuhara	4.81	4.67	4.77	4.79	4.93	4.77	4.78	4.88	4.87	4.85	4.51	5.00	4.97	4.94	5.15
	Hedo	4.99	5.00	5.11	5.20	4.90	5.13	4.96	5.02	5.14	5.17	5.00	5.10	4.98	5.07	4.68
	Ogasawara	5.03	5.00	5.17	5.25	5.30	5.33	5.25	5.08	5.23	5.10	5.22	5.23	5.23	4.97	5.29
	Tokyo	4.79	4.60	4.75	4.95	4.83	4.84	5.05	4.83	4.79	4.94	4.90	4.93	5.00	5.10	5.17
	Niigata-maki													4.86	4.95	5.00
	Tsushima													4.99	4.92	4.89
Lao PDR	Vientiane	5.67	6.01	5.48	***	***	6.46	***	6.54	5.94	6.77	*	*	*	***	***
Malaysia	Petaling Jaya	4.56	4.43	4.35	4.26	4.16	4.21	4.42	4.42	4.39	4.26	4.51	4.50	***	4.65	4.68
	Tanah Rata	4.95	5.10	5.08	5.06	5.01	4.96	4.95	4.86	4.72	4.85	4.86	4.86	***	4.90	
	Danum Valley	5.10	5.22	5.22	5.22	5.21	5.18	5.27	5.31	5.21	5.25	5.22	5.30	***	5.22	5.24
	Kuching		5.26	5.26	5.28	5.43	5.32	5.29	5.34	5.31	5.15	5.21	5.25	***	5.60	5.34
	Gunung Brinchang															5.25
Mongolia	Ulaanbaatar	6.26	6.28	6.11	5.88	5.44	5.88	5.98	***	6.42	5.02	5.53	5.76	5.49	5.95	5.68
	Terelj	5.22	5.43	6.22	5.61	5.26	5.74	4.91	***	5.50	5.19	5.04	5.81	***	6.25	5.70
Myanmar	Yangon	5.57	6.41	6.46	6.42	6.46	6.49	6.45	6.70	6.66	6.75	6.69	6.58	6.53	6.26	6.74
Philippines	Metro Manila	5.27	5.55	5.23	5.65	5.64	5.22	5.55	6.13	6.28	5.52	***	***	5.40	5.60	5.00
	Los Baños	5.54	4.95	5.58	5.88	5.57	5.66	5.85	5.79	6.29	4.71	***	***	***	***	***
	Mt.Sto.Tomas	5.53	5.49	5.83	6.70	5.35	5.95	5.29	6.14	5.96	6.46	***	***	***	***	***
Republic of Korea	Kanghwa	4.62	4.55	4.59	4.41	4.64	4.61	4.58	4.87	4.69	4.79	4.44	4.88	4.68	***	5.25
	Cheju	4.51	4.67	5.11	5.04	5.17	5.31	5.38	5.79	5.67	5.10	5.28	5.87	5.60	***	5.69
	Imsil	5.73	4.88	5.09	4.87	5.27	5.11	5.22	5.29	5.09	5.50	5.30	5.70	5.34	***	6.18
Russia	Mondy	5.52	5.17	5.48	5.55	5.54	5.62	5.32	5.33	5.45	5.37	5.31	5.19	5.41	5.40	5.63
	Listvyanka	4.67	4.63	4.84	4.76	4.73	4.78	4.80	4.90	4.83	4.90	4.77	4.75	4.73	4.80	4.85
	Irkutsk	4.93	4.77	5.41	5.13	5.02	4.93	5.01	5.06	5.21	4.93	4.94	4.86	4.82	4.85	4.96
	Primorskaya	4.84	4.79	4.98	4.97	4.63	5.07	5.06	5.47	5.16	5.40	5.69	5.83	5.44	6.00	5.56
Thailand	Bangkok	5.05	5.28	5.09	5.07	5.05	5.68	5.60	7.03	5.29	5.54	5.97	6.04	6.06	5.77	***
	Samutprakarn	5.61	5.29	5.13	5.32	5.90	6.17	5.98	6.51	5.60	5.45	5.86	5.52	5.75	6.06	***
	Pathumthani	4.81	5.03	5.15	5.24	5.00	5.44	5.41	5.51	5.29	5.40	5.34	5.12	5.46	5.72	5.49
	Khanchanaburi	5.78	5.66	5.66	5.69	5.49	6.02	5.33	5.79	5.46	5.98	5.76	5.76	6.08	***	***
	Mae Hia	5.95	5.98	5.92	6.17	5.29	6.10	6.04	6.28	5.64	5.60	5.56	5.51	5.15		
	Sakaerat	5.08	5.03	4.87	4.75	5.00	5.07	5.24	4.82	5.03	5.26	5.42	5.14	5.21		
Vietnam	Hanoi	5.58	5.84	5.67	5.93	5.30	5.62	5.66	5.74	6.19	5.60	6.53	5.52	4.95	6.19	5.64
	HoaBinh	5.06	5.49	5.29	5.37	5.44	5.63	6.04	5.44	5.29	5.64	5.22	5.26	5.31	5.73	5.46
	Cuc Phuong			4.99	5.23	5.04	5.43	5.42	5.52	5.32	5.81	5.07	5.45	5.45	5.25	6.13
	Da Nang			4.77	5.11	4.98	5.44	5.58	5.52	5.98	5.96	5.87	5.78	6.15	6.15	5.79
	Can Tho								6.26	5.77	5.84	5.97	5.87	5.93	5.85	5.96
	Ho Chi Minh								5.85	6.11	5.76	6.06	6.11	5.96	5.96	6.08
	Yen Bai									5.23	5.18	5.19	5.35	4.82	5.77	5.59

Terms and abbreviations are given in Table 3.5.

Table 3.84 Precipitation amount-weighted annual average EC from 2007 to 2021

unit: mS m⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	PhnomPenh	1.37	1.53	0.880	0.747	0.820	0.704	0.665	0.676	0.691	0.705	0.747	***	***	***	***
China	Guanyinqiao	5.01														
	Haifu		6.46	5.14	6.71	6.55	5.33	5.26	3.94	2.70	3.00	2.71	2.83	2.27	1.86	1.85
	Jinyunshan	3.76	5.13	5.27	8.07	7.09	6.56	4.81	3.65	2.50	2.44	2.38	2.65	2.43	2.20	1.71
	Shizhan	7.21	7.96	5.80	5.63	4.31	6.51	6.97	4.37	5.06	3.69	3.53	3.28	3.02	3.43	3.57
	Jiwozi	10.3	8.46	3.73	1.67	3.04	5.39	3.61	4.29	2.32	1.05	2.64	2.09	5.58	2.21	1.41
	Hongwen	2.68	2.15	2.25	2.05	2.18	2.67	1.63	1.89	1.59	2.33	2.21	2.07	3.18	7.26	2.42
	Xiaoping	2.01	2.09	2.26	2.06	1.82	1.67	1.46	2.15	1.43	1.28	0.996	1.29	1.56	1.41	1.35
	Xiang Zhou	1.99	1.84	1.99	1.74	1.84	1.76	1.15	1.94	1.65	1.50	1.85	2.09	1.46	1.24	0.905
	Zhuxiandong	***	1.94	2.15	1.37	1.99	***	***	***	2.29	2.01	1.45	2.38	1.53	1.49	1.02
	Wuzhishan													0.733	0.613	0.525
	Lijiang													1.50	0.418	0.366
Indonesia	Jakarta	2.23	1.78	1.66	1.90	2.17	1.39	1.59	1.67	1.26	2.03	1.27	2.52	1.82	1.27	1.81
	Serpong	2.14	2.10	1.66	1.95	2.31	2.05	2.16	1.89	2.26	1.85	1.82	2.30	2.46	2.03	2.00
	Kototabang	0.816	0.556	0.766	0.903	0.742	0.791	0.927	1.10	1.04	0.790	0.402	0.429	0.671	0.499	0.507
	Bandung	1.64	1.58	1.62	1.43	1.90	1.60	1.86	2.14	1.71	1.79	1.88	1.88	2.37	1.96	1.59
	Maros		0.623	1.06	0.718	0.576	0.885	0.970	1.00	2.10	3.03	1.65	0.664	1.04	0.692	0.659
	Jembrana													0.898	1.78	1.79
	Lombok													1.10	1.03	0.968
Japan	Rishiri	3.72	4.86	4.10	3.77	3.50	5.54	4.25	3.56	3.16	1.92	4.47	3.78	4.00	3.13	4.36
	Ochiishi	3.69	3.33	3.31	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	4.92	4.32	3.78	2.80	3.64	3.45	4.76	3.62	3.97	3.32	3.91	3.16			
	Sado-seki	4.92	4.28	5.65	5.08	3.57	4.88	5.98	5.58	6.15	3.47	3.11	2.86	4.15	3.17	27.9
	Happo	1.08	1.03	0.860	0.597	0.666	1.07	0.764	0.744	0.680	0.616	0.569	0.560	0.595	0.494	0.541
	Ijira	2.05	2.18	1.65	1.33	1.46	1.65	1.42	1.47	1.49	1.33	1.32	0.959	1.19	1.00	0.866
	Oki	5.91	6.60	7.16	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	3.36	3.10	3.02	2.88	3.13	3.44	2.48	3.11	2.82	2.39	2.46	1.85			
	Yusuhara	1.06	1.14	1.15	1.06	0.870	1.24	1.06	0.789	1.11	0.972	2.68	0.804	0.870	0.839	0.763
	Hedo	2.54	2.61	2.44	4.59	3.87	7.27	4.24	2.68	5.28	3.41	6.15	3.00	2.66	4.16	19.7
	Ogasawara	2.59	1.86	3.27	3.58	3.70	2.26	2.86	2.62	5.30	1.87	3.25	1.02	3.15	1.39	2.80
	Tokyo	1.80	1.96	1.66	1.18	1.88	1.75	1.33	1.46	1.40	1.04	1.60	1.43	1.66	0.997	0.941
	Niigata-maki													3.87	2.58	3.67
	Tsushima													1.23	1.40	1.46
Lao PDR	Vientiane	0.396	0.644	0.534	***	***	0.411	***	0.867	1.26	0.730	*	*	*	***	***
Malaysia	Petaling Jaya	1.40	1.98	2.46	2.90	3.43	3.10	2.43	2.50	2.61	2.95	1.92	2.17	***	1.58	1.50
	Tanah Rata	0.506	0.471	0.544	0.550	0.822	0.780	0.734	0.875	1.10	0.813	0.798	0.808	***	1.01	
	Danum Valley	0.347	0.461	0.445	0.552	0.440	0.416	0.410	0.419	0.513	0.360	0.339	0.433	***	0.707	0.506
	Kuching		0.443	0.521	0.500	0.547	0.489	0.549	1.02	0.635	0.683	0.588	0.612	***	0.730	0.630
	Gunung Brinchang															0.481
Mongolia	Ulaanbaatar	2.18	1.92	1.76	1.53	1.74	1.71	2.54	***	2.86	3.52	1.26	1.40	7.89	2.09	2.10
	Terelj	2.02	1.34	2.06	1.88	1.54	1.33	1.94	***	2.80	3.27	1.38	1.19	***	2.37	4.04
Myanmar	Yangon	0.595	0.949	1.54	1.34	0.682	1.30	0.813	0.914	1.46	1.37	0.504	0.644	0.910	1.19	0.807
Philippines	Metro Manila	1.40	2.88	1.24	1.89	3.76	4.81	1.53	1.92	2.53	3.02	***	***	1.20	1.01	1.33
	Los Baños	0.859	1.76	0.802	1.22	1.18	1.74	1.02	1.45	3.34	2.25	***	***	***	***	***
	Mt.Sto.Tomas	1.03	0.347	0.495	0.533	0.355	0.500	0.558	0.460	0.464	0.527	***	***	***	***	***
Republic of Korea	Kanghwa	3.49	2.72	2.88	2.46	2.34	2.76	2.66	2.41	4.29	1.80	2.44	1.67	4.74	***	1.62
	Cheju	3.43	3.47	2.20	2.32	3.07	7.05	5.55	2.42	2.31	7.07	5.00	4.74	2.37	***	5.13
	Imsil	1.58	1.75	1.98	1.89	1.58	2.58	1.47	1.39	1.98	1.23	1.69	1.07	1.31	***	1.96
Russia	Mondy	0.799	0.727	0.621	0.653	0.566	0.864	0.420	0.480	0.588	0.409	0.659	0.576	0.469	0.330	0.802
	Listvyanka	1.38	1.58	1.31	1.41	1.63	1.51	1.25	1.20	1.50	1.11	1.54	1.43	1.32	1.14	1.14
	Irkutsk	2.02	2.48	2.18	2.05	2.16	2.16	2.08	1.59	2.55	1.47	1.62	1.90	1.65	1.54	1.51
	Primorskaya	1.90	2.58	1.48	1.96	2.64	1.56	1.89	1.63	1.75	1.58	2.06	1.53	1.36	1.56	1.85
Thailand	Bangkok	1.41	1.54	1.38	1.31	1.24	1.26	1.35	1.10	1.35	1.34	0.821	1.64	1.36	0.891	***
	Samutprakarn	1.34	1.66	1.48	1.13	0.667	0.902	1.20	1.00	0.921	0.880	0.799	1.05	1.01	0.845	***
	Pathumthani	1.50	1.19	1.07	0.975	1.27	1.17	1.08	0.998	1.34	1.38	1.19	1.24	1.24	0.798	1.03
	Khanchanaburi	0.292	0.496	0.511	0.249	0.585	0.817	0.326	0.506	0.438	0.379	0.421	0.382	0.421	***	***
	Mae Hia	0.630	0.622	0.608	0.519	0.442	0.512	0.682	0.803	0.561	0.825	0.736	0.526	0.939		
	Sakaerat	0.775	0.833	0.981	0.992	0.796	0.756	0.789	1.46	0.856	0.848	0.566	0.870	0.800		
Vietnam	Hanoi	1.57	1.11	1.41	1.72	1.60	1.56	1.52	1.99	2.21	1.93	2.08	2.47	3.68	4.28	2.21
	HoaBinh	1.08	0.918	1.10	1.39	1.02	0.940	1.10	1.35	1.22	1.45	1.27	1.22	1.06	2.11	1.90
	Cuc Phuong			1.74	1.71	1.98	1.73	1.80	1.28	1.42	1.37	1.52	1.10	1.69	1.51	2.22
	Da Nang			2.53	1.46	2.37	2.10	3.46	1.85	1.82	1.74	2.47	2.41	5.02	4.72	2.63
	Can Tho								1.10	1.92	1.20	1.06	1.27	1.35	1.34	1.21
	Ho Chi Minh								2.00	2.85	1.33	1.68	1.35	1.78	1.64	1.61
	Yen Bai									1.31	2.47	1.55	1.49	1.90	2.90	2.10

Terms and abbreviations are given in Table 3.5.

Table 3.85 Annual SO₄²⁻ deposition amount from 2007 to 2021

unit: mmol m⁻²y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	30.9	21.3	15.4	13.6	11.5	17.0	10.7	9.78	7.76	6.85	15.6	***	***	***	***
China	Guanyinqiao	169														
	Haifu		145	106	136	115	103	109	120	61.3	59.5	49.8	46.1	41.0	33.0	34.7
	Jinyunshan	149	146	125	148	119	125	91.7	90.0	56.5	48.6	46.3	33.9	36.6	38.0	37.3
	Shizhan	96.7	73.6	80.5	45.8	72.5	42.9	62.0	70.1	49.1	25.9	41.8	22.1	14.1	19.5	28.7
	Jiwozi	18.2	63.6	58.7	36.8	60.7	36.9	34.1	39.4	14.1	7.18	18.2	14.5	36.4	6.75	15.6
	Hongwen	102	29.9	19.2	40.8	26.4	29.7	30.7	30.4	18.8	40.4	17.1	17.3	46.4	9.74	9.75
	Xiaoping	29.2	58.3	32.0	41.4	38.1	30.2	44.9	40.3	27.0	25.4	9.85	11.0	12.9	9.26	9.34
	Xiang Zhou	31.2	46.5	36.6	36.7	19.5	22.6	46.3	23.9	16.6	37.6	26.9	25.0	20.2	15.5	14.4
	Zhuxiandong	***	49.6	33.2	31.6	23.4	***	***	***	37.2	42.6	25.7	33.1	24.8	22.5	19.1
	Wuzhishan													10.1	3.50	3.11
	Lijiang													0.234	36.9	1.34
Indonesia	Jakarta	60.6	38.9	30.2	46.4	28.4	56.0	51.0	70.4	48.0	61.4	22.6	59.4	38.1	45.8	57.4
	Serpong	61.5	65.9	31.0	34.8	27.9	26.0	61.6	66.9	55.8	76.0	81.5	71.0	74.3	82.4	68.6
	Kototabang	19.4	7.21	12.5	15.0	17.1	16.0	13.2	21.3	20.8	12.3	10.9	16.2	14.0	12.2	14.3
	Bandung	52.0	65.4	78.3	70.3	47.1	55.2	72.1	78.8	60.6	86.1	67.3	55.6	72.8	44.0	54.3
	Maros		16.3	22.5	28.9	30.0	21.5	26.0	20.9	15.3	20.6	14.6	19.4	11.6	8.26	8.55
	Jembrana													14.8	20.1	22.0
	Lombok													18.6	15.0	19.7
Japan	Rishiri	24.9	24.3	27.4	25.1	26.1	32.6	27.1	20.7	19.9	15.3	23.1	24.4	15.6	22.7	23.2
	Ochiishi	18.4	13.7	26.3	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	31.2	23.3	30.9	33.1	31.5	26.2	35.4	31.7	27.5	27.5	24.9	28.8			
	Sado-seki	40.6	31.6	34.2	44.2	34.0	38.6	52.7	45.1	30.1	21.4	24.7	24.6	22.2	25.3	179
	Happo	28.4	18.0	23.8	16.0	21.5	23.2	23.6	19.6	15.8	12.5	14.5	13.1	14.5	10.7	12.4
	Ijira	43.0	41.0	44.2	42.6	39.8	38.9	33.6	36.6	36.8	34.1	29.4	27.7	27.5	25.0	25.6
	Oki	42.1	39.5	42.4	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	35.5	32.7	36.3	30.8	30.1	31.2	35.0	32.7	26.7	30.9	23.8	19.3			
	Yusuhara	22.5	22.4	24.1	23.9	23.9	32.8	22.5	24.4	19.9	20.8	51.3	21.2	20.1	19.2	14.0
	Hedo	38.8	27.8	25.9	55.3	36.3	88.5	35.8	34.9	42.1	31.9	45.5	33.6	32.0	37.5	226
	Ogasawara	19.9	15.0	27.7	27.9	20.4	16.0	17.1	18.5	32.9	11.0	21.1	3.83	23.9	12.6	22.1
	Tokyo	18.4	36.5	27.6	18.1	22.0	25.5	19.7	25.1	19.2	15.1	14.5	13.7	18.0	11.7	12.8
	Niigata-maki													31.6	30.1	31.7
	Tsushima													25.8	25.1	22.9
Lao PDR	Vientiane	6.54	8.43	0.733	***	***	3.19	***	***	2.94	2.61	*	*	*	***	***
Malaysia	Petaling Jaya	41.8	65.6	39.2	60.3	81.2	58.0	63.6	79.2	80.3	69.4	42.2	59.6	***	40.9	36.1
	Tanah Rata	10.4	12.9	10.0	7.96	16.6	13.1	13.2	17.9	18.4	9.28	10.7	11.0	***	14.7	
	Danum Valley	6.85	7.46	9.56	12.0	7.42	6.75	10.1	7.35	7.17	4.92	7.99	8.01	***	16.9	9.00
	Kuching		17.8	17.6	16.6	18.9	17.7	20.6	26.1	20.7	23.0	15.3	16.3	***	30.8	12.7
	Gunung Brinchang															1.22
Mongolia	Ulaanbaatar	4.67	4.33	4.53	3.39	4.59	***	8.71	***	18.3	20.7	5.54	5.48	11.7	6.27	*
	Terelj	4.63	3.40	1.83	3.96	3.40	***	4.40	***	10.4	15.1	1.42	3.98	***	5.60	*
Myanmar	Yangon	***	***	24.1	10.3	20.9	19.2	21.4	13.1	11.2	20.0	32.6	23.8	26.0	14.0	11.0
Philippines	Metro Manila	78.1	59.2	51.3	54.2	68.3	108	52.9	47.3	47.4	54.7	***	***	24.1	28.8	45.9
	Los Baños	26.0	34.2	25.6	15.3	20.4	26.5	15.8	18.9	21.0	27.0	***	***	***	***	***
	Mt.Sto. Tomas	19.4	17.6	23.8	17.8	21.6	41.6	33.8	16.8	24.5	24.4	***	***	***	***	***
Republic of Korea	Kanghwa	36.4	43.2	37.0	41.3	40.1	20.3	32.4	12.5	17.3	15.8	13.8	8.93	13.2	***	10.3
	Cheju	47.1	22.1	26.3	19.4	27.4	43.9	25.9	20.5	25.1	48.3	22.6	24.3	16.7	***	37.8
	Imsil	38.8	17.9	21.0	32.0	30.9	27.2	22.6	16.7	14.5	11.6	14.2	12.4	16.8	***	8.94
Russia	Mondy	3.26	1.47	0.929	0.613	0.333	0.753	1.18	0.675	0.877	0.696	1.23	1.58	0.853	0.212	0.358
	Listvyanka	6.99	8.33	6.02	6.76	10.6	7.33	5.02	4.85	7.04	4.74	7.09	4.77	8.32	5.92	9.12
	Irkutsk	16.0	20.3	13.4	12.6	11.3	16.8	10.1	9.02	12.3	11.4	12.9	13.7	11.3	10.9	15.4
	Primorskaya	30.4	22.5	19.5	21.5	8.70	19.1	21.1	20.6	24.7	22.2	21.7	30.6	16.4	21.2	15.9
Thailand	Bangkok	27.2	32.0	26.3	24.3	23.2	19.3	9.42	8.52	12.0	23.1	27.1	17.3	7.29	13.5	***
	Samutprakarn	27.7	27.2	30.0	29.3	16.1	9.73	8.55	9.52	10.4	21.3	16.2	15.1	9.55	8.07	***
	Pathumthani	16.6	17.8	11.7	14.1	14.8	12.4	11.1	8.71	12.4	10.9	12.2	9.47	8.64	7.98	7.90
	Khanchanaburi	4.20	7.41	7.19	2.91	9.93	8.89	1.84	3.51	2.56	10.4	3.92	2.65	1.91	***	***
	Mae Hia	5.62	6.38	4.52	3.88	5.23	5.28	5.92	4.42	3.07	4.06	7.67	3.41	5.34		
	Sakaerat	8.93	12.7	8.11	11.5	7.99	7.48	10.8	4.61	9.04	7.51	8.34	10.9	8.02		
Vietnam	Hanoi	55.8	45.8	44.1	43.8	55.7	51.8	50.4	65.3	50.3	59.5	71.7	84.6	87.5	136	79.5
	Hoa Binh	33.1	26.9	21.8	36.1	31.7	32.7	39.6	32.9	32.3	37.9	35.9	61.4	22.9	86.1	70.8
	Cuc Phuong			41.9	33.7	69.7	49.0	51.1	31.5	27.5	32.3	36.1	34.0	35.5	38.0	31.1
	Da Nang			55.6	27.6	76.7	32.9	56.1	35.0	21.6	31.9	37.0	36.2	52.7	34.5	31.5
	Can Tho								16.1	67.7	26.5	30.9	59.1	61.0	39.7	51.6
	Ho Chi Minh								46.3	67.6	49.0	80.5	63.5	71.8	60.7	58.0
	Yen Bai									34.2	79.1	62.9	47.3	38.9	80.6	57.1

Terms and abbreviations are given in Table 3.5.

Table 3.86 Annual nss-SO₄²⁻ deposition amount from 2007 to 2021

unit: mmol m⁻²y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	30.2	15.9	14.9	13.3	11.3	16.6	10.5	9.07	7.35	6.53	15.2	***	***	***	***
China	Guanyinqiao	169														
	Haifu		145	106	135	115	102	108	119	61.1	59.1	49.5	45.7	40.7	32.7	34.6
	Jinyunshan	148	145	124	148	119	125	91.5	89.6	56.4	48.5	46.1	33.8	36.5	37.9	37.2
	Shizhan	96.2	73.0	80.1	45.6	71.8	42.8	58.3	65.4	45.1	24.6	40.8	21.5	13.7	19.0	27.8
	Jiwozi	17.7	61.5	57.8	36.3	60.3	35.8	29.7	35.1	11.6	6.99	17.1	13.7	33.3	6.18	14.4
	Hongwen	99.7	28.6	18.1	39.0	25.5	28.8	29.5	29.1	17.7	37.7	15.9	15.9	46.1	8.82	8.54
	Xiaoping	28.4	55.6	30.9	39.7	37.1	29.5	43.5	39.6	25.9	24.7	9.57	10.7	12.8	8.76	9.01
	Xiang Zhou	29.5	40.6	31.7	34.5	17.0	18.4	38.4	20.9	12.3	34.4	20.9	16.6	17.8	13.0	11.7
	Zhuxiandong	***	44.0	28.9	29.4	20.3	***	***	***	30.8	38.3	22.8	21.8	21.7	17.7	15.6
	Wuzhishan													9.35	3.17	2.63
	Lijiang													0.207	36.9	1.31
Indonesia	Jakarta	58.5	37.9	29.3	45.4	27.7	53.9	48.8	66.3	45.7	58.9	21.8	57.7	37.2	43.0	55.4
	Serpong	60.1	64.5	30.2	34.1	27.4	25.4	59.6	63.7	54.3	73.5	79.2	68.8	72.1	80.0	65.6
	Kototabang	17.9	6.47	11.6	14.3	16.2	14.4	12.1	20.4	21.6	10.7	10.4	15.7	13.4	11.5	13.7
	Bandung	51.2	64.2	76.4	68.8	46.0	53.8	70.2	77.2	59.5	84.3	65.1	53.2	68.2	42.9	53.5
	Maros		13.5	20.0	26.7	26.7	18.7	21.3	17.2	14.9	11.0	8.53	16.7	9.75	6.69	7.33
	Jembrana													12.9	16.0	17.0
	Lombok													16.4	12.4	17.3
Japan	Rishiri	17.4	12.0	16.2	14.6	15.8	12.3	13.2	10.6	10.7	9.89	11.4	13.3	7.76	12.3	8.60
	Ochiishi	8.73	6.14	9.29	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	16.6	13.5	15.4	22.5	21.2	16.3	18.9	20.4	12.9	15.1	12.1	12.9			
	Sado-seki	24.7	18.7	14.2	18.3	21.2	19.9	22.0	21.2	13.1	10.9	13.3	12.0	9.48	11.2	51.4
	Happo	28.0	17.6	23.1	15.4	20.9	22.0	22.9	18.8	15.0	11.8	13.6	12.2	14.0	10.1	11.6
	Ijira	40.1	39.0	41.9	39.6	37.2	35.5	31.1	33.8	33.8	31.8	26.8	24.4	25.3	22.2	21.5
	Oki	22.8	18.2	17.0	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	29.5	27.2	25.9	22.5	20.8	24.5	26.5	24.8	18.6	21.8	16.0	13.7			
	Yusuhara	20.6	21.2	22.6	22.6	21.3	29.4	21.1	23.3	16.1	19.5	43.4	17.7	17.5	17.6	11.0
	Hedo	17.8	13.2	11.0	15.3	14.6	17.9	13.8	14.7	8.88	9.97	9.63	8.21	11.9	10.9	40.4
	Ogasawara	7.61	6.38	8.72	5.60	4.62	5.27	6.31	6.44	3.79	4.72	3.45	1.18	3.92	7.45	3.57
	Tokyo	16.2	34.3	25.1	16.3	18.9	22.6	17.4	23.1	17.4	13.7	11.4	11.0	12.3	10.4	10.6
	Niigata-maki													15.4	15.8	11.5
	Tsushima													21.4	20.6	18.2
Lao PDR	Vientiane	6.34	8.14	0.633	***	***	***	***	***	2.79	2.54	*	*	*	***	***
Malaysia	Petaling Jaya	41.2	64.6	38.4	59.3	80.2	57.3	62.6	78.1	78.9	68.1	41.1	58.4	***	39.6	35.0
	Tanah Rata	10.2	12.6	9.80	7.78	16.2	12.8	12.8	17.4	18.0	8.93	10.2	10.6	***	13.8	
	Danum Valley	6.11	6.89	8.36	10.2	6.51	6.24	9.15	6.42	6.52	4.36	7.58	7.24	***	15.1	7.50
	Kuching		16.4	15.6	14.7	16.3	16.5	18.7	24.1	17.3	18.8	13.2	14.3	***	28.2	10.7
	Gunung Brinchang															1.08
Mongolia	Ulaanbaatar	4.63	4.22	4.47	3.36	4.53	***	8.00	***	***	19.0	5.32	5.05	11.4	5.65	*
	Terelj	4.53	3.26	1.78	3.86	3.34	***	4.33	***	***	13.5	1.34	3.56	***	5.17	*
Myanmar	Yangon	***	***	20.8	8.88	18.0	15.8	19.7	10.1	9.94	18.0	30.0	19.9	22.7	12.1	9.06
Philippines	Metro Manila	73.9	55.7	47.7	50.6	63.6	103	47.0	43.5	43.9	52.0	***	***	21.5	27.3	42.5
	Los Baños	22.7	32.0	22.5	12.5	17.6	23.7	12.5	17.0	19.3	24.7	***	***	***	***	***
	Mt.Sto. Tomas	18.2	16.1	21.5	16.5	20.4	38.1	32.1	15.4	21.3	20.5	***	***	***	***	***
Republic of Korea	Kanghwa	34.0	39.5	33.6	38.8	36.9	18.3	30.8	11.4	15.7	14.3	12.9	7.77	7.71	***	9.04
	Cheju	39.5	15.3	23.0	13.1	17.6	16.9	14.8	12.1	16.2	21.7	11.3	7.82	12.3	***	17.8
	Imsil	37.5	16.3	17.7	27.2	27.5	22.8	20.4	14.7	12.5	9.88	12.5	9.75	14.2	***	6.41
Russia	Mondy	3.20	1.45	0.912	0.598	0.316	0.726	1.15	0.658	0.863	0.678	1.20	1.54	0.832	0.194	0.348
	Listvyanka	6.93	8.27	5.94	6.69	10.4	7.25	4.91	4.77	6.98	4.63	7.03	4.68	8.22	5.81	8.96
	Irkutsk	15.8	20.0	12.9	12.2	11.0	16.5	9.90	8.82	12.1	11.1	12.7	13.5	11.1	10.7	15.1
	Primorskaya	29.2	21.7	18.8	20.5	8.19	17.9	20.0	20.0	23.0	20.8	20.7	29.3	15.4	19.6	14.4
Thailand	Bangkok	26.5	31.0	25.1	23.3	22.4	18.6	8.46	7.96	11.2	22.0	26.6	16.5	6.95	12.2	***
	Samutprakarn	26.3	25.6	28.8	27.2	15.4	9.28	6.94	8.77	9.63	20.3	15.4	14.3	9.03	7.27	***
	Pathumthani	16.1	17.2	11.2	13.5	14.2	11.1	10.7	8.37	12.0	10.4	11.8	9.09	8.32	7.68	7.72
	Khanchanaburi	3.48	6.33	6.05	2.61	9.06	7.49	1.40	3.13	2.19	9.73	3.59	2.16	1.70	***	***
	Mae Hia	5.46	6.18	4.36	3.69	4.93	5.04	5.49	4.31	2.87	3.74	7.23	3.06	4.97		
	Sakaerat	8.56	12.2	7.90	11.1	7.63	7.23	10.5	4.39	8.66	7.25	8.13	10.1	7.36		
Vietnam	Hanoi	55.0	44.5	43.2	43.3	55.0	51.4	49.5	64.6	49.6	58.4	69.6	83.3	85.5	133	78.1
	Hoa Binh	32.7	26.5	21.5	35.7	31.5	32.4	39.1	32.7	31.9	37.5	35.4	61.0	21.8	85.0	69.6
	Cuc Phuong			40.4	32.5	68.2	46.5	48.0	30.4	26.8	30.8	33.7	31.9	33.3	35.9	26.6
	Da Nang			38.7	23.4	61.3	27.1	36.0	24.0	12.6	21.1	26.1	25.6	38.8	23.8	20.8
	Can Tho								14.4	63.8	25.2	29.8	57.5	58.4	37.9	49.4
	Ho Chi Minh								43.5	64.6	46.9	76.9	61.4	69.0	57.9	55.3
	Yen Bai									33.7	78.1	62.4	46.9	37.7	79.0	56.2

Terms and abbreviations are given in Table 3.5.

Table 3.87 Annual NO₃⁻ deposition amount from 2007 to 2021unit: mmol m⁻² y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	11.3	17.2	13.7	15.5	11.3	17.4	10.3	13.3	11.4	9.78	15.1	***	***	***	***
China	Guanyinqiao	63.3														
	Haifu		65.6	56.7	75.9	67.4	74.6	75.8	90.8	57.8	66.4	63.1	63.5	61.4	54.9	54.1
	Jinyunshan	51.8	56.4	59.7	73.4	65.8	70.8	59.9	68.0	46.9	45.6	46.7	41.7	48.8	52.8	54.6
	Shizhan	40.0	15.5	34.1	18.8	11.5	19.4	15.7	61.0	42.7	26.1	14.6	18.1	11.5	10.8	10.7
	Jiwozi	6.68	44.9	17.2	14.1	8.01	18.5	5.69	7.84	12.8	2.05	1.30	8.25	22.0	2.16	4.08
	Hongwen	50.6	21.6	17.2	44.3	19.9	32.5	29.3	29.8	26.6	55.6	23.5	26.5	40.4	15.9	16.8
	Xiaoping	27.3	49.2	33.2	46.0	34.6	34.4	40.9	46.3	38.0	35.7	19.0	21.3	31.7	23.2	22.3
	Xiang Zhou	23.9	34.7	35.5	44.3	19.8	23.1	49.3	34.9	26.9	42.6	34.5	35.3	43.0	40.3	32.9
	Zhuxiandong	***	33.9	31.3	36.6	21.5	***	***	***	47.0	52.2	41.5	40.7	51.0	51.4	45.9
	Wuzhishan													14.1	8.14	7.17
	Lijiang													2.25	29.6	0.542
Indonesia	Jakarta	67.4	24.1	23.8	36.2	29.5	44.2	50.8	63.4	42.9	67.5	24.7	75.8	38.3	48.3	52.0
	Serpong	61.3	71.8	34.2	42.4	29.5	28.2	91.9	104	85.1	92.8	99.6	102	88.3	93.1	75.4
	Kototabang	9.88	6.93	0.679	5.61	11.1	12.3	6.06	18.7	9.00	8.99	9.21	21.7	16.2	12.9	14.3
	Bandung	42.4	48.4	61.3	46.8	42.8	45.0	51.7	55.3	47.5	61.0	49.7	41.8	60.4	36.9	34.9
	Maros		10.7	17.4	16.9	27.3	22.2	14.7	16.8	15.6	17.3	8.00	25.1	5.26	5.20	8.19
	Jembrana													15.3	53.1	62.2
Japan	Lombok													20.0	13.4	10.6
	Rishiri	13.8	12.1	18.3	15.4	17.4	15.7	15.7	10.6	11.8	13.3	17.5	20.9	12.2	17.6	13.5
	Ochiishi	8.29	6.16	8.57	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	22.8	18.5	18.0	27.2	22.7	20.4	27.0	28.8	15.9	21.5	22.0	20.1			
	Sado-seki	30.0	24.4	17.2	24.8	27.3	26.0	30.6	27.1	18.0	18.7	23.5	22.2	17.4	17.7	28.9
	Happo	22.9	18.2	20.1	17.1	25.1	23.3	22.1	19.1	15.2	14.2	18.6	17.9	20.0	14.4	18.5
	Ijira	49.4	54.3	52.9	57.9	46.4	47.7	40.2	44.7	52.5	51.6	44.9	38.6	37.9	38.8	42.9
	Oki	27.6	21.5	22.7	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	37.1	31.2	34.8	33.2	27.9	33.6	32.8	32.9	26.3	32.8	32.6	22.6			
	Yusuhara	17.1	19.7	16.2	19.1	19.6	26.1	17.5	17.2	23.0	19.1	68.2	17.6	17.5	16.4	17.0
	Hedo	17.3	13.5	12.7	16.9	13.6	20.3	13.8	16.8	12.4	13.5	14.2	13.1	17.0	13.3	55.4
	Ogasawara	7.64	6.27	5.67	5.70	3.80	4.53	4.83	4.76	3.82	4.47	4.65	2.00	4.25	4.46	4.43
	Tokyo	21.0	45.5	31.3	25.4	30.1	30.7	25.9	30.4	26.7	19.0	17.9	20.0	20.9	19.4	21.5
	Niigata-maki													25.7	28.7	23.9
	Tsushima													16.6	27.3	25.1
Lao PDR	Vientiane	9.65	9.95	1.76	***	***	7.34	***	***	3.79	2.90	*	*	*	***	***
Malaysia	Petaling Jaya	80.5	135	138	174	190	150	119	133	164	151	90.1	140	***	96.1	105
	Tanah Rata	12.4	17.8	16.0	10.8	7.29	10.8	10.5	13.9	20.5	14.1	23.8	15.2	***	19.2	
	Danum Valley	2.02	4.11	5.61	3.36	3.99	2.83	6.32	2.10	3.81	2.65	0.545	2.35	***	<0.01	4.01
	Kuching		21.3	21.2	22.8	23.1	14.5	18.6	19.4	16.0	23.5	17.8	20.0	***	13.5	32.8
Mongolia	Gunung Brinchang															2.49
	Ulaanbaatar	3.27	3.12	4.35	3.26	2.75	***	4.76	***	5.20	5.87	4.86	4.16	1.92	7.03	*
Myanmar	Terej	3.39	3.77	2.33	3.58	2.59	***	2.89	***	2.41	5.20	4.58	3.81	***	4.68	*
	Yangon	***	***	21.8	11.3	19.8	21.4	18.1	13.8	20.1	32.5	51.4	29.3	65.5	36.8	32.6
Philippines	Metro Manila	49.4	50.2	32.8	135	52.7	81.4	49.0	42.0	33.5	91.8	***	***	31.0	28.5	33.9
	Los Baños	19.4	15.1	23.2	64.9	19.9	25.0	18.7	17.0	13.7	67.7	***	***	***	***	***
	Mt.Sto. Tomas	18.5	19.9	18.6	15.5	11.8	34.9	37.2	18.5	21.3	25.5	***	***	***	***	***
Republic of Korea	Kanghwa	34.5	48.0	23.9	49.8	40.9	27.2	38.8	15.7	29.7	24.7	24.6	17.9	16.0	***	23.0
	Cheju	18.7	22.3	19.3	22.7	30.0	23.1	19.3	21.8	31.4	35.6	28.4	21.2	31.0	***	31.6
	Imsil	24.4	19.3	23.9	47.6	41.3	36.7	32.0	30.8	24.3	19.0	26.5	24.6	25.1	***	13.5
Russia	Mondy	2.99	1.54	0.938	0.732	0.316	0.841	1.66	0.573	0.718	1.28	1.86	1.92	1.40	0.202	0.194
	Listvyanka	8.33	6.02	5.10	6.59	14.6	6.64	4.37	3.68	5.18	4.73	6.08	3.99	6.88	4.75	5.32
	Irkutsk	8.76	9.02	7.23	8.36	6.81	8.09	4.52	4.77	6.02	6.46	7.22	5.82	6.53	5.44	5.89
	Primorskaya	18.9	18.3	16.1	14.7	23.5	21.6	13.4	4.93	29.4	20.6	22.3	27.0	18.6	14.9	16.1
Thailand	Bangkok	44.1	55.4	58.2	54.1	44.7	49.7	17.2	15.5	25.7	51.8	32.2	43.4	18.0	40.8	***
	Samutprakarn	31.0	30.2	39.7	28.9	20.6	11.9	5.65	12.9	14.4	33.2	28.5	27.5	17.8	15.2	***
	Pathumthani	31.4	35.9	21.8	36.0	30.0	29.3	22.0	15.6	31.2	28.1	38.8	24.2	22.6	25.4	22.2
	Khanchanaburi	5.01	9.85	9.10	6.11	14.1	16.4	2.90	4.58	4.68	5.22	5.83	4.00	2.09	***	***
	Mae Hia	7.47	11.7	8.88	8.52	11.7	8.78	14.2	6.19	6.24	9.59	12.5	7.25	11.2		
	Sakaerat	15.7	19.8	16.0	23.7	15.0	12.6	15.0	10.5	17.8	14.6	17.9	15.4	15.2		
Vietnam	Hanoi	25.8	22.1	26.7	25.7	39.5	45.3	51.2	50.9	44.7	47.3	72.1	88.0	100	120	80.8
	Hoa Binh	20.4	20.2	17.5	21.3	25.4	29.5	37.7	32.8	36.0	35.7	42.1	45.9	37.3	91.8	88.2
	Cuc Phuong			24.6	38.4	51.5	40.5	31.6	17.4	19.6	22.1	31.4	23.2	33.4	36.3	50.5
	Da Nang			33.7	11.9	57.5	8.06	12.5	11.7	0.941	7.58	12.1	1.12	4.03	5.94	9.56
	Can Tho								15.4	25.8	5.52	7.30	8.01	39.7	6.42	10.0
	Ho Chi Minh								34.2	25.5	18.9	37.2	12.2	41.4	22.2	31.4
Yen Bai										27.0	73.2	58.6	54.0	63.0	126	53.4

Terms and abbreviations are given in Table 3.5.

Table 3.88 Annual Cl⁻ deposition amount from 2007 to 2021unit: mmol m⁻² y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	17.4	15.9	13.6	9.12	7.52	10.8	10.1	14.2	9.94	8.23	8.40	***	***	***	***
China	Guanyinqiao	17.9														
	Haifu		13.9	11.7	15.8	11.6	11.5	13.1	15.7	9.48	10.6	9.49	9.93	8.35	8.12	6.84
	Jinyunshan	14.3	18.6	17.7	15.7	10.1	11.7	8.13	8.50	6.56	5.78	6.77	4.18	5.10	5.77	6.55
	Shizhan	21.0	12.9	15.5	10.5	7.07	6.28	22.4	13.1	10.6	5.96	5.15	10.4	6.20	8.54	21.3
	Jiwozi	4.41	14.8	17.5	16.9	10.8	12.2	22.0	13.1	6.35	0.290	8.49	7.94	13.9	7.25	8.02
	Hongwen	52.6	29.5	23.8	23.0	21.5	22.1	27.1	32.3	26.1	55.3	38.6	61.3	74.3	15.6	14.7
	Xiaoping	15.2	37.1	22.8	21.1	26.1	18.8	25.7	18.8	28.8	19.7	14.5	18.9	10.2	11.4	8.94
	Xiang Zhou	44.5	98.1	90.2	41.6	37.5	65.8	112	39.8	86.1	55.3	116	152	48.5	50.1	51.5
	Zhuxiandong	***	105	81.2	40.2	21.5	***	***	***	116	78.9	53.3	214	60.5	94.3	66.4
	Wuzhishan													11.1	7.02	8.57
	Lijiang													1.72	20.7	1.27
Indonesia	Jakarta	40.7	19.6	18.7	32.7	19.2	35.3	45.1	91.1	48.0	61.6	16.2	36.1	22.3	53.9	42.7
	Serpong	28.8	40.3	23.6	31.9	12.5	21.6	52.8	73.3	39.4	46.8	52.6	50.2	65.7	109	57.4
	Kototabang	38.2	9.62	28.4	23.5	30.5	25.7	57.8	26.4	20.7	72.3	15.3	14.1	12.6	14.1	15.2
	Bandung	14.8	19.4	31.6	22.4	18.9	22.1	36.5	29.8	19.1	26.0	28.7	24.0	36.3	17.3	13.6
	Maros		60.9	49.7	56.2	58.4	48.9	146	99.9	17.1	304	262	51.8	35.5	47.4	23.0
	Jembrana													49.8	136	158
	Lombok													37.9	38.2	41.7
Japan	Rishiri	142	222	203	197	192	389	260	190	175	104	219	211	149	196	273
	Ochiishi	189	142	323	288	147	267	514	93.8	166	184	216	99.6	64.6	85.6	260
	Tappi	276	186	290	192	191	191	309	210	315	238	242	305			
	Sado-seki	298	241	377	481	252	380	559	447	318	199	214	237	240	264	2335
	Happo	10.1	9.21	15.6	13.1	13.6	23.3	13.0	15.2	15.7	15.7	19.3	18.1	11.0	13.0	17.0
	Ijira	56.1	42.5	47.4	62.4	52.8	70.2	53.2	59.8	62.3	48.0	51.7	66.9	43.6	55.1	80.3
	Oki	362	412	489	684	847	532	807	649	502	583	551	619	207	397	754
	Banryu	114	105	197	157	179	125	164	155	157	168	147	108			
	Yusuhara	38.5	22.0	28.8	27.3	49.8	66.5	33.4	24.5	83.4	27.4	157	66.8	51.7	31.7	59.7
	Hedo	394	270	278	751	410	1407	424	383	648	429	696	490	391	527	3707
	Ogasawara	241	165	379	391	313	210	210	236	587	122	344	50.7	379	101	358
	Tokyo	44.4	44.0	48.0	32.1	63.8	58.5	44.5	41.8	36.4	27.6	60.8	51.5	108	25.8	41.9
	Niigata-maki													320	276	387
	Tsushima													85.5	86.1	90.5
Lao PDR	Vientiane	10.4	12.4	1.12	***	***	5.89	***	***	4.58	3.76	*	*	*	***	***
Malaysia	Petaling Jaya	17.2	28.1	23.4	32.6	30.2	27.2	27.3	33.0	38.7	35.3	31.3	37.5	***	33.6	33.0
	Tanah Rata	5.05	5.78	6.96	4.67	9.70	9.07	8.19	10.1	10.1	7.82	10.1	10.7	***	12.5	
	Danum Valley	14.6	18.3	23.0	40.5	21.6	12.3	24.1	18.5	15.1	14.6	13.6	18.1	***	33.3	32.0
	Kuching		27.2	39.3	37.3	53.2	25.7	36.2	40.4	64.1	81.8	44.0	41.3	***	58.2	48.8
	Gunung Brinchang															4.02
Mongolia	Ulaanbaatar	1.18	1.56	2.20	1.30	1.22	***	0.628	***	0.774	0.740	0.569	0.752	0.452	0.743	*
	Terelj	1.91	1.90	1.10	1.37	1.41	***	0.630	***	0.793	1.03	0.913	0.860	***	0.655	*
Myanmar	Yangon	***	***	75.3	30.0	49.6	68.3	72.9	56.0	83.6	68.2	99.1	64.1	61.6	50.8	34.9
Philippines	Metro Manila	97.8	68.4	92.9	55.2	109	90.1	101	68.6	68.2	79.0	***	***	55.1	25.9	77.3
	Los Baños	75.5	35.5	72.6	52.3	62.5	45.4	61.7	38.0	143	44.3	***	***	***	***	***
	Mt.Sto. Tomas	24.9	26.6	39.3	18.3	20.3	37.2	31.2	15.3	47.6	24.1	***	***	***	***	***
Republic of Korea	Kanghwa	50.9	70.5	76.2	68.9	71.6	50.5	32.6	26.3	95.0	41.9	32.8	26.6	108	***	25.0
	Cheju	130	114	66.1	114	158	545	219	148	159	498	200	303	60.4	***	341
	Imsil	30.1	31.2	55.5	72.9	37.9	124	27.8	33.8	33.7	25.1	24.4	32.4	31.2	***	37.0
Russia	Mondy	1.38	0.869	0.391	0.306	0.388	0.626	1.22	0.440	0.501	0.369	1.01	0.864	0.355	0.128	0.143
	Listvyanka	1.75	2.00	0.942	1.12	3.17	1.13	1.62	1.02	1.82	0.975	1.30	0.658	1.80	1.50	1.28
	Irkutsk	6.30	8.39	10.7	8.95	7.23	6.69	5.30	3.82	6.96	4.76	5.13	4.43	4.27	4.38	4.09
	Primorskaya	18.3	14.2	12.7	19.8	41.9	27.5	30.9	16.1	29.4	30.9	23.6	22.0	30.4	25.4	43.1
Thailand	Bangkok	13.0	20.1	15.9	18.9	17.3	15.0	9.63	9.32	11.7	18.1	13.0	16.5	7.46	17.1	***
	Samutprakarn	21.0	22.1	16.8	30.4	16.0	9.45	10.2	11.2	13.9	17.0	15.1	16.0	10.3	14.6	***
	Pathumthani	9.17	11.0	8.18	10.2	10.6	24.9	8.08	8.34	10.7	9.24	10.2	9.23	7.74	8.66	7.69
	Khanchanaburi	11.3	20.1	17.6	5.37	17.2	27.8	4.34	6.75	6.22	9.58	6.97	7.55	4.48	***	***
	Mae Hia	5.48	5.90	5.16	4.17	4.65	4.59	8.51	2.84	2.89	5.49	7.07	5.89	5.70		
	Sakaerat	7.08	10.2	5.81	7.82	7.24	7.17	9.14	4.76	9.68	7.12	6.90	5.74	6.00		
Vietnam	Hanoi	19.5	19.8	15.5	13.4	15.6	11.8	19.3	17.2	18.8	18.9	30.3	43.7	32.5	76.1	28.1
	Hoa Binh	12.3	8.35	7.30	8.70	7.58	8.91	12.4	5.53	8.49	11.4	27.6	27.5	14.2	46.3	33.0
	Cuc Phuong			100	40.2	28.7	41.0	47.9	19.8	31.1	33.1	79.6	76.1	60.9	76.7	71.6
	Da Nang			325	85.2	340	140	403	206	138	191	182	254	359	524	300
	Can Tho								50.4	90.8	60.3	55.6	79.4	56.6	47.8	75.5
	Ho Chi Minh								85.8	73.9	95.2	164	89.9	83.6	109	99.7
	Yen Bai									11.3	25.9	41.4	23.2	22.3	52.8	20.2

Terms and abbreviations are given in Table 3.5.

Table 3.89 Annual NH₄⁺ deposition amount from 2007 to 2021unit: mmol m⁻²y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	27.0	21.6	17.3	41.9	28.0	34.9	18.1	21.7	19.9	24.9	30.7	***	***	***	***
China	Guanyinqiao	181														
	Haifu		149	112	137	117	118	145	164	116	125	117	115	112	95.3	96.8
	Jinyunshan	124	120	121	121	98.8	125	102	105	80.6	80.1	76.1	74.2	73.2	77.0	85.4
	Shizhan	109	63.3	99.7	85.6	40.0	42.7	105	106	115	49.0	85.0	59.8	63.3	70.1	57.5
	Jiwozi	1.12	13.8	32.7	20.0	22.5	10.4	36.0	18.6	29.4	1.06	0.544	8.50	19.9	17.1	29.5
	Hongwen	51.8	32.8	34.4	60.9	35.7	39.9	25.7	29.1	29.6	65.9	18.2	24.4	29.1	10.1	20.5
	Xiaoping	55.0	65.9	52.0	65.1	59.6	39.2	50.0	53.0	58.8	45.5	20.0	19.8	20.1	20.6	25.8
	Xiang Zhou	28.0	55.0	44.4	45.4	26.1	44.2	42.9	39.9	27.3	69.4	46.6	50.0	45.1	41.6	34.5
	Zhuxiandong	***	42.9	40.5	42.1	28.4	***	***	***	38.9	99.8	46.7	49.8	48.4	45.7	44.1
	Wuzhishan													22.0	16.6	15.2
	Lijiang													5.58	2.44	7.75
Indonesia	Jakarta	52.6	43.6	27.6	48.8	33.4	62.9	40.0	55.7	53.2	74.1	31.4	81.9	44.3	73.0	64.8
	Serpong	89.2	112	57.7	74.6	51.6	63.6	193	189	112	163	161	147	148	218	156
	Kototabang	50.5	18.7	7.15	6.72	21.9	22.4	14.7	30.2	4764	10.7	13.6	21.4	16.6	19.3	25.6
	Bandung	94.3	104	130	83.7	93.0	112	111	113	114	157	120	108	124	91.2	94.4
	Maros		26.9	41.2	27.0	33.8	34.5	27.2	19.9	51.4	106	12.0	36.5	4.33	2.71	5.64
	Jembrana													26.7	32.2	31.4
	Lombok													27.0	34.3	34.4
Japan	Rishiri	22.9	19.5	18.7	16.8	17.3	13.3	15.1	12.9	14.5	13.5	20.9	24.2	13.6	23.8	15.8
	Ochiishi	6.79	4.71	13.3	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	18.7	15.0	14.0	23.3	19.4	16.3	20.4	27.2	14.5	18.8	17.9	16.9			
	Sado-seki	29.3	22.2	12.9	16.2	20.2	20.1	28.6	25.6	16.7	16.0	25.2	17.2	15.5	15.2	21.8
	Happo	25.8	16.6	22.9	15.4	18.6	21.5	23.8	19.8	17.6	11.7	13.5	15.4	21.2	14.5	19.4
	Ijira	46.8	40.6	52.4	46.9	43.4	42.2	36.6	40.8	42.3	45.1	36.4	34.0	35.2	37.4	40.7
	Oki	18.3	17.4	19.1	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	28.4	24.3	28.3	31.8	22.5	25.9	27.9	26.2	21.8	27.4	24.0	16.0			
	Yusuhara	17.7	16.5	17.1	16.3	16.4	23.0	17.8	17.3	12.3	16.6	56.9	12.7	16.7	16.9	13.4
	Hedo	20.2	12.0	12.7	24.6	16.1	53.5	16.0	20.2	19.4	14.7	11.4	8.39	12.6	15.6	65.3
	Ogasawara	12.1	5.74	8.07	9.82	5.88	8.14	7.64	5.94	4.19	5.59	3.80	1.94	4.61	5.84	3.15
	Tokyo	29.9	55.6	45.3	31.8	35.3	39.8	36.9	41.8	33.0	27.7	23.3	28.1	28.8	30.6	32.4
	Niigata-maki													24.8	26.3	21.2
	Tsushima													21.2	30.8	20.4
Lao PDR	Vientiane	15.3	14.0	3.13	***	***	***	***	***	7.17	5.35	*	*	*	***	***
Malaysia	Petaling Jaya	57.7	77.9	22.5	16.2	17.5	4.40	57.8	102	95.5	44.6	53.3	76.0	***	75.3	71.4
	Tanah Rata	11.6	12.2	16.7	9.92	47.2	16.1	6.69	9.97	20.2	8.31	9.45	5.33	***	31.3	
	Danum Valley	3.95	29.3	11.7	11.6	7.19	1.90	2.48	2.60	8.53	0.827	0.590	4.34	***	0.0532	1.61
	Kuching		19.7	23.1	9.03	23.3	23.4	11.8	34.3	24.3	13.9	13.3	19.9	***	9.25	22.0
Gunung Brinchang																1.67
Mongolia	Ulaanbaatar	11.0	8.26	10.6	8.35	7.50	***	9.58	***	***	6.50	7.81	9.78	2.53	8.00	11.1
	Terelj	7.19	10.5	4.54	4.53	5.66	***	0.487	***	***	6.41	4.40	4.62	***	2.63	10.6
Myanmar	Yangon	***	***	48.9	33.3	46.9	45.6	45.8	47.6	54.3	37.4	38.2	57.4	50.3	47.0	39.3
Philippines	Metro Manila	118	148	79.7	142	667	1218	145	162	215	283	***	***	67.6	53.8	42.1
	Los Baños	52.1	37.1	33.9	79.1	70.1	142	53.3	116	85.6	149	***	***	***	***	***
	Mt.Sto. Tomas	29.4	53.3	66.7	16.8	3.79	19.6	20.7	49.0	58.4	34.5	***	***	***	***	***
Republic of Korea	Kanghwa	51.5	54.8	38.6	41.6	63.8	36.9	70.5	25.7	58.3	48.6	49.6	24.2	21.2	***	25.3
	Cheju	35.9	22.1	47.0	26.8	30.2	40.1	22.9	30.4	40.9	45.2	27.3	26.6	35.9	***	27.7
	Imsil	53.7	25.5	37.6	51.2	56.3	55.4	49.4	36.7	36.4	30.2	39.2	31.4	39.1	***	11.8
Russia	Mondy	10.6	2.03	2.40	1.58	0.672	2.00	0.894	0.444	1.84	1.10	1.99	3.03	1.73	0.304	1.94
	Listvyanka	6.35	7.40	4.18	5.99	8.22	9.17	2.74	3.83	12.3	4.56	6.50	3.11	8.06	4.91	8.28
	Irkutsk	16.2	18.1	15.7	12.9	10.8	15.1	8.15	9.28	21.3	10.7	10.3	9.29	12.0	11.5	14.8
	Primorskaya	29.2	28.0	24.9	28.8	33.6	24.9	28.6	27.2	29.8	21.0	29.7	33.8	21.0	18.5	37.3
Thailand	Bangkok	91.3	95.5	134	76.5	87.3	79.4	61.6	52.9	96.7	104	87.0	60.5	22.4	63.1	***
	Samutprakarn	88.1	97.8	81.5	52.9	58.5	32.5	42.1	48.2	66.3	78.4	88.1	58.9	28.4	33.3	***
	Pathumthani	47.5	49.6	43.3	49.4	59.5	59.2	53.1	37.4	48.6	56.7	56.3	47.0	39.7	44.5	28.7
	Khanchanaburi	23.7	19.8	52.1	14.5	25.2	21.4	10.2	13.7	11.7	17.2	16.6	6.29	2.94	***	***
	Mae Hia	17.7	25.6	21.2	22.5	21.9	21.8	27.7	14.1	13.1	21.8	32.3	12.3	25.0		
	Sakaerat	25.4	36.4	28.8	40.0	36.7	29.0	34.4	18.0	43.3	36.8	39.4	71.5	78.6		
Vietnam	Hanoi	80.1	69.4	81.4	64.8	95.9	108	104	113	82.6	102	109	108	38.6	155	132
	Hoa Binh	41.4	33.8	42.6	38.8	48.9	57.4	50.7	59.5	62.0	81.8	37.8	81.1	18.3	89.1	118
	Cuc Phuong			14.3	16.4	35.5	48.3	48.5	34.9	43.8	38.9	19.5	13.6	31.0	32.0	94.0
	Da Nang			40.0	14.6	78.3	35.8	57.0	32.2	16.5	14.8	46.8	36.6	89.4	65.0	48.1
	Can Tho								33.7	46.9	38.0	41.0	32.0	41.8	26.6	48.6
	Ho Chi Minh								46.6	41.8	73.6	132	51.3	51.5	76.2	69.5
	Yen Bai									46.1	166	80.5	72.8	29.0	112	106

Terms and abbreviations are given in Table 3.5.

Table 3.90 Annual Na⁺ deposition amount from 2007 to 2021unit: mmol m⁻² y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	11.3	18.8	9.22	5.74	4.54	5.90	4.16	11.9	6.92	5.40	6.14	***	***	***	***
China	Guanyinqiao	7.69														
	Haifu		7.06	4.48	7.38	7.99	6.10	7.48	9.01	4.40	7.85	5.38	5.56	4.90	4.54	3.26
	Jinyunshan	10.2	12.5	8.45	8.00	5.19	6.32	4.41	6.70	2.87	3.10	3.74	1.69	2.08	2.49	2.31
	Shizhan	8.22	9.41	7.91	3.35	11.7	2.20	60.9	78.1	67.3	22.2	16.6	9.72	5.62	8.94	14.8
	Jiwozi	8.58	35.5	15.8	7.47	7.63	17.3	72.8	70.9	41.3	3.09	17.1	13.4	51.3	9.35	19.3
	Hongwen	32.4	21.7	18.1	29.6	15.2	15.0	20.1	22.3	18.8	48.2	19.2	23.4	5.12	15.3	20.1
	Xiaoping	13.0	44.9	18.5	28.6	16.6	10.9	23.9	12.0	17.0	12.1	4.64	5.50	1.46	8.37	5.56
	Xiang Zhou	27.9	97.5	80.7	36.8	40.7	69.7	131	51.4	75.7	52.8	99.5	139	40.4	41.9	45.3
	Zhuxiandong	***	94.1	71.5	37.0	51.5	***	***	***	107	80.4	47.7	188	50.5	80.5	58.0
	Wuzhishan													13.0	6.16	7.90
	Lijiang													4.40	0.579	0.705
Indonesia	Jakarta	34.4	17.1	14.5	16.8	11.6	34.5	37.7	67.8	5.65	41.5	12.8	28.5	14.1	46.2	33.5
	Serpong	23.7	24.8	13.7	11.9	8.36	9.71	32.5	54.1	25.9	42.1	38.7	37.4	37.5	40.9	50.2
	Kototabang	24.0	13.2	16.3	12.4	14.3	25.4	18.0	14.2	1.95	45.7	8.43	9.88	10.1	20.9	9.35
	Bandung	13.1	20.1	31.6	25.4	18.7	22.5	31.9	26.3	17.3	30.3	35.9	40.4	75.7	19.4	12.5
	Maros		47.5	43.0	35.3	54.1	48.8	77.7	80.5	9.10	233	240	45.2	31.1	26.0	20.3
	Jembrana													31.6	67.0	82.7
	Lombok													36.6	42.3	40.4
Japan	Rishiri	126	204	185	173	171	343	234	168	153	90.6	194	185	130	174	243
	Ochiishi	161	125	287	252	126	239	446	81.5	147	158	183	87.2	56.0	74.9	228
	Tappi	247	162	266	177	171	166	275	187	264	206	213	263			
	Sado-seki	264	219	333	437	213	319	517	397	283	175	189	211	211	235	2124
	Happo	7.29	6.77	12.1	9.86	10.3	19.2	10.8	13.0	13.1	11.8	15.5	14.9	8.80	11.0	14.1
	Ijira	47.1	34.5	39.0	50.0	42.3	55.2	41.3	47.5	49.6	39.1	42.7	54.4	36.3	47.8	68.1
	Oki	319	360	422	594	737	462	705	574	437	505	482	530	178	344	659
	Banryu	100	91.6	171	139	155	111	140	132	133	150	129	94.3			
	Yusuhara	32.1	18.8	24.9	21.8	41.8	55.1	24.6	18.3	69.8	21.9	126	58.3	42.7	26.5	50.2
	Hedo	349	243	250	670	360	1186	366	335	552	365	597	421	333	442	3083
	Ogasawara	209	144	315	386	262	179	178	201	486	105	298	44.8	333	85.0	308
	Tokyo	37.3	36.2	40.7	28.7	52.3	48.2	36.7	34.2	29.6	23.2	51.5	44.7	94.7	21.5	35.7
	Niigata-maki													269	237	336
	Tsushima													73.8	74.9	78.1
Lao PDR	Vientiane	3.32	4.86	1.66	***	***	***	***	***	2.56	1.08	*	*	*	***	***
Malaysia	Petaling Jaya	10.9	15.8	13.6	17.6	16.5	13.1	15.3	18.7	23.3	21.1	18.9	20.5	***	20.5	18.4
	Tanah Rata	4.57	4.73	4.87	3.15	6.56	4.29	6.02	8.17	7.36	6.44	7.45	6.46	***	14.4	
	Danum Valley	12.4	9.65	19.8	32.7	20.9	8.49	16.5	15.4	10.9	9.87	7.47	12.8	***	29.1	25.0
	Kuching		23.1	34.3	31.0	42.1	19.8	31.0	33.8	56.9	71.7	35.5	32.3	***	43.1	33.2
	Gunung Brinchang															2.66
Mongolia	Ulaanbaatar	0.660	0.556	1.11	0.535	0.924	***	12.1	***	***	27.6	3.50	7.07	3.72	12.5	3.10
	Terelj	1.74	1.13	0.843	1.44	0.873	***	1.54	***	***	21.9	1.42	7.38	***	7.11	21.2
Myanmar	Yangon	***	***	55.7	29.3	47.2	56.7	42.6	49.6	21.3	34.3	42.2	64.3	54.2	31.2	32.5
Philippines	Metro Manila	70.8	58.7	76.5	59.7	78.2	74.6	98.3	64.4	58.5	43.7	***	***	42.7	26.3	57.0
	Los Baños	54.4	36.2	50.5	46.9	46.3	46.7	54.5	32.0	27.4	39.3	***	***	***	***	***
	Mt.Sto. Tomas	19.2	25.9	39.1	22.7	19.9	58.9	29.4	23.0	53.2	65.7	***	***	***	***	***
Republic of Korea	Kanghwa	39.1	60.8	57.1	42.4	52.8	37.9	26.6	18.4	26.5	23.8	16.3	19.1	90.3	***	20.6
	Cheju	126	112	55.7	103	163	449	184	139	147	442	187	273	73.8	***	338
	Imsil	20.2	27.3	53.7	79.2	55.9	72.6	36.9	32.8	33.9	28.4	27.5	45.1	41.8	***	42.0
Russia	Mondy	1.10	0.379	0.270	0.253	0.283	0.455	0.449	0.277	0.219	0.306	0.493	0.764	0.350	0.293	0.166
	Listvyanka	1.05	0.972	1.19	1.18	2.59	1.44	1.86	1.34	0.989	0.883	1.03	0.677	1.32	1.85	2.70
	Irkutsk	4.75	5.29	8.06	6.91	5.52	4.41	3.55	3.35	3.71	3.57	4.01	3.89	2.69	4.83	4.14
	Primorskaya	19.6	12.7	11.0	16.1	8.48	21.3	18.4	10.1	28.7	23.3	16.5	22.4	17.6	27.3	24.9
Thailand	Bangkok	11.2	17.3	20.3	17.8	14.0	10.9	16.0	9.26	12.7	17.9	9.28	13.0	5.56	22.7	***
	Samutprakarn	22.8	26.8	19.9	35.0	12.0	7.51	28.2	12.5	13.5	16.1	12.9	14.6	8.68	13.4	***
	Pathumthani	7.97	9.95	7.34	13.1	9.16	22.0	7.04	5.62	7.42	6.85	6.60	6.74	5.28	5.17	3.21
	Khanchanaburi	12.0	18.1	19.0	5.05	14.5	23.2	8.19	6.28	6.46	11.0	5.54	8.12	3.55	***	***
	Mae Hia	2.75	3.35	2.83	3.17	5.17	4.22	8.07	1.93	3.34	5.21	7.58	6.45	6.17		
	Sakaerat	6.17	7.24	3.44	5.22	6.10	4.18	4.27	3.78	6.36	4.36	3.53	12.5	11.0		
Vietnam	Hanoi	13.6	21.7	14.8	9.00	11.2	7.54	15.0	12.0	11.5	18.9	33.9	21.2	34.1	37.7	23.1
	Hoa Binh	6.23	6.08	4.60	6.65	4.32	5.81	8.29	4.12	6.14	6.33	7.56	7.80	18.6	17.9	21.1
	Cuc Phuong			25.5	19.8	25.2	40.4	50.7	18.2	12.8	24.6	39.3	33.9	36.7	34.2	72.9
	Da Nang			281	69.9	255	106	333	182	151	179	182	177	231	177	178
	Can Tho								28.4	64.8	21.0	18.3	25.4	42.8	29.7	35.5
	Ho Chi Minh								47.9	49.1	34.4	59.8	35.1	46.1	46.5	44.7
	Yen Bai									8.18	16.3	8.81	6.81	18.7	27.1	15.2

Terms and abbreviations are given in Table 3.5.

Table 3.91 Annual K⁺ deposition amount from 2007 to 2021unit: mmol m⁻²y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	5.00	19.0	1.98	1.59	1.47	1.23	1.42	4.20	2.18	2.70	1.68	***	***	***	***
China	Guanyinqiao	11.4														
	Haifu		11.6	8.23	9.78	7.60	6.64	13.1	13.2	7.30	5.91	5.84	6.94	4.22	3.46	3.14
	Jinyunshan	11.1	11.6	9.56	10.2	8.80	7.69	6.19	6.59	4.38	4.10	4.56	2.57	3.32	3.20	2.72
	Shizhan	10.2	5.11	6.03	14.9	8.83	2.23	12.4	156	3.16	1.56	2.65	5.13	3.49	3.31	2.91
	Jiwozi	2.80	12.7	8.58	5.64	7.07	3.80	6.64	9.33	2.96	1.69	6.59	10.6	37.3	6.02	4.67
	Hongwen	5.03	2.00	1.66	3.42	1.68	2.64	2.67	1.60	6.08	9.45	18.8	37.0	14.7	3.09	4.69
	Xiaoping	7.63	20.3	2.64	2.94	4.29	4.48	3.29	1.98	13.1	10.3	8.37	12.1	2.54	2.16	1.89
	Xiang Zhou	11.9	4.65	4.23	4.10	4.71	14.0	20.0	11.5	6.31	8.63	4.87	6.30	2.97	2.17	2.23
	Zhuxiandong	***	10.4	4.04	6.10	6.78	***	***	***	13.3	13.7	4.08	9.80	3.93	4.54	3.91
	Wuzhishan													4.29	2.23	3.93
	Lijiang													0.778	0.767	0.394
Indonesia	Jakarta	24.3	6.03	3.46	4.72	2.26	7.79	6.61	11.5	35.2	20.7	3.10	4.83	2.08	10.5	5.14
	Serpong	5.56	5.24	2.36	4.57	2.61	3.87	11.4	16.3	13.8	14.2	12.1	12.8	26.2	45.5	11.3
	Kototabang	23.3	8.42	24.8	10.5	8.69	14.6	40.9	25.8	12387	24.9	4.54	5.98	6.13	10.8	11.0
	Bandung	4.01	5.38	11.0	11.0	7.30	7.01	18.7	11.4	7.11	7.79	8.10	7.82	7.85	6.68	4.51
	Maros		17.5	12.6	6.71	6.74	8.57	7.41	52.7	4427	29.7	14.4	9.44	4.98	19.0	3.06
	Jembrana													6.05	43.9	53.8
	Lombok													5.26	11.1	14.3
Japan	Rishiri	3.65	5.44	4.54	4.59	4.24	7.51	5.40	4.23	3.95	2.69	5.63	5.25	3.74	5.37	6.52
	Ochiishi	3.97	2.78	6.47	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	5.97	4.42	6.62	5.45	4.96	4.66	6.65	4.74	6.20	5.46	5.33	6.38			
	Sado-seki	6.84	7.31	8.26	11.1	6.18	8.58	12.1	10.6	8.40	7.54	5.95	5.23	5.57	5.74	66.2
	Happo	1.41	0.962	1.58	0.934	1.38	1.73	1.54	1.83	1.53	1.12	1.17	1.17	1.39	1.33	1.14
	Ijira	2.60	1.43	1.95	1.64	1.64	1.74	1.60	1.86	2.19	1.57	1.68	1.72	1.45	1.71	2.47
	Oki	10.6	13.2	11.3	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	3.89	3.22	5.20	7.98	4.85	3.93	4.71	4.02	3.70	4.17	3.54	2.76			
	Yusuhara	1.51	0.928	1.59	1.52	1.58	3.25	0.962	2.47	2.31	1.39	4.74	2.67	2.46	2.04	3.06
	Hedo	8.95	6.23	6.49	16.4	8.73	30.2	8.82	8.08	12.8	8.22	13.0	9.26	7.78	10.0	66.9
	Ogasawara	4.97	4.36	7.61	9.32	6.42	4.26	4.60	4.79	12.8	2.56	6.84	1.06	8.23	2.37	5.62
	Tokyo	1.51	2.12	1.90	1.64	1.79	1.45	1.14	1.13	1.05	0.868	1.42	1.09	2.25	0.758	0.922
	Niigata-maki													7.31	5.67	8.08
	Tsushima													2.17	2.65	2.67
Lao PDR	Vientiane	2.37	2.82	0.168	***	***	***	***	***	1.61	0.683	*	*	*	***	***
Malaysia	Petaling Jaya	2.97	4.45	4.47	5.26	4.71	4.53	4.07	5.46	6.39	6.27	4.83	7.33	***	7.34	5.78
	Tanah Rata	1.92	1.70	3.05	2.60	6.70	4.78	4.85	4.69	6.35	2.88	5.82	3.54	***	13.5	
	Danum Valley	3.22	7.58	5.39	7.67	6.56	3.59	3.22	6.15	4.83	3.02	3.83	6.58	***	6.77	8.88
	Kuching		2.77	3.24	3.02	3.95	3.51	2.85	11.9	6.37	6.40	5.48	5.84	***	7.88	8.66
	Gunung Brinchang															1.06
Mongolia	Ulaanbaatar	0.161	0.435	0.577	0.416	0.650	***	0.598	***	***	0.0990	0.207	0.172	0.0677	0.264	0.278
	Terelj	0.703	1.33	0.455	0.703	0.719	***	0.725	***	***	0.754	0.358	0.544	***	0.407	0.805
Myanmar	Yangon	***	***	19.4	4.71	5.21	17.4	7.17	13.5	32.2	7.30	29.4	12.9	20.8	10.4	15.9
Philippines	Metro Manila	18.9	37.1	15.1	45.6	85.9	117	22.7	25.7	32.7	35.8	***	***	9.78	3.69	4.54
	Los Baños	15.2	5.51	26.3	15.4	16.3	17.1	15.3	17.0	114	24.3	***	***	***	***	***
	Mt.Sto. Tomas	7.73	3.57	9.24	5.09	3.78	5.07	3.30	4.57	9.93	3.93	***	***	***	***	***
Republic of Korea	Kanghwa	9.51	8.35	11.3	12.2	5.34	4.78	2.94	5.73	62.7	11.2	9.72	3.14	3.97	***	1.66
	Cheju	8.94	8.78	10.1	7.98	7.04	18.8	7.65	13.5	20.1	17.0	5.31	6.76	2.27	***	13.4
	Imsil	19.2	4.79	11.7	16.8	5.81	66.5	7.72	10.8	6.61	2.84	6.70	2.55	1.46	***	3.47
Russia	Mondy	0.867	0.416	0.390	0.237	0.366	0.952	0.759	0.248	0.462	0.233	0.371	0.461	0.179	0.0548	0.213
	Listvyanka	0.521	1.32	0.646	0.543	1.16	0.686	1.21	0.868	0.702	0.540	1.15	0.452	1.31	1.47	2.12
	Irkutsk	3.72	4.74	11.4	2.07	1.51	2.21	1.44	1.15	1.31	1.49	1.47	1.35	1.63	1.80	3.06
	Primorskaya	6.11	4.97	3.81	3.93	4.19	4.69	4.01	3.30	9.01	17.6	6.41	8.56	7.07	7.32	4.86
Thailand	Bangkok	2.48	3.61	4.10	5.22	3.95	2.74	2.54	1.40	2.78	2.77	1.97	2.58	2.45	5.53	***
	Samutprakarn	5.38	10.6	5.51	31.9	2.33	1.45	5.83	2.30	2.79	3.10	2.48	2.40	1.72	2.31	***
	Pathumthani	2.23	2.51	2.12	3.26	3.06	2.57	2.51	1.98	1.97	2.24	2.90	1.78	1.72	2.15	3.55
	Khanchanaburi	1.21	2.26	2.41	1.15	4.30	3.75	1.43	1.19	0.916	1.60	1.69	1.71	0.679	***	***
	Mae Hia	2.69	3.38	1.55	1.41	2.33	1.40	2.12	0.935	0.924	2.35	3.35	1.55	2.74		
	Sakaerat	1.91	2.13	1.65	1.53	1.81	1.42	1.17	1.12	2.10	1.73	0.866	7.85	6.99		
Vietnam	Hanoi	4.48	6.28	2.53	3.43	4.12	5.39	1.13	6.23	4.73	6.03	14.7	15.3	10.5	10.3	11.1
	Hoa Binh	4.36	6.40	3.69	3.94	4.23	2.88	14.3	3.61	4.63	3.73	5.46	10.9	2.83	5.31	9.72
	Cuc Phuong			31.7	9.28	6.14	12.2	16.3	8.04	6.83	11.2	7.63	10.1	8.45	8.46	15.6
	Da Nang			18.6	5.76	50.9	19.3	41.5	30.5	22.6	9.24	22.1	40.5	38.7	275	49.6
	Can Tho								13.7	15.8	10.1	10.4	16.4	30.0	11.7	16.1
	Ho Chi Minh								20.3	17.1	16.9	35.7	20.6	24.9	24.8	24.8
	Yen Bai									6.09	9.03	14.9	6.10	4.12	7.76	6.84

Terms and abbreviations are given in Table 3.5.

Table 3.92 Annual Ca²⁺ deposition amount from 2007 to 2021unit: mmol m⁻² y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	26.4	59.9	27.1	15.4	11.9	17.4	12.9	14.8	12.8	18.2	13.4	***	***	***	***
China	Guanyinqiao	97.7														
	Haifu		66.0	46.1	67.6	55.5	58.5	71.2	77.4	52.5	85.4	65.1	48.0	31.5	28.2	28.5
	Jinyunshan	90.7	82.9	73.2	67.3	55.2	59.5	35.1	38.8	28.0	46.3	65.8	32.0	23.6	23.7	23.6
	Shizhan	61.3	57.6	81.7	48.1	60.1	50.1	143	57.7	53.2	14.5	39.4	29.1	23.6	20.2	78.6
	Jiwozi	34.7	116	58.9	47.0	88.9	79.3	86.2	84.4	25.8	13.6	48.3	30.7	93.9	28.7	32.3
	Hongwen	74.0	13.3	9.71	13.9	11.9	16.1	30.8	28.8	16.6	23.3	15.2	26.0	62.4	131	15.7
	Xiaoping	17.4	31.2	10.2	12.7	17.9	25.9	44.9	57.8	14.3	11.8	10.2	6.83	7.54	3.81	5.13
	Xiang Zhou	6.78	15.3	9.87	13.7	22.1	16.3	105	28.5	22.7	25.4	19.1	21.9	16.2	12.7	15.5
	Zhuxiandong	***	31.4	11.7	30.3	21.8	***	***	***	40.2	40.9	25.2	37.4	22.7	25.6	20.3
	Wuzhishan													15.5	3.12	3.89
	Lijiang													11.8	2.78	2.65
Indonesia	Jakarta	30.2	7.48	19.6	21.9	11.0	32.6	33.0	47.4	21.0	49.8	22.9	28.2	15.8	22.3	17.8
	Serpong	14.9	18.9	6.95	13.2	9.08	8.31	32.5	37.4	34.9	40.7	38.6	44.9	38.5	26.7	26.3
	Kototabang	13.0	12.1	14.5	11.3	12.9	20.7	20.2	9.82	4.98	8.28	28.4	24.9	66.0	14.7	25.0
	Bandung	18.7	26.4	41.1	35.1	32.0	27.8	45.9	46.4	35.4	41.0	27.7	31.8	33.2	32.3	30.3
	Maros		25.5	26.3	25.5	23.6	39.4	41.9	77.0	41.5	27.2	33.0	46.8	33.8	13.6	36.4
	Jembrana													12.5	45.4	14.0
	Lombok													25.3	13.1	13.8
Japan	Rishiri	5.15	7.22	10.6	7.39	6.93	9.89	8.58	5.97	5.75	4.68	7.64	9.19	5.24	8.31	10.3
	Ochiishi	6.03	3.86	8.21	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	11.7	8.52	8.58	13.3	9.17	9.45	15.0	8.89	8.90	9.10	7.66	10.0			
	Sado-seki	13.7	10.5	11.5	17.4	11.5	14.8	16.4	13.4	9.83	11.4	8.41	12.4	8.39	7.58	81.2
	Happo	6.77	4.44	11.0	6.30	7.89	8.29	7.37	5.67	3.82	1.84	5.54	5.86	5.57	5.00	6.55
	Ijira	8.23	4.94	7.89	9.55	6.05	7.16	7.45	5.02	6.26	5.92	6.41	6.92	6.55	5.61	8.54
	Oki	15.8	12.1	16.3	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	9.37	9.40	9.46	11.8	8.38	8.03	7.92	7.20	7.83	9.45	7.55	5.49			
	Yusuhara	4.66	3.71	4.07	4.44	7.71	7.28	5.37	5.64	3.11	3.13	13.5	3.41	4.10	3.12	5.51
	Hedo	13.3	8.19	8.83	21.1	10.7	32.6	11.1	10.4	14.5	9.79	15.7	14.0	9.72	12.4	78.0
	Ogasawara	6.83	4.27	8.71	10.8	7.21	5.44	5.82	6.10	12.9	3.00	7.51	1.23	8.65	2.64	7.46
	Tokyo	5.38	7.61	5.91	6.59	6.72	6.88	7.00	6.88	5.84	3.99	4.27	4.49	6.58	4.48	4.82
	Niigata-maki													10.9	11.3	12.1
	Tsushima													3.31	3.79	4.27
Lao PDR	Vientiane	4.25	9.62	0.996	***	***	***	***	***	3.68	1.57	*	*	*	***	***
Malaysia	Petaling Jaya	11.9	14.7	14.8	19.0	14.3	13.5	21.9	22.3	25.1	22.2	13.1	26.8	***	16.1	15.3
	Tanah Rata	3.11	3.03	3.17	2.99	6.84	6.73	8.06	7.75	5.36	5.15	6.80	7.19	***	17.1	
	Danum Valley	1.53	1.06	3.43	9.05	3.36	2.37	4.59	4.02	4.62	2.95	4.38	6.27	***	16.3	6.92
	Kuching		8.19	8.35	12.1	14.6	13.0	17.2	22.4	19.2	18.9	14.8	16.3	***	75.6	10.9
Mongolia	Gunung Brinchang															1.56
	Ulaanbaatar	5.19	6.66	9.63	5.23	5.54	***	14.7	***	***	4.65	6.68	4.00	1.31	7.40	8.73
Myanmar	Terelj	2.52	3.68	3.97	5.48	2.93	***	6.28	***	***	1.78	1.67	2.29	***	7.31	5.98
	Yangon	***	***	29.1	14.5	21.7	20.0	2.87	40.6	216	12.1	29.5	48.8	41.9	22.0	5.40
Philippines	Metro Manila	36.4	32.7	24.2	34.2	47.0	61.8	40.5	38.2	43.6	51.6	***	***	34.8	41.0	23.6
	Los Baños	16.1	7.10	14.7	41.6	15.2	19.8	15.3	14.5	13.7	20.7	***	***	***	***	***
	Mt.Sto. Tomas	79.0	15.7	27.8	81.8	36.1	80.4	37.7	29.3	41.8	59.5	***	***	***	***	***
Republic of Korea	Kanghwa	11.0	16.8	6.57	11.0	6.48	6.46	7.83	3.81	5.61	3.22	3.96	2.01	3.54	***	7.32
	Cheju	13.2	8.86	4.23	6.74	7.10	13.4	8.64	4.92	6.74	18.1	9.15	6.87	3.61	***	11.6
	Imsil	18.4	5.91	4.14	9.42	10.2	6.03	3.59	3.85	3.71	2.26	2.82	1.92	2.92	***	4.63
Russia	Mondy	2.42	1.64	0.616	0.830	0.663	1.28	1.52	0.866	1.14	1.20	1.66	1.94	0.928	0.202	0.264
	Listvyanka	3.68	3.19	3.92	4.12	7.72	4.03	3.30	3.56	3.34	2.51	3.86	2.80	3.46	3.04	3.81
	Irkutsk	12.7	15.5	12.6	12.1	11.4	13.9	9.12	10.3	8.88	8.18	11.3	12.3	7.09	6.82	9.12
	Primorskaya	13.8	10.7	10.1	11.3	8.52	11.2	13.0	11.6	15.2	12.1	13.3	15.0	10.6	14.7	10.0
Thailand	Bangkok	21.5	28.7	20.8	22.8	22.9	24.2	33.5	14.6	27.0	26.0	18.0	31.0	18.4	25.7	***
	Samutprakarn	20.5	24.0	26.2	14.6	12.5	7.99	22.2	14.5	8.98	16.8	14.4	12.8	9.57	7.28	***
	Pathumthani	11.7	19.4	12.1	16.2	18.9	32.2	32.0	23.8	17.8	14.7	16.8	10.5	8.30	6.22	4.77
	Khanchanaburi	5.16	9.00	9.85	2.93	7.84	41.7	4.90	3.98	3.97	5.48	4.28	3.52	2.77	***	***
	Mae Hia	7.53	8.60	5.98	5.14	4.20	8.64	15.1	5.13	3.07	7.99	10.6	5.74	7.75		
	Sakaerat	5.20	5.78	3.19	3.60	2.83	4.21	2.83	3.73	9.46	8.93	7.78	39.7	63.7		
Vietnam	Hanoi	30.0	26.7	19.3	29.2	26.6	27.0	31.6	41.2	46.8	37.8	73.2	77.1	103	131	61.4
	Hoa Binh	18.2	28.7	12.8	28.9	22.1	21.2	34.0	17.4	16.3	18.9	43.8	38.4	26.9	94.2	55.9
	Cuc Phuong			56.2	63.3	59.8	61.8	46.2	39.2	28.3	52.4	53.7	45.4	38.0	40.7	65.4
	Da Nang			18.8	15.0	36.4	28.4	49.7	60.6	65.0	105	76.0	94.8	197	286	83.2
	Can Tho								23.5	59.1	19.8	20.1	37.5	37.4	23.5	32.9
	Ho Chi Minh								49.7	62.8	30.8	51.0	45.1	60.0	39.8	42.6
	Yen Bai									24.1	36.9	55.4	38.8	43.6	89.4	31.8

Terms and abbreviations are given in Table 3.5.

Table 3.93 Annual nss-Ca²⁺ deposition amount from 2007 to 2021unit: mmol m⁻² y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	26.2	59.5	26.9	15.3	11.8	17.3	12.8	14.5	12.6	18.1	13.3	***	***	***	***
China	Guanyinqiao	97.5														
	Haifu		65.8	46.0	67.5	55.3	58.3	71.1	77.2	52.4	85.2	65.0	47.9	31.4	28.1	28.4
	Jinyunshan	90.4	82.6	73.0	67.1	55.1	59.4	35.0	38.6	27.9	46.2	65.7	32.0	23.6	23.7	23.6
	Shizhan	61.2	57.4	81.5	48.0	59.8	50.1	142	56.0	51.8	14.1	39.0	28.9	23.5	20.0	78.3
	Jiwozi	34.5	116	58.5	46.9	88.8	78.9	84.6	82.9	24.9	13.5	47.9	30.5	92.8	28.5	31.9
	Hongwen	73.3	12.8	9.32	13.3	11.5	15.8	30.3	28.4	16.2	22.2	14.8	25.4	62.3	131	15.2
	Xiaoping	17.1	30.2	9.85	12.1	17.6	25.6	44.4	57.6	13.9	11.6	10.1	6.71	7.51	3.63	5.01
	Xiang Zhou	6.25	13.2	8.13	13.0	21.2	14.8	102	27.4	21.1	24.4	16.9	18.9	15.3	11.8	14.6
	Zhuxiandong	***	29.3	10.2	29.5	20.7	***	***	***	37.9	39.1	24.2	33.3	21.6	23.8	19.1
	Wuzhishan													15.2	3.01	3.73
	Lijiang													11.7	2.77	2.63
Indonesia	Jakarta	29.5	7.11	19.2	21.6	10.7	31.9	32.2	46.0	20.8	48.9	22.7	27.6	15.5	21.3	17.1
	Serpong	14.5	18.4	6.76	12.9	8.91	8.10	31.8	36.2	34.3	39.8	37.8	44.1	37.7	25.9	25.2
	Kototabang	12.5	11.8	14.2	11.0	12.6	20.2	19.9	9.51	5.09	7.64	28.2	24.7	65.8	14.3	24.8
	Bandung	18.4	25.9	40.4	34.6	31.6	27.4	45.2	45.9	35.1	40.4	27.0	31.0	31.5	31.9	30.1
	Maros		24.4	25.3	24.8	22.4	38.4	40.3	75.2	41.4	22.8	28.1	45.8	33.1	13.1	35.9
	Jembrana													11.8	44.0	12.2
	Lombok													24.5	12.1	12.9
Japan	Rishiri	2.44	2.81	6.74	3.69	3.24	2.58	3.58	2.39	2.51	2.72	3.45	5.20	2.44	4.56	5.09
	Ochiishi	2.56	1.21	2.18	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	6.34	5.02	3.02	9.58	5.57	5.23	9.14	4.98	3.36	4.65	3.06	4.35			
	Sado-seki	7.99	5.79	4.36	8.12	6.92	8.03	6.04	4.88	3.76	7.66	4.33	7.80	3.82	2.52	35.3
	Happo	6.63	4.30	10.7	6.09	7.67	7.87	7.14	5.39	3.54	1.58	5.20	5.53	5.38	4.76	6.25
	Ijira	7.21	4.21	7.06	8.49	5.23	5.99	6.61	4.07	5.20	5.08	5.49	5.74	5.77	4.58	7.07
	Okii	8.91	4.37	7.23	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	7.21	7.42	5.76	8.80	5.04	5.62	4.90	4.35	5.09	6.31	4.75	3.46			
	Yusuhara	3.97	3.30	3.53	4.07	6.94	6.09	4.84	5.25	1.61	2.66	10.7	2.24	3.19	2.58	4.43
	Hedo	5.75	2.95	3.46	6.61	2.88	6.93	3.21	3.14	2.60	2.05	3.38	5.01	2.73	2.86	11.4
	Ogasawara	2.34	1.44	1.95	2.51	1.56	1.58	1.97	1.76	2.40	0.736	1.07	0.290	1.47	0.838	0.911
	Tokyo	4.58	6.83	5.03	5.97	5.59	5.84	6.21	6.14	5.20	3.49	3.16	3.52	4.53	4.02	4.04
	Niigata-maki													5.17	6.16	4.83
	Tsushima													1.76	2.19	2.58
Lao PDR	Vientiane	4.18	9.51	0.960	***	***	***	***	***	3.63	1.55	*	*	*	***	***
Malaysia	Petaling Jaya	11.7	14.4	14.5	18.6	14.0	13.2	21.6	21.9	24.6	21.8	12.7	26.3	***	15.6	14.9
	Tanah Rata	3.02	2.95	3.10	2.93	6.71	6.64	7.95	7.60	5.22	5.01	6.64	7.05	***	16.8	
	Danum Valley	1.36	0.944	3.12	8.51	3.01	2.22	4.30	3.76	4.40	2.75	4.24	5.99	***	15.7	6.38
	Kuching		7.77	7.76	11.4	13.7	12.6	16.6	21.7	18.0	17.4	14.2	15.6	***	74.7	10.2
Gunung Brinchang																1.51
Mongolia	Ulaanbaatar	5.17	6.64	9.60	5.22	5.53	***	14.4	***	***	4.05	6.60	3.85	1.23	7.17	8.66
	Terelj	2.48	3.66	3.95	5.45	2.91	***	6.25	***	***	1.46	1.64	2.14	***	7.16	5.55
Myanmar	Yangon	***	***	27.9	13.9	20.7	18.8	2.13	39.6	215	11.4	28.6	47.4	40.8	21.4	4.70
Philippines	Metro Manila	34.9	31.4	22.6	32.9	45.4	60.2	38.4	36.8	42.3	50.8	***	***	33.9	40.7	22.4
	Los Baños	14.9	6.32	13.7	40.7	14.2	18.7	14.2	13.8	13.1	19.9	***	***	***	***	***
	Mt.Sto. Tomas	78.7	15.1	26.9	81.4	35.7	79.1	37.0	28.8	40.7	58.0	***	***	***	***	***
Republic of Korea	Kanghwa	10.1	15.5	5.35	10.1	5.40	5.64	7.26	3.47	5.04	2.71	3.61	1.61	1.60	***	6.87
	Cheju	10.5	6.43	3.15	4.72	4.00	3.78	4.66	2.13	3.66	8.65	5.42	2.37	2.28	***	4.48
	Imsil	17.9	5.32	3.02	7.87	8.99	4.76	2.80	3.19	3.01	1.68	2.26	1.37	2.27	***	3.78
Russia	Mondy	2.40	1.63	0.610	0.824	0.657	1.27	1.51	0.860	1.13	1.20	1.65	1.92	0.921	0.196	0.260
	Listvyanka	3.66	3.17	3.89	4.09	7.67	4.00	3.26	3.53	3.31	2.49	3.83	2.78	3.43	3.00	3.75
	Irkutsk	12.6	15.4	12.4	11.9	11.3	13.8	9.04	10.2	8.80	8.10	11.2	12.2	7.03	6.72	9.03
	Primorskaya	13.4	10.4	9.86	11.0	8.34	10.8	12.6	11.4	14.5	11.6	12.9	14.5	10.2	14.1	9.49
Thailand	Bangkok	21.3	28.3	20.3	22.4	22.6	24.0	33.2	14.4	26.7	25.6	17.8	30.7	18.3	25.3	***
	Samutprakarn	20.0	23.4	25.8	13.9	12.3	7.83	21.6	14.2	8.69	16.5	14.2	12.4	9.38	6.99	***
	Pathumthani	11.6	19.2	11.9	15.9	18.7	31.8	31.9	23.7	17.7	14.5	16.6	10.4	8.19	6.11	4.70
	Khanchanaburi	4.90	8.61	9.44	2.82	7.53	41.2	4.72	3.85	3.83	5.24	4.16	3.34	2.69	***	***
	Mae Hia	7.47	8.52	5.92	5.09	4.10	8.54	15.0	5.09	3.00	7.87	10.4	5.60	7.62		
	Sakaerat	5.07	5.62	3.12	3.50	2.73	4.13	2.75	3.66	9.32	8.83	7.70	39.4	63.5		
Vietnam	Hanoi	29.7	26.2	19.0	29.0	26.3	26.9	31.2	40.9	46.5	37.4	72.5	76.6	102	130	60.9
	Hoa Binh	18.0	28.5	12.7	28.7	22.0	21.0	33.8	17.3	16.2	18.7	43.7	38.2	26.5	93.8	55.5
	Cuc Phuong			55.7	62.9	59.2	60.9	45.2	38.8	28.0	51.9	52.9	44.7	37.2	39.9	63.8
	Da Nang			12.8	13.5	30.9	26.1	42.5	56.7	61.8	101	72.1	91.0	192	282	79.4
	Can Tho								22.9	57.7	19.4	19.7	37.0	36.5	22.9	32.1
	Ho Chi Minh								48.7	61.8	30.1	49.7	44.3	59.0	38.8	41.6
	Yen Bai									23.9	36.5	55.2	38.6	43.2	88.8	31.4

Terms and abbreviations are given in Table 3.5.

Table 3.94 Annual Mg²⁺ deposition amount from 2007 to 2021

unit: mmol m⁻² y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	4.49	6.33	2.66	1.33	1.55	1.98	1.50	2.54	2.82	1.84	1.94	***	***	***	***
China	Guanyinqiao	10.4														
	Haifu		7.15	5.81	8.75	6.98	6.94	8.44	9.92	5.85	7.22	4.96	4.52	3.68	2.84	2.89
	Jinyunshan	4.61	5.62	6.10	5.64	5.20	5.85	4.99	6.52	4.17	4.73	6.01	3.13	3.12	3.14	3.25
	Shizhan	11.3	17.5	7.34	5.04	6.55	1.36	24.0	7.34	5.49	0.819	6.45	6.06	3.08	4.35	1.03
	Jiwozi	4.88	33.8	12.7	8.28	9.37	17.3	14.5	12.3	4.97	4.66	10.0	8.74	13.1	2.84	0.583
	Hongwen	8.32	4.65	3.01	3.06	3.56	4.34	4.71	4.82	4.26	8.65	3.87	4.66	4.29	4.60	2.85
	Xiaoping	2.16	6.78	3.67	2.88	3.39	4.46	7.97	4.98	3.54	3.96	1.88	1.78	2.06	2.27	1.62
	Xiang Zhou	3.43	11.2	9.08	4.77	5.53	10.5	33.9	12.1	10.3	9.42	10.7	13.2	7.08	6.81	5.87
	Zhuxiandong	***	13.2	9.71	5.30	7.74	***	***	***	14.0	12.2	5.82	21.5	8.67	12.4	8.36
	Wuzhishan													3.44	1.12	1.57
	Lijiang													2.33	2.62	0.759
Indonesia	Jakarta	4.79	2.87	3.06	4.72	3.42	8.06	6.11	11.5	5.07	8.90	3.86	5.76	2.83	7.50	6.47
	Serpong	5.33	9.76	1.83	4.40	2.59	1.80	8.97	9.31	6.84	8.96	8.01	9.36	9.74	6.11	7.93
	Kototabang	10.6	2.48	2.92	3.67	2.08	3.69	5.09	2.27	53.7	2.57	2.63	3.08	1.55	3.44	2.37
	Bandung	3.31	10.3	11.1	11.6	8.85	6.61	14.8	15.3	11.3	9.45	7.30	6.86	8.16	6.71	4.99
	Maros		7.77	6.02	5.79	9.07	17.2	11.3	37.7	74.5	5.76	5.16	8.39	4.30	3.55	2.64
	Jembrana													4.19	10.6	12.5
	Lombok													6.65	11.2	8.56
Japan	Rishiri	15.0	24.8	21.0	20.0	18.9	37.8	26.3	18.7	17.7	10.3	22.7	21.7	15.3	19.9	29.2
	Ochiishi	18.6	14.5	31.4	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	27.9	19.1	28.2	20.1	19.9	18.2	32.1	21.6	28.0	23.8	24.5	30.2			
	Sado-seki	30.3	24.0	37.6	51.6	26.4	38.1	58.2	45.8	32.3	20.8	21.6	24.3	24.3	26.5	288
	Happo	1.57	1.15	2.73	2.12	2.76	4.60	3.63	3.11	2.98	2.11	3.83	2.84	2.01	2.22	2.57
	Ijira	6.23	3.92	4.80	6.22	5.19	7.27	5.70	6.00	6.40	4.94	5.38	7.17	4.64	5.89	9.11
	Oki	36.8	40.8	48.3	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	12.5	11.3	20.4	17.7	18.3	13.5	17.2	16.4	15.7	17.3	14.6	11.1			
	Yusuhara	4.27	2.42	3.33	3.86	8.71	8.65	5.98	6.43	8.45	3.33	15.6	7.18	5.35	2.98	7.14
	Hedo	40.0	27.9	28.6	77.2	40.9	136	41.5	38.2	63.0	42.5	69.2	54.7	44.2	52.9	354
	Ogasawara	23.4	17.7	36.6	45.4	30.5	21.3	21.5	23.2	54.8	12.1	35.2	5.23	38.0	9.80	32.7
	Tokyo	4.56	5.17	5.13	3.98	6.65	6.18	4.89	4.58	4.02	2.97	6.30	5.38	11.0	3.05	4.16
	Niigata-maki													31.0	27.4	38.4
	Tsushima													8.05	8.39	9.18
Lao PDR	Vientiane	0.977	2.18	0.131	***	***	***	***	***	0.564	0.198	*	*	*	***	***
Malaysia	Petaling Jaya	1.16	1.95	1.39	2.46	2.09	1.69	2.45	4.07	3.46	2.81	1.77	2.79	***	3.31	2.80
	Tanah Rata	0.329	0.192	0.0927	0.210	0.869	0.528	0.835	0.964	0.636	0.647	0.327	0.673	***	3.34	
	Danum Valley	1.20	1.58	1.86	3.51	2.05	0.830	1.38	1.57	1.89	0.956	1.12	3.25	***	4.80	2.61
	Kuching		1.24	1.84	2.12	3.45	1.04	2.42	4.10	5.35	5.37	2.75	2.31	***	6.09	2.64
	Gunung Brinchang															0.189
Mongolia	Ulaanbaatar	0.597	0.568	1.21	0.455	1.51	***	0.576	***	***	0.968	0.489	0.426	0.125	0.524	0.591
	Terelj	0.384	0.619	0.604	0.718	1.06	***	0.451	***	***	0.233	0.139	0.218	***	1.05	0.600
Myanmar	Yangon	***	***	8.54	4.11	9.52	16.9	33.1	9.79	14.3	9.98	9.75	13.9	11.8	6.20	61.3
Philippines	Metro Manila	14.5	11.1	9.69	24.4	26.1	29.1	16.0	12.2	16.0	13.3	***	***	9.41	8.21	3.59
	Los Baños	10.7	8.80	10.8	17.0	11.3	8.96	7.77	6.88	6.86	7.28	***	***	***	***	***
	Mt.Sto. Tomas	7.03	1.76	7.23	12.1	7.41	16.6	7.41	4.92	21.0	12.3	***	***	***	***	***
Republic of Korea	Kanghwa	5.95	4.26	6.67	5.71	4.70	4.11	2.96	1.39	2.12	0.994	1.37	0.683	8.13	***	3.68
	Cheju	9.09	8.16	6.25	6.91	11.3	41.4	16.3	9.38	8.60	42.2	15.3	18.7	2.90	***	29.6
	Imsil	4.80	1.70	4.14	7.69	3.02	4.27	2.28	1.95	2.38	1.30	1.45	0.759	0.874	***	2.76
Russia	Mondy	0.623	0.408	0.138	0.163	0.191	0.427	0.290	0.146	0.292	0.192	0.334	0.386	0.173	0.0321	0.0725
	Listvyanka	0.755	0.687	0.884	0.970	1.49	0.867	0.810	0.662	0.689	0.604	0.993	0.663	0.974	0.992	1.29
	Irkutsk	3.00	3.40	3.25	2.53	2.40	2.88	1.77	1.43	1.60	1.91	2.36	2.35	1.69	1.86	2.74
	Primorskaya	4.25	3.46	2.68	2.88	2.66	4.08	3.53	3.99	6.49	5.09	7.57	9.44	7.83	7.05	4.04
Thailand	Bangkok	2.65	4.15	3.09	3.07	2.72	2.43	3.50	2.40	3.02	4.04	2.50	3.43	1.70	4.01	***
	Samutprakarn	5.03	6.91	5.57	4.14	2.52	1.46	4.97	3.09	2.26	3.24	2.83	3.14	1.71	2.48	***
	Pathumthani	1.77	2.84	1.62	2.43	2.46	4.91	3.06	2.03	2.02	2.25	1.92	1.51	1.59	1.45	1.04
	Khanchanaburi	1.70	3.16	2.87	0.935	2.47	6.59	1.55	1.30	1.16	1.84	1.35	1.43	0.647	***	***
	Mae Hia	1.16	2.29	2.87	0.526	0.367	0.936	2.15	1.01	1.05	1.15	1.69	0.537	1.07		
	Sakaerat	2.47	2.11	1.60	1.14	0.410	0.477	0.289	0.557	3.01	4.60	2.97	9.23	10.6		
Vietnam	Hanoi	6.91	8.27	7.70	7.02	7.41	3.87	5.42	5.83	5.85	7.28	15.1	12.3	9.77	13.3	11.1
	Hoa Binh	5.38	3.17	2.51	7.61	4.21	4.15	5.40	3.54	3.95	3.63	3.73	8.70	3.32	11.1	9.47
	Cuc Phuong			9.89	7.30	8.86	14.3	23.1	8.30	7.94	16.1	18.6	25.6	21.2	21.1	26.6
	Da Nang			30.1	14.4	34.3	15.4	43.4	23.9	16.6	24.6	25.4	27.6	61.3	51.1	44.8
	Can Tho								8.19	20.2	11.4	10.2	25.7	24.1	13.0	17.8
	Ho Chi Minh								16.7	25.4	17.6	31.0	25.2	29.9	23.6	25.4
	Yen Bai									4.06	5.88	3.99	6.32	3.71	15.8	4.92

Terms and abbreviations are given in Table 3.5.

Table 3.95 Annual H⁺ deposition amount from 2007 to 2021unit: mmol m⁻² y⁻¹

Country	Name of sites	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	0.279	2.65	0.861	1.98	1.41	1.12	0.890	0.969	0.791	0.496	0.920	***	***	***	***
China	Guanyinqiao	29.3														
	Haifu		64.1	64.3	69.3	53.4	58.1	30.8	17.1	4.65	0.832	1.79	5.70	4.56	4.36	3.88
	Jinyunshan	49.4	53.3	51.7	112	77.1	82.0	71.4	61.3	25.7	12.9	8.96	13.2	18.2	21.5	13.7
	Shizhan	1.60	0.155	0.176	0.0965	0.352	0.217	0.0514	0.154	0.131	0.0852	0.148	0.0803	0.0697	0.0528	0.0616
	Jiwozi	0.0143	0.0498	0.498	3.36	1.10	0.0295	0.412	0.0591	0.0556	0.0875	0.103	0.0895	0.102	0.121	0.537
	Hongwen	21.8	24.3	22.2	40.7	19.0	28.6	18.5	9.48	12.9	21.5	2.46	2.25	0.877	0.124	2.05
	Xiaoping	26.5	55.8	38.7	40.2	23.4	20.3	19.6	26.7	17.6	34.2	0.856	12.2	18.9	13.7	10.1
	Xiang Zhou	33.7	33.0	26.9	26.2	11.1	11.7	14.1	16.6	3.96	15.9	20.0	17.9	22.4	14.5	14.9
	Zhuxiandong	***	30.2	28.0	21.0	19.1	***	***	***	5.25	16.2	15.4	14.7	20.1	14.4	8.55
	Wuzhishan													1.71	1.07	0.720
	Lijiang													0.269	0.374	0.148
Indonesia	Jakarta	59.7	38.6	36.6	39.5	27.9	47.4	39.3	62.2	40.5	22.3	16.8	34.8	22.1	19.4	26.7
	Serpong	52.0	56.7	25.9	25.0	16.4	11.1	20.1	20.8	20.1	19.2	20.3	12.9	23.1	23.1	7.59
	Kototabang	14.7	14.9	59.9	37.9	20.2	25.7	22.5	38.0	30.9	10.9	15.3	14.2	8.99	13.3	6.58
	Bandung	23.2	15.9	13.4	20.8	6.12	7.25	9.42	12.5	8.87	22.4	10.8	3.79	1.61	1.40	5.72
	Maros		7.15	15.0	16.4	16.1	5.90	13.7	16.2	14.3	11.4	11.2	14.1	19.1	6.75	0.910
	Jembrana													6.86	15.4	31.4
	Lombok													4.11	6.61	10.7
Japan	Rishiri	23.3	10.2	19.3	20.1	24.8	23.6	24.8	19.2	18.4	16.4	16.2	14.8	10.9	12.7	9.26
	Ochiishi	14.5	9.86	15.2	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	25.1	21.4	24.4	31.7	28.2	24.1	17.1	26.1	15.7	18.5	20.4	18.1			
	Sado-seki	36.5	28.5	18.4	27.0	28.8	24.1	28.7	27.8	18.9	13.9	16.0	17.1	12.1	18.3	28.4
	Happo	37.8	24.2	25.2	21.0	28.2	26.6	26.7	24.0	18.3	20.0	24.9	17.4	18.0	14.3	14.8
	Ijira	66.3	80.2	66.0	66.6	55.2	58.7	48.8	58.8	62.7	55.2	53.5	45.1	45.4	39.7	36.7
	Oki	26.8	27.7	21.8	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	41.1	37.2	38.3	29.2	31.3	40.5	46.2	42.3	32.4	28.2	25.2	22.5			
	Yusuhara	36.4	47.3	35.5	40.1	39.7	51.3	41.4	46.5	41.2	38.9	80.7	40.3	33.6	32.5	20.1
	Hedo	27.7	19.6	15.4	16.8	22.1	21.3	17.6	23.3	12.6	12.2	16.1	21.0	27.0	16.6	56.9
	Ogasawara	14.7	16.8	11.4	10.5	6.46	7.28	7.15	12.8	9.35	9.21	10.1	5.72	11.0	17.7	9.72
	Tokyo	17.6	46.2	30.6	18.6	20.7	23.5	14.2	26.7	26.8	18.4	16.3	15.3	16.4	11.1	12.3
	Niigata-maki													20.8	23.8	17.9
	Tsushima													25.1	28.6	28.9
Lao PDR	Vientiane	3.02	1.65	0.600	***	***	0.463	***	0.366	1.06	0.122	*	*	*	***	***
Malaysia	Petaling Jaya	83.2	140	134	191	250	210	136	142	153	189	96.6	122	***	83.4	78.3
	Tanah Rata	33.0	31.4	25.6	21.2	32.1	31.0	31.1	40.3	51.4	33.3	41.9	35.7	***	36.4	
	Danum Valley	24.0	18.1	20.4	14.2	23.5	19.5	17.1	13.9	12.4	16.6	18.0	12.4	***	13.8	21.2
	Kuching		23.8	25.5	24.4	17.3	18.4	21.2	16.8	21.6	40.4	23.4	21.4	***	10.3	20.0
	Gunung Brinchang															3.20
Mongolia	Ulaanbaatar	0.0692	0.0807	0.177	0.202	0.595	0.224	0.161	***	0.0569	1.52	0.471	0.295	0.110	0.182	0.369
	Terelj	1.12	0.768	0.0675	0.316	0.786	0.211	1.11	***	0.315	0.689	0.962	0.233	***	0.0659	0.381
Myanmar	Yangon	10.6	2.50	1.04	0.875	1.09	0.831	0.948	0.571	0.526	0.387	0.575	0.777	0.871	1.23	0.378
Philippines	Metro Manila	18.7	6.75	22.2	6.01	8.29	26.9	10.0	1.93	1.32	7.68	***	***	9.33	6.31	25.6
	Los Baños	9.01	21.2	7.64	2.73	6.43	4.61	3.37	3.34	0.791	33.9	***	***	***	***	***
	Mt.Sto. Tomas	10.0	16.3	6.96	0.726	20.6	6.41	22.7	2.64	6.72	1.52	***	***	***	***	***
Republic of Korea	Kanghwa	21.2	43.9	32.7	61.2	33.9	18.3	23.6	5.72	11.9	13.7	21.4	8.27	10.5	***	3.85
	Cheju	38.2	18.1	8.09	9.21	7.32	5.93	2.66	1.93	3.12	8.90	3.76	1.41	2.00	***	2.42
	Imsil	2.49	11.2	8.62	22.1	8.09	10.9	7.33	5.69	5.78	2.64	3.83	2.34	5.04	***	0.342
Russia	Mondy	1.06	1.38	0.395	0.253	0.213	0.250	1.60	0.573	0.487	0.957	0.928	2.35	0.717	0.232	0.137
	Listvyanka	8.82	9.06	4.49	5.74	9.00	5.73	4.41	3.53	4.91	3.94	5.38	4.03	8.00	6.52	7.88
	Irkutsk	5.59	9.01	1.67	2.78	3.13	5.15	2.71	3.35	1.79	5.68	5.73	6.17	6.14	6.77	6.44
	Primorskaya	14.4	9.02	9.11	7.23	14.6	7.88	6.36	2.19	7.98	3.68	1.31	1.53	3.21	0.800	2.01
Thailand	Bangkok	14.1	9.39	16.7	17.2	19.5	3.74	3.35	0.0953	8.10	4.75	1.72	1.03	0.543	2.43	***
	Samutprakarn	4.60	8.81	14.7	9.06	2.66	0.647	1.18	0.307	3.66	6.46	2.49	4.43	1.58	0.956	***
	Pathumthani	21.5	15.4	9.26	10.3	15.6	5.62	4.60	3.27	5.48	4.29	6.21	10.0	2.79	2.69	2.87
	Khanchanaburi	2.83	4.30	4.35	3.30	6.24	2.30	7.08	1.58	3.76	1.10	2.02	1.72	0.544	***	***
	Mae Hia	1.05	1.34	1.26	0.789	8.29	0.876	1.30	0.278	1.70	1.85	3.42	2.51	5.31		
	Sakaerat	11.5	16.0	17.1	29.0	15.0	9.66	8.23	6.42	12.8	5.92	6.50	8.21	7.11		
Vietnam	Hanoi	4.32	3.24	3.46	1.44	9.13	4.29	3.04	0.826	4.19	0.604	5.77	14.5	1.02	4.55	
	Hoa Binh	17.0	6.42	6.96	5.84	6.42	4.50	1.83	4.69	8.20	3.32	11.4	15.4	7.55	4.04	7.65
	Cuc Phuong			23.4	9.73	16.8	7.42	7.16	5.10	6.99	3.03	18.8	8.99	5.52	11.0	1.42
	Da Nang			49.9	13.0	38.0	6.16	6.07	6.69	1.98	2.99	3.06	4.27	1.52	2.18	4.19
	Can Tho								1.01	3.71	2.39	2.05	3.50	2.79	2.34	2.77
	Ho Chi Minh								2.72	1.10	4.46	2.97	1.92	2.45	2.74	1.91
	Yen Bai									8.93	12.0	15.3	8.36	24.4	2.87	3.66

Terms and abbreviations are given in Table 3.5.

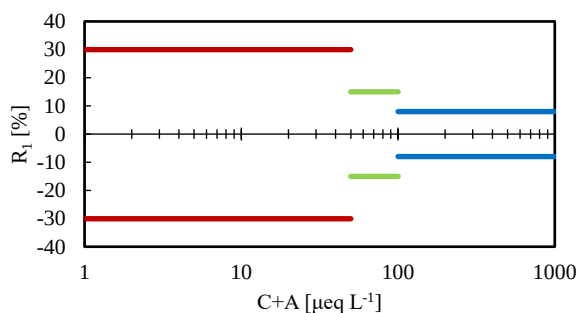


Fig. 3.2 a) Phnom Penh Ion Balance (R_1)

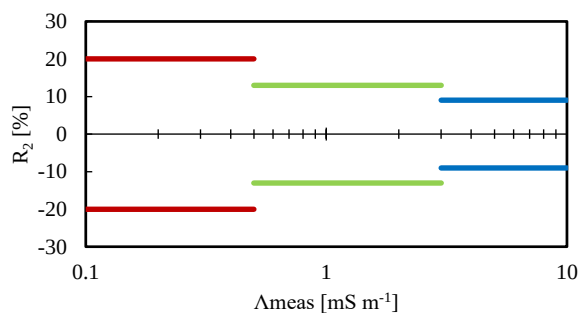


Fig. 3.2 b) Phnom Penh Conductivity Agreement (R_2)

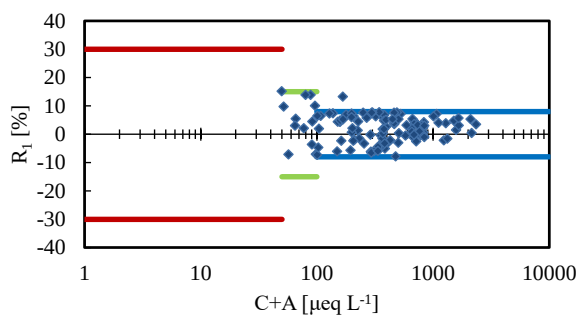


Fig. 3.3 a) Haifu Ion Balance (R_1)

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

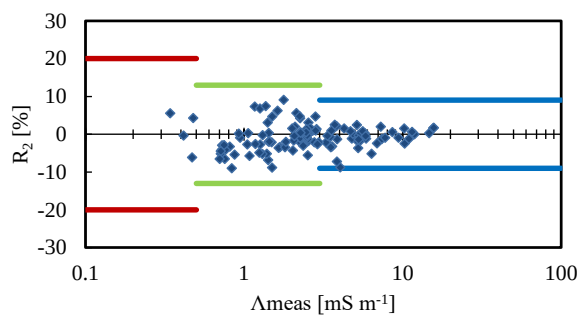


Fig. 3.3 b) Haifu Conductivity Agreement (R_2)

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

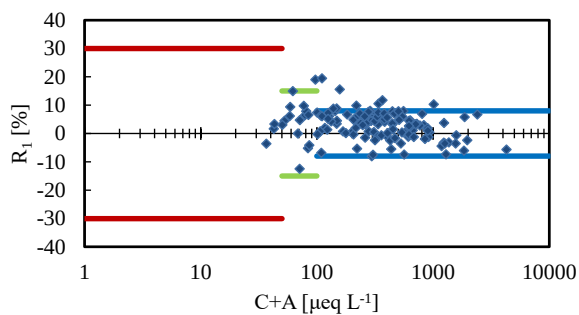


Fig. 3.4 a) Jinyunshan Ion Balance (R_1)

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

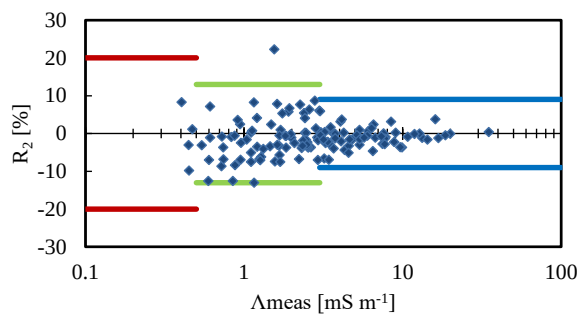


Fig. 3.4 b) Jinyunshan Conductivity Agreement (R_2)

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

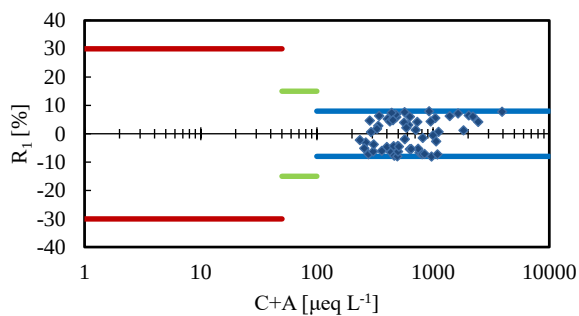


Fig. 3.5 a) Shizhan Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^-

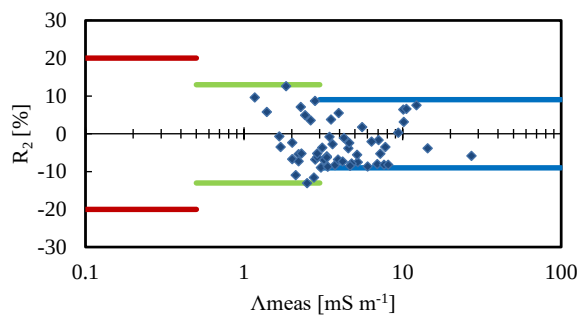


Fig. 3.5 b) Shizhan Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^-

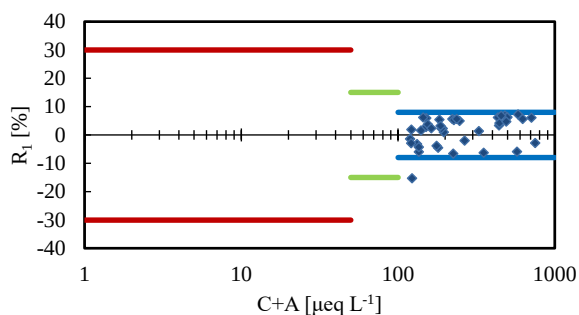


Fig. 3.6 a) Jiwozi Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^-

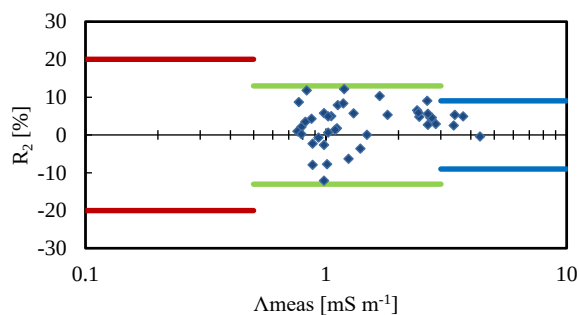


Fig. 3.6 b) Jiwozi Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^-

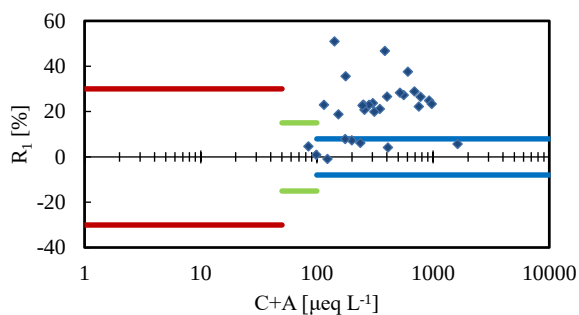


Fig. 3.7 a) Hongwen Ion Balance (R_1)

All of R_1 plots were calculated including F^-

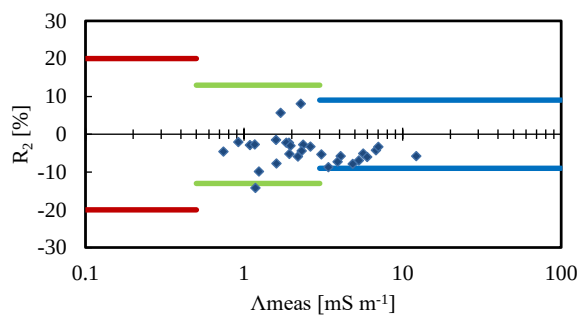


Fig. 3.7 b) Hongwen Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

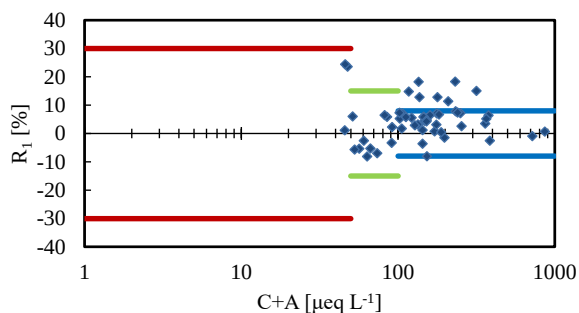


Fig. 3.8 a) Xiaoping Ion Balance (R_1)

All of R_1 plots were calculated including F^-

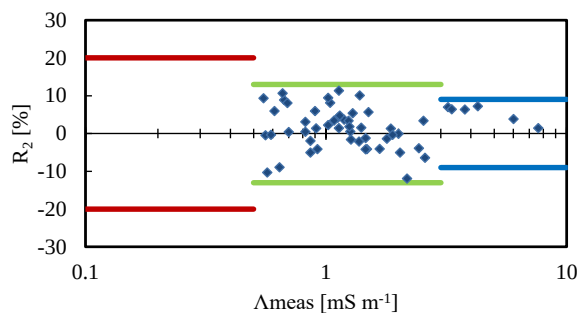


Fig. 3.8 b) Xiaoping Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

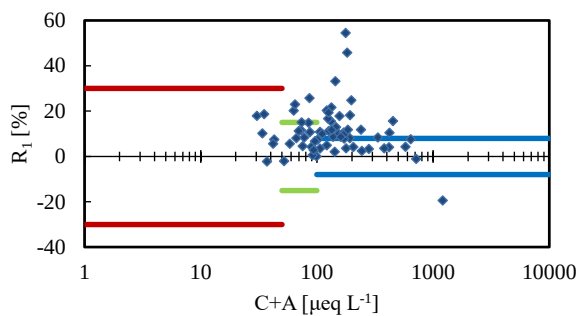


Fig. 3.9 a) Xiang Zhou Ion Balance (R_1)

All of R_1 plots were calculated including F^-

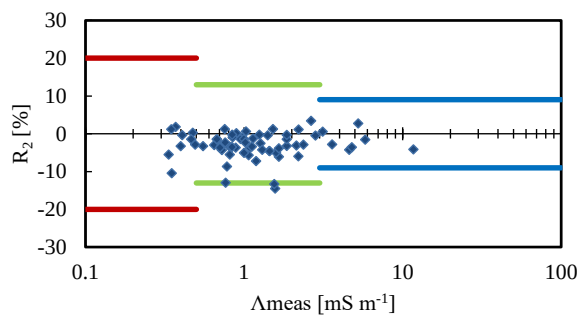


Fig. 3.9 b) Xiang Zhou Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

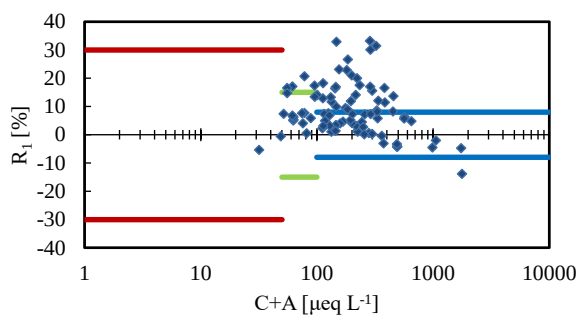


Fig. 3.10 a) Zhuxiandong Ion Balance (R_1)

All of R_1 plots were calculated including F^-

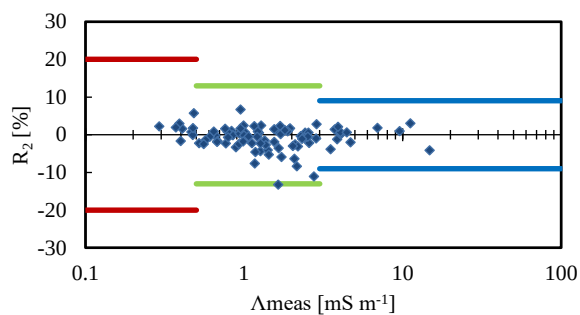


Fig. 3.10 b) Zhuxiandong Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

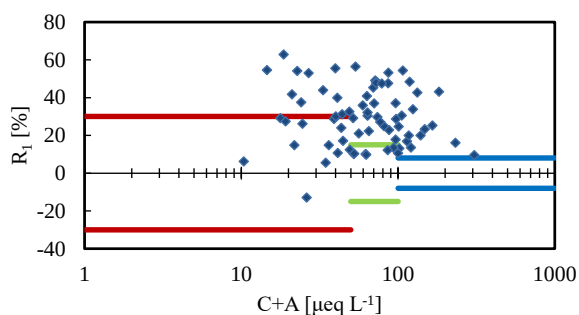


Fig. 3.11 a) Wuzhishan Ion Balance (R_1)

All of R_1 plots were calculated including F^-

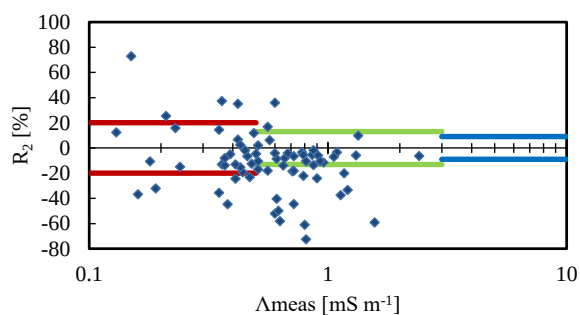


Fig. 3.11 b) Wuzhishan Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

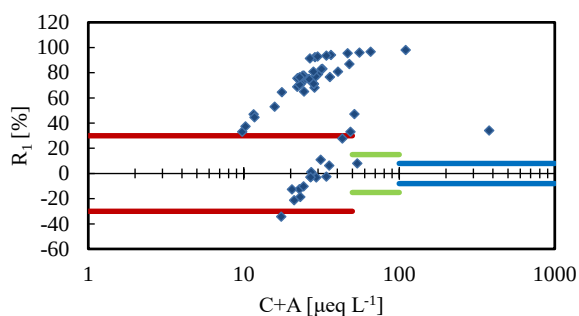


Fig. 3.12 a) Lijiang Ion Balance (R_1)

All of R_1 plots were calculated including F^-

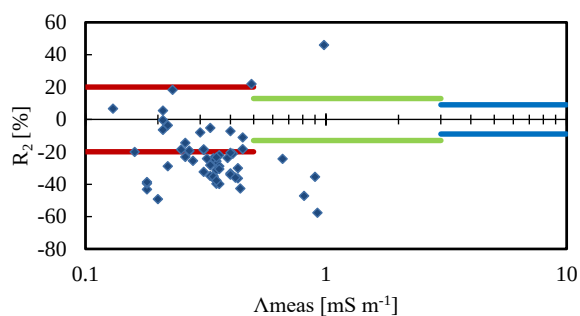


Fig. 3.12 b) Lijiang Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

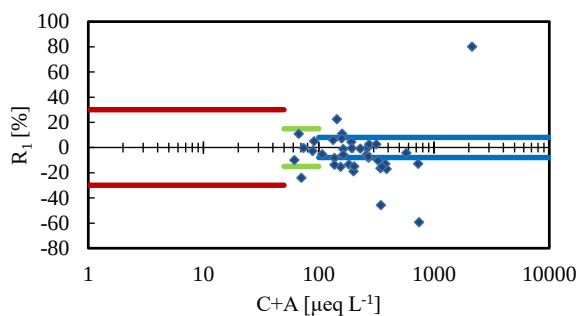


Fig. 3.13 a) Jakarta Ion Balance (R_1)

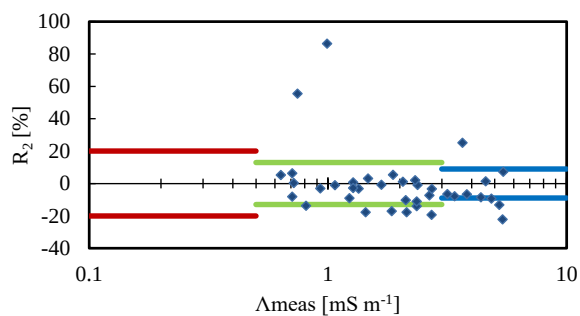


Fig. 3.13 b) Jakarta Conductivity Agreement (R_2)

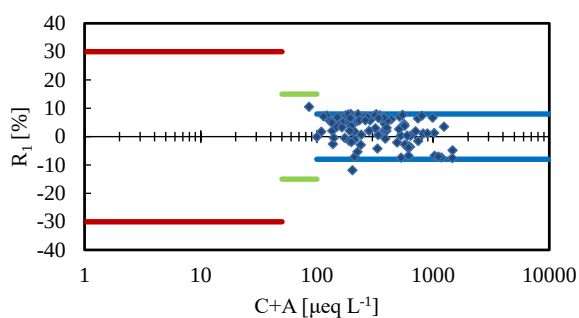


Fig. 3.14 a) Serpong Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^-

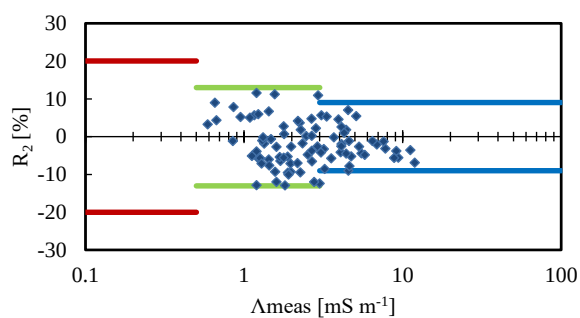


Fig. 3.14 b) Serpong Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^-

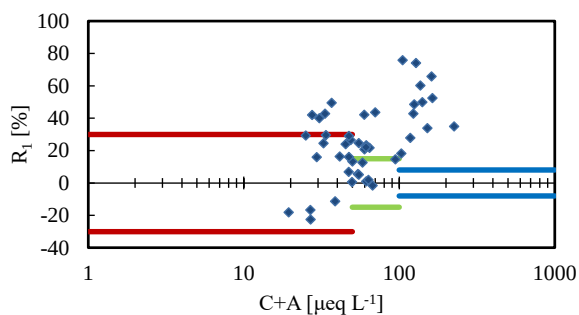


Fig. 3.15 a) Kototabang Ion Balance (R_1)

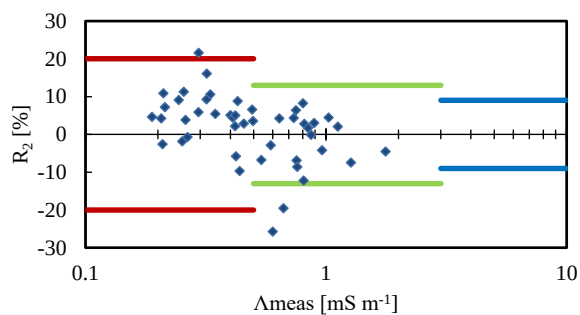


Fig. 3.15 b) Kototabang Conductivity Agreement (R_2)

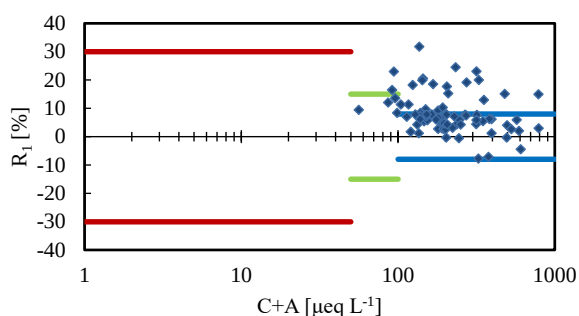


Fig. 3.16 a) Bandung Ion Balance (R_1)

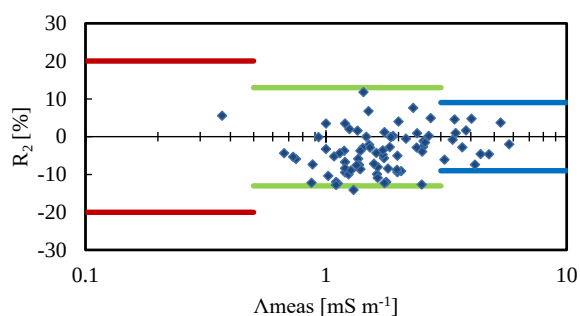


Fig. 3.16 b) Bandung Conductivity Agreement (R_2)

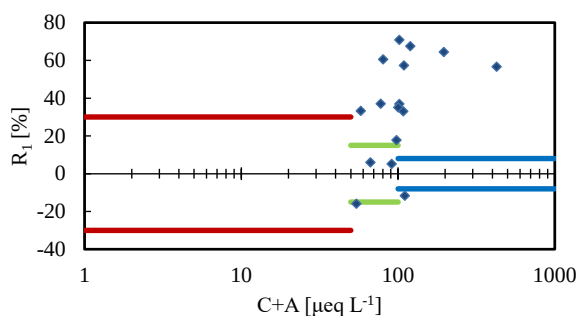


Fig. 3.17 a) Maros Ion Balance (R_1)

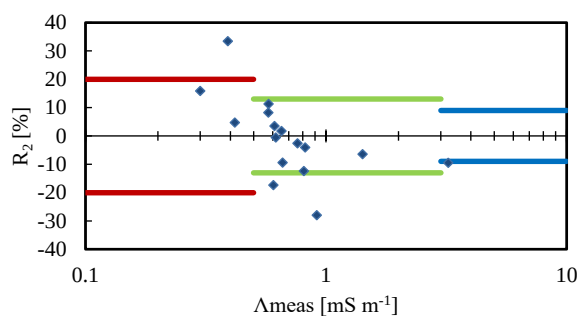


Fig. 3.17 b) Maros Conductivity Agreement (R_2)

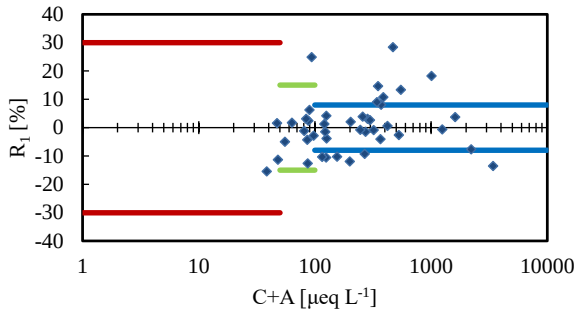


Fig. 3.18 a) Jembrana Ion Balance (R_1)

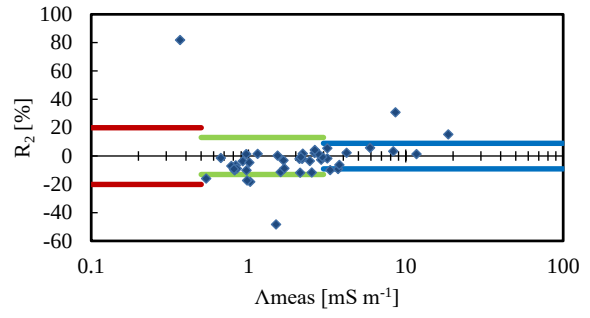


Fig. 3.18 b) Jembrana Conductivity Agreement (R_2)

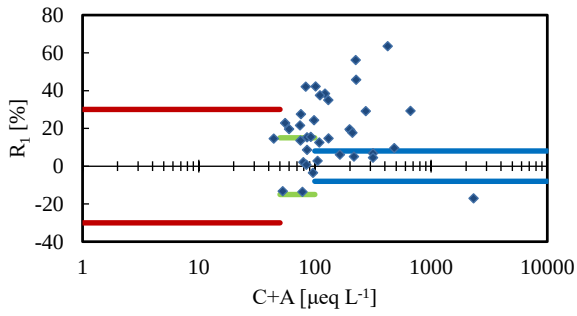


Fig. 3.19 a) Lombok Ion Balance (R_1)

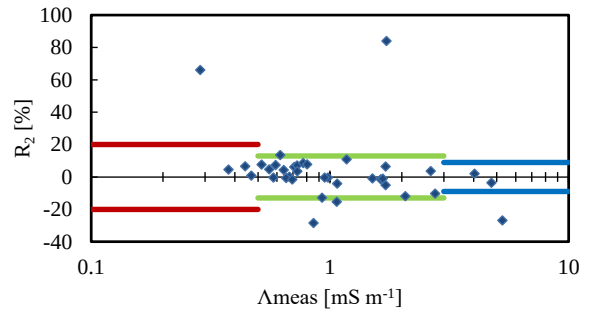


Fig. 3.19 b) Lombok Conductivity Agreement (R_2)

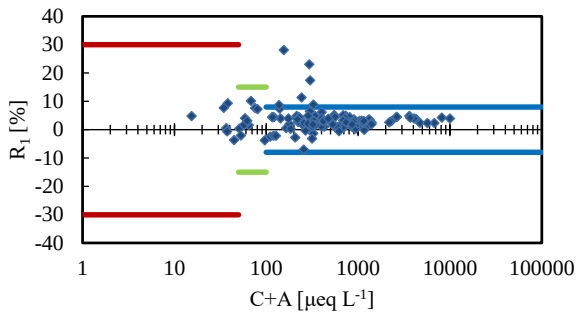


Fig. 3.20 a) Rishiri Ion Balance (R_1)

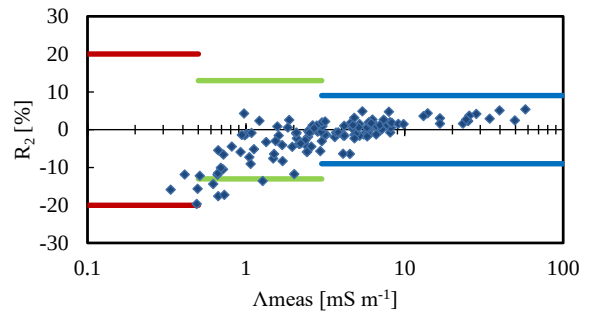


Fig. 3.20 b) Rishiri Conductivity Agreement (R_2)

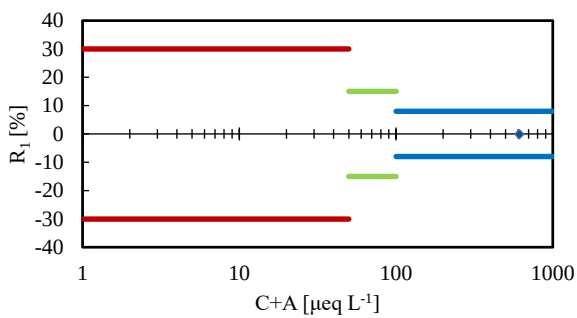


Fig. 3.21 a) Ochiishi Ion Balance (R_1)

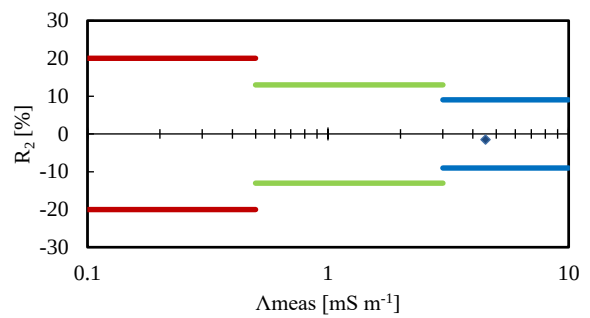


Fig. 3.21 b) Ochiishi Conductivity Agreement (R_2)

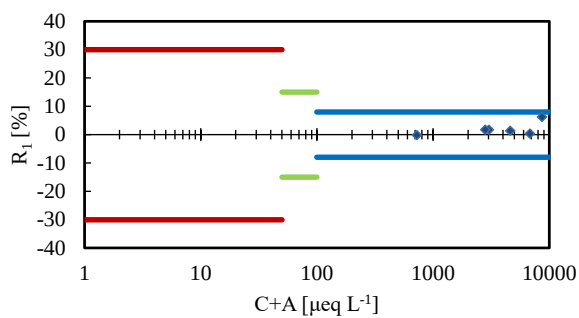


Fig. 3.22 a) Sado-seki Ion Balance (R_1)

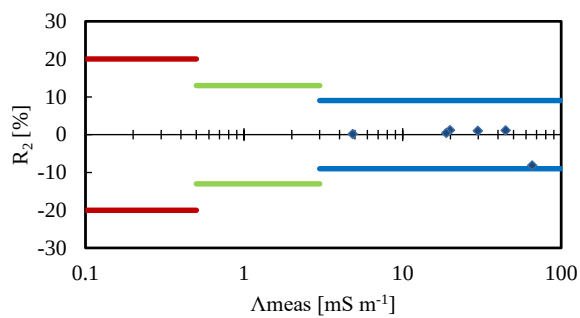


Fig. 3.22 b) Sado-seki Conductivity Agreement (R_2)

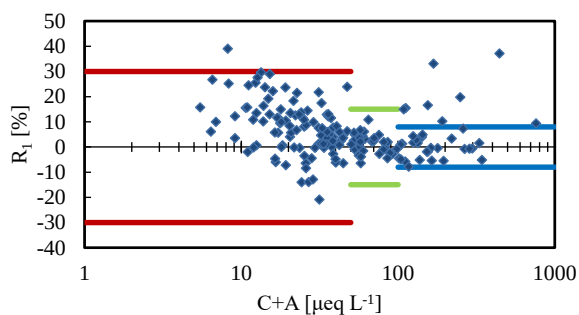


Fig. 3.23 a) Happo Ion Balance (R_1)

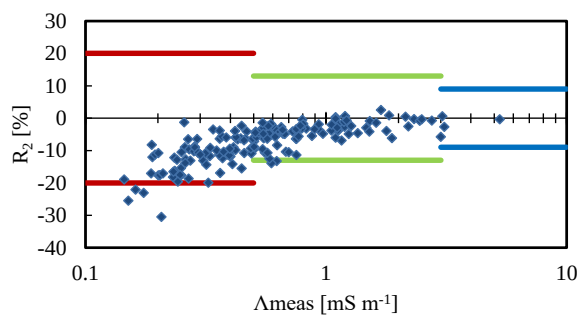


Fig. 3.23 b) Happo Conductivity Agreement (R_2)

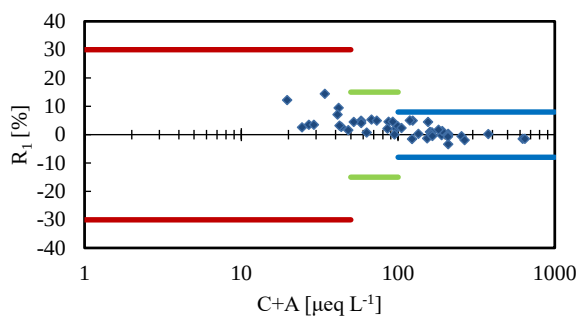


Fig. 3.24 a) Ijira Ion Balance (R_1)

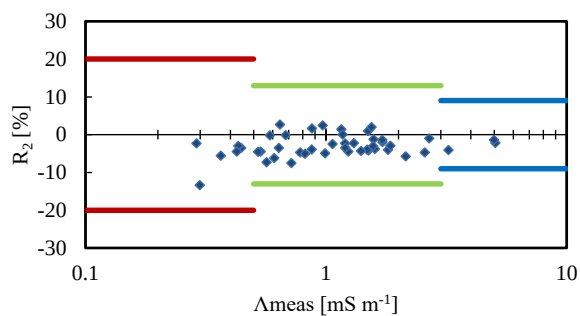


Fig. 3.24 b) Ijira Conductivity Agreement (R_2)

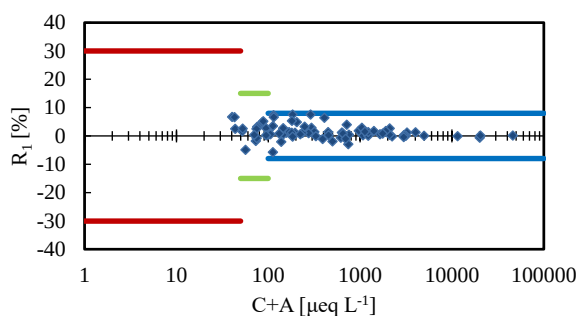


Fig. 3.25 a) Oki Ion Balance (R_1)

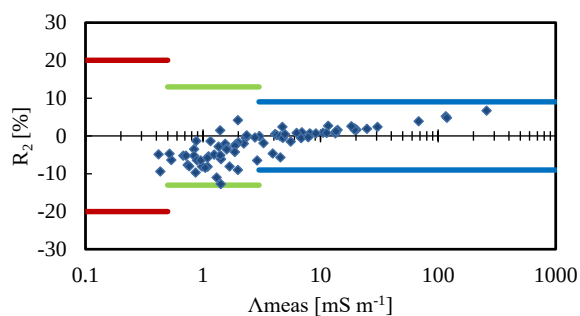


Fig. 3.25 b) Oki Conductivity Agreement (R_2)

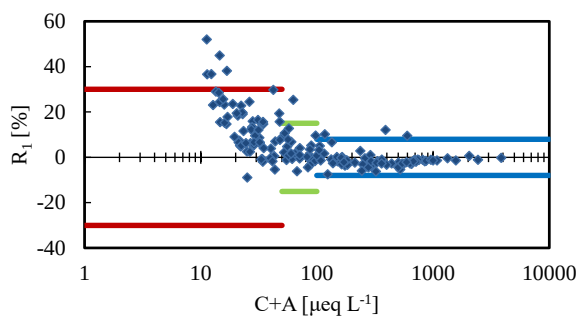


Fig. 3.26 a) Yusuhara Ion Balance (R_1)

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

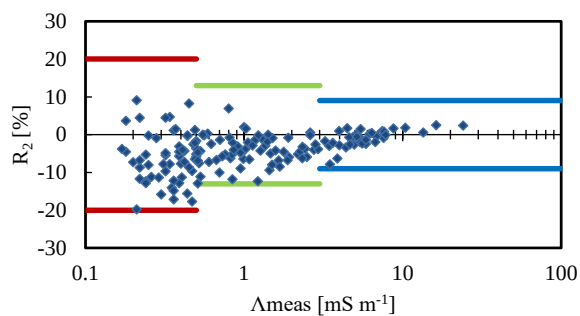


Fig. 3.26 b) Yusuhara Conductivity Agreement (R_2)

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

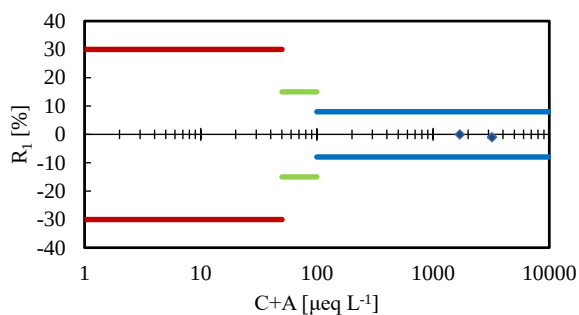


Fig. 3.27 a) Hedo Ion Balance (R_1)

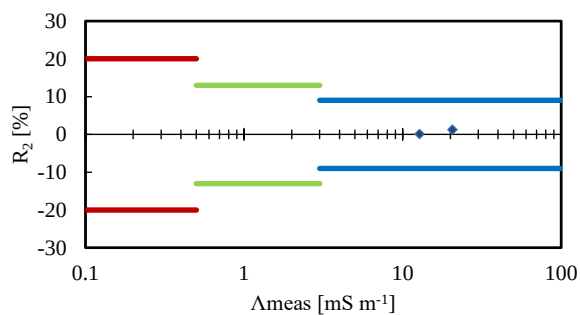


Fig. 3.27 b) Hedo Conductivity Agreement (R_2)

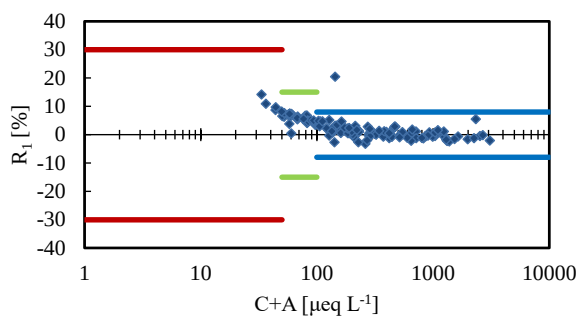


Fig. 3.28 a) Ogasawara Ion Balance (R_1)

All of R_1 plots were calculated including NO_2^-

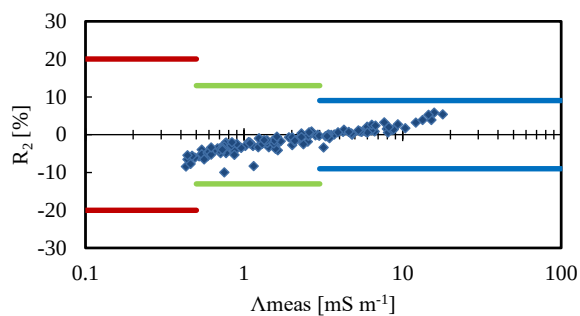


Fig. 3.28 b) Ogasawara Conductivity Agreement (R_2)

All of R_2 plots were calculated including NO_2^-

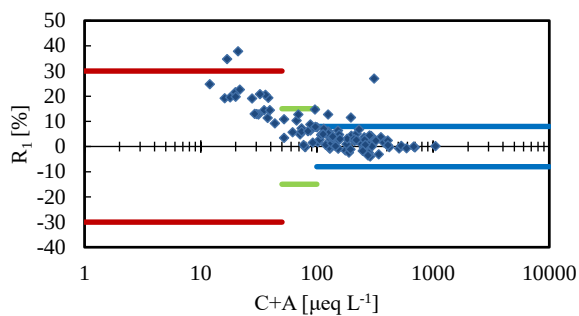


Fig. 3.29 a) Tokyo Ion Balance (R_1)

All of R_1 plots were calculated including NO_2^-

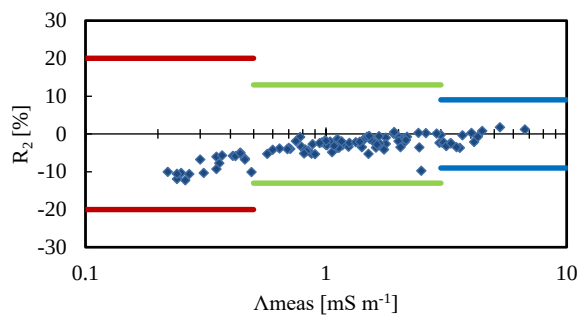


Fig. 3.29 b) Tokyo Conductivity Agreement (R_2)

All of R_2 plots were calculated including NO_2^-

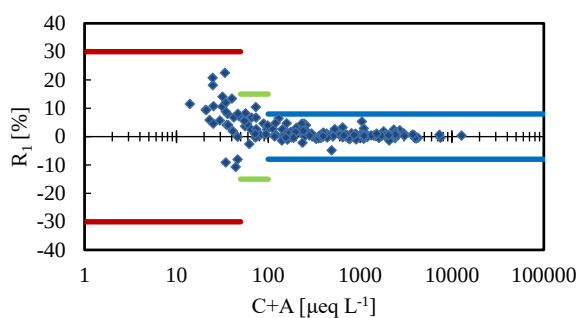


Fig. 3.30 a) Niigata-maki Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^-

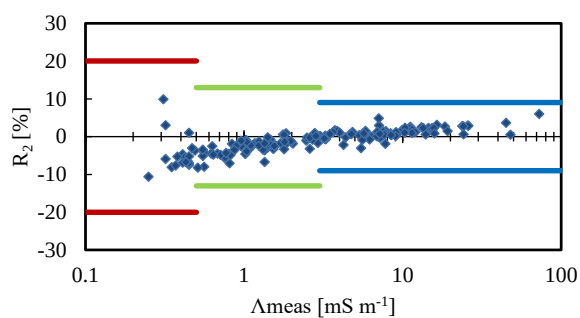


Fig. 3.30 b) Niigata-maki Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^-

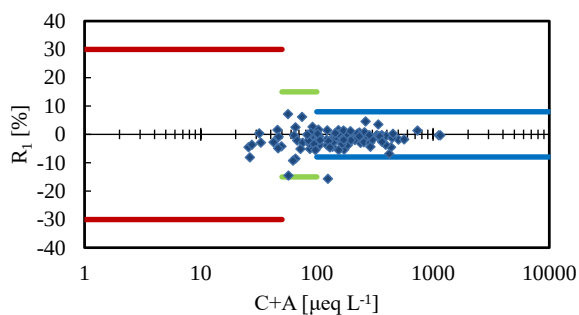


Fig. 3.31 a) Tsushima Ion Balance (R_1)

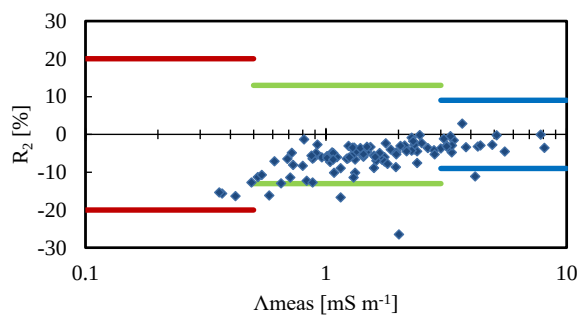


Fig. 3.31 b) Tsushima Conductivity Agreement (R_2)

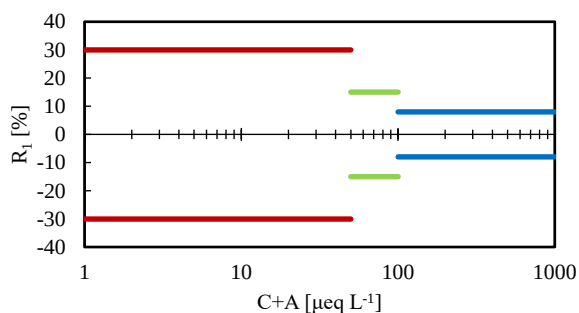


Fig. 3.32 a) Vientiane Ion Balance (R_1)

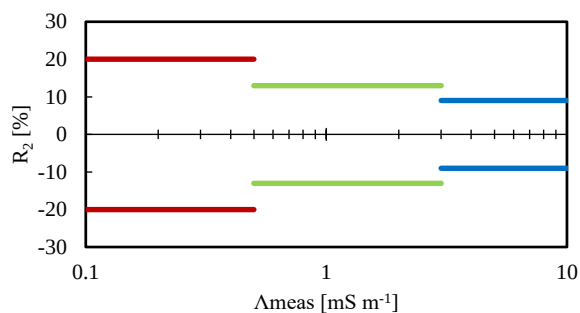


Fig. 3.32 b) Vientiane Conductivity Agreement (R_2)

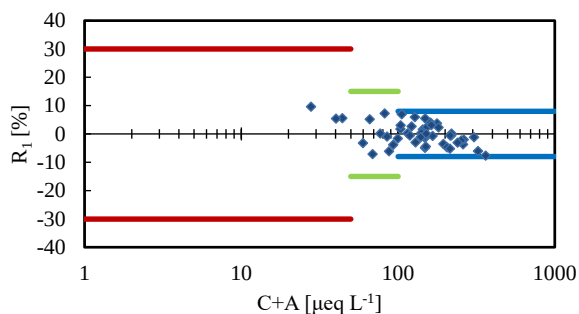


Fig. 3.33 a) Petaling Jaya Ion Balance (R_1)

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

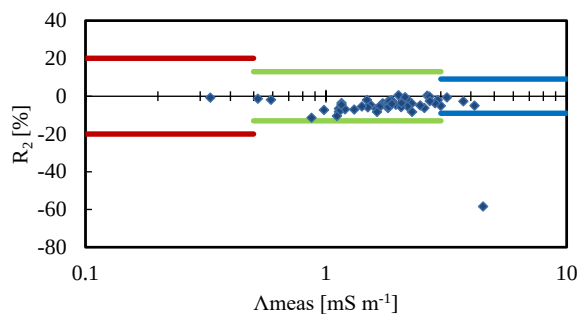


Fig. 3.33 b) Petaling Jaya Conductivity Agreement (R_2)

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

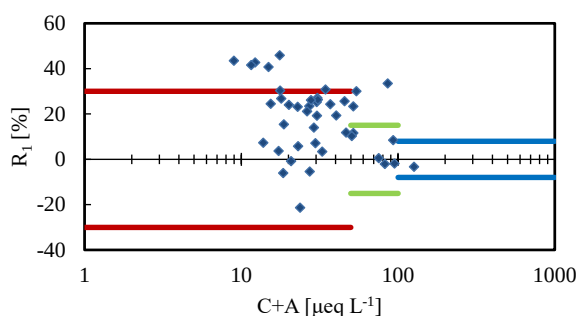


Fig. 3.34 a) Danum Valley Ion Balance (R_1)

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

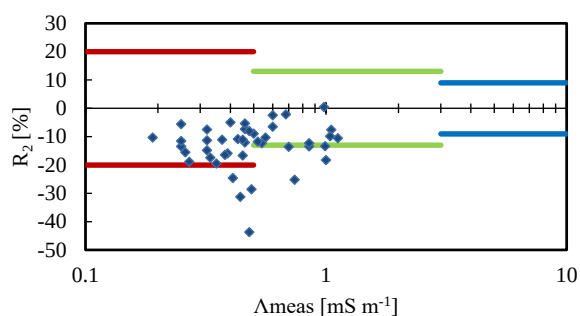


Fig. 3.34 b) Danum Valley Conductivity Agreement (R_2)

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

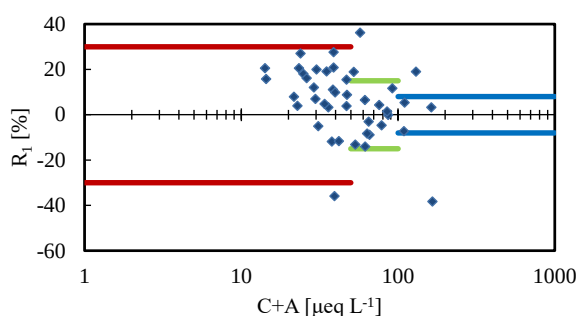


Fig. 3.35 a) Kuching Ion Balance (R_1)

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

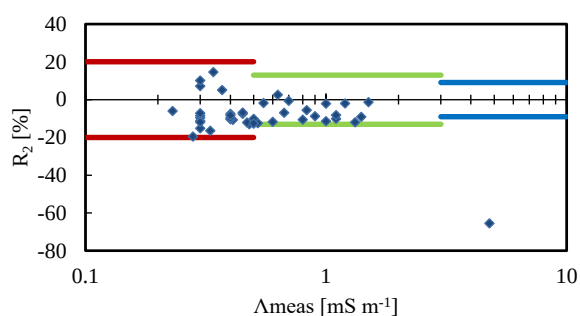


Fig. 3.35 b) Kuching Conductivity Agreement (R_2)

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

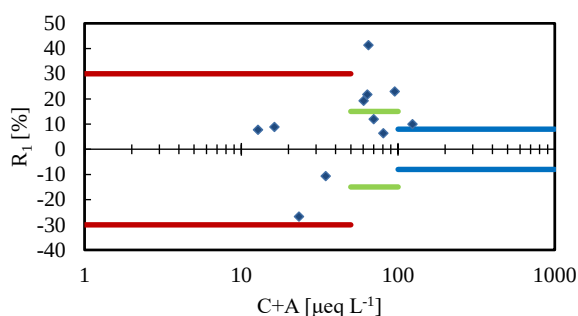


Fig. 3.36 a) Gunung Brinchang Ion Balance (R_1)

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

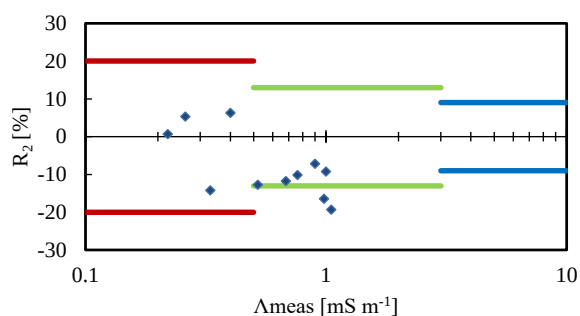


Fig. 3.36 b) Gunung Brinchang Conductivity Agreement (R_2)

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

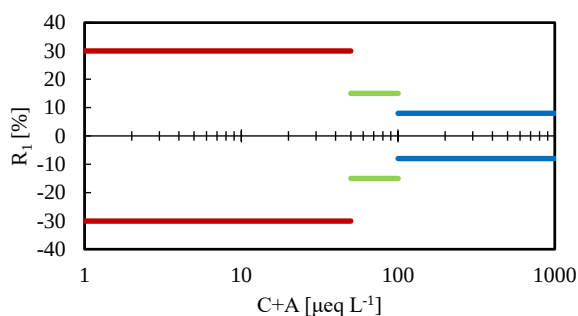


Fig. 3.37 a) Ulaanbaatar Ion Balance (R_1)

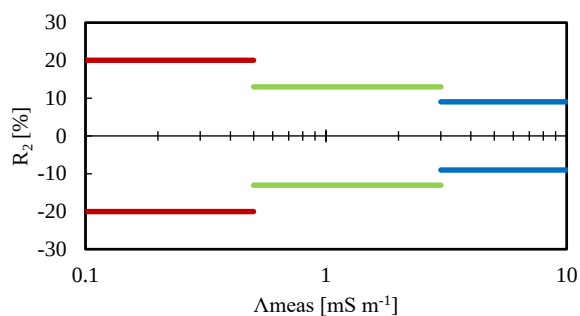


Fig. 3.37 b) Ulaanbaatar Conductivity Agreement (R_2)

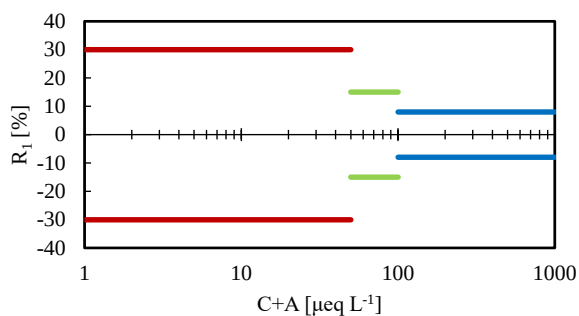


Fig. 3.38 a) Terej Ion Balance (R_1)

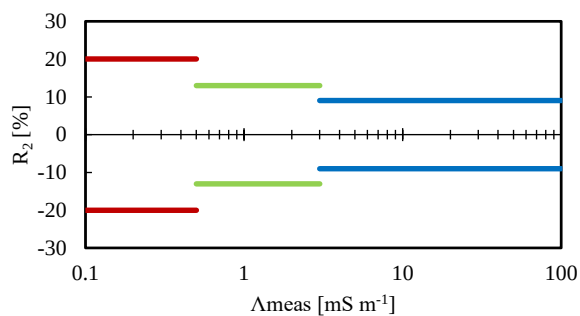


Fig. 3.38 b) Terej Conductivity Agreement (R_2)

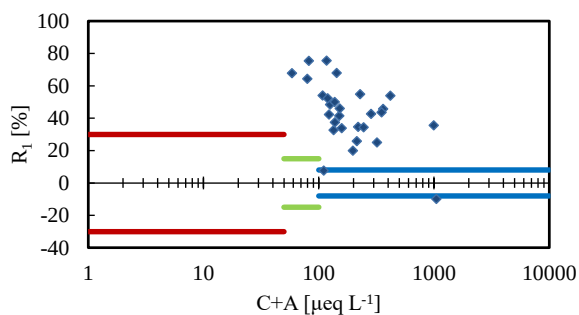


Fig. 3.39 a) Yangon Ion Balance (R_1)

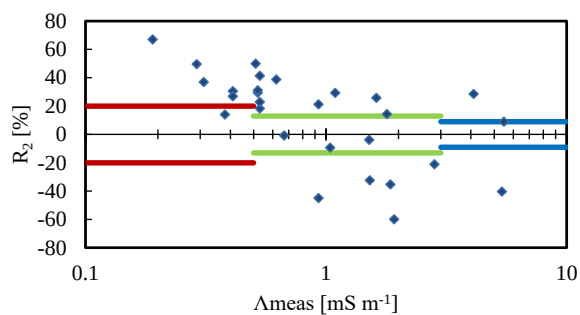


Fig. 3.39 b) Yangon Conductivity Agreement (R_2)

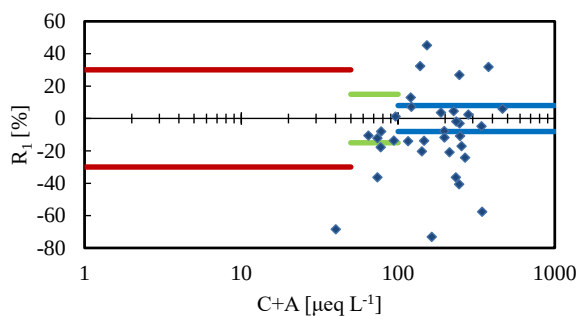


Fig. 3.40 a) Metro Manila Ion Balance (R_1)

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

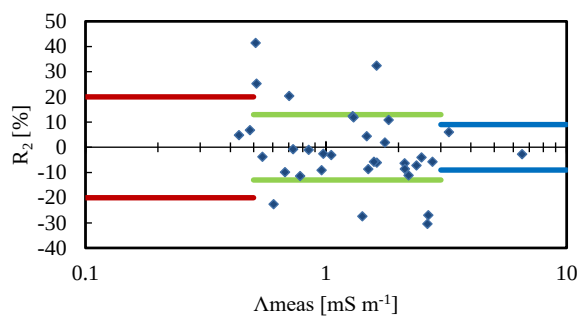


Fig. 3.40 b) Metro Manila Conductivity Agreement (R_2)

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

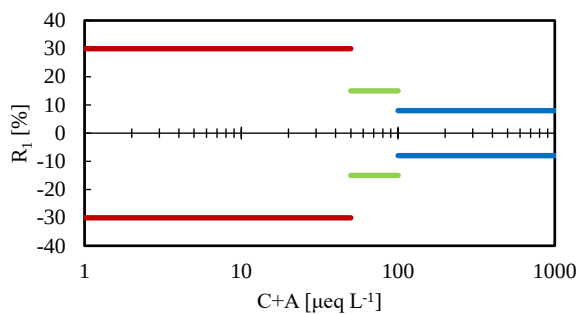


Fig. 3.41 a) Los Baños Ion balance (R_1)

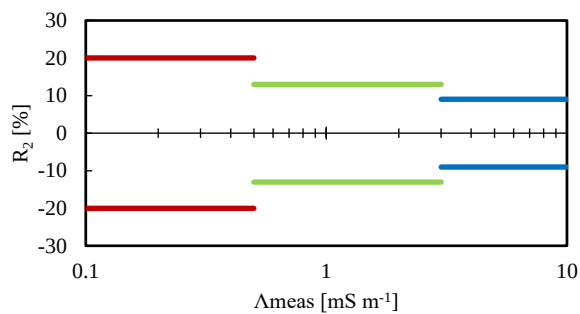


Fig. 3.41 b) Los Baños Conductivity Agreement (R_2)

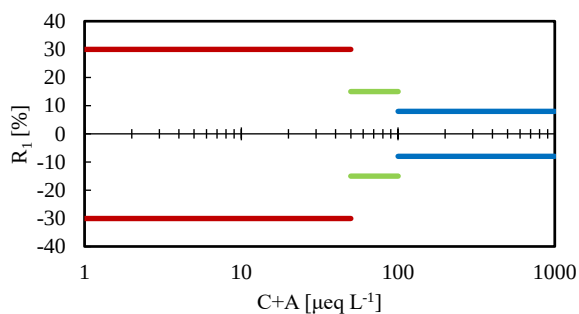


Fig. 3.42 a) Mt. Sto. Tomas Ion balance (R_1)

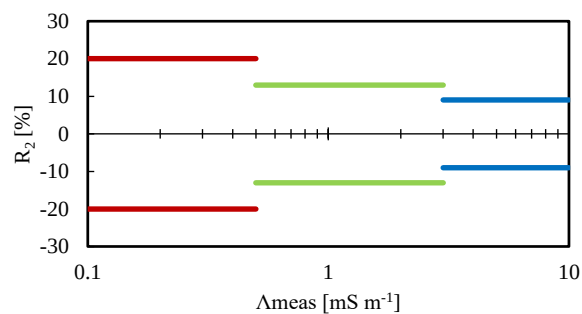


Fig. 3.42 b) Mt. Sto. Tomas Conductivity Agreement (R_2)

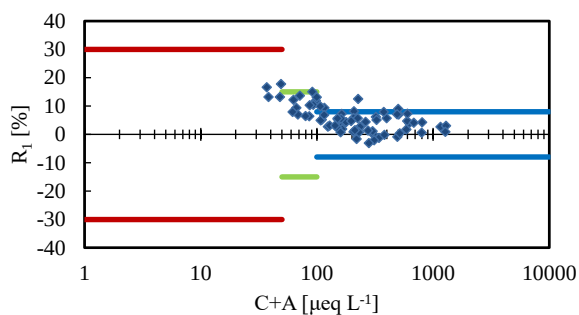


Fig. 3.43 a) Kanghwa Ion Balance (R_1)

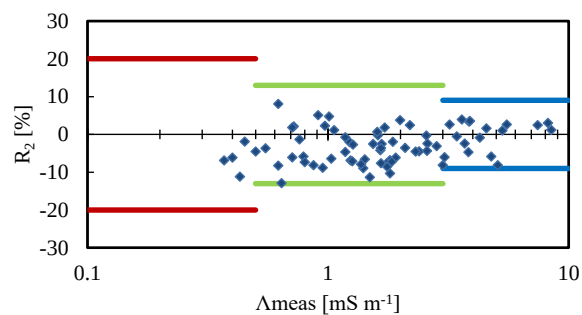


Fig. 3.43 b) Kanghwa Conductivity Agreement (R_2)

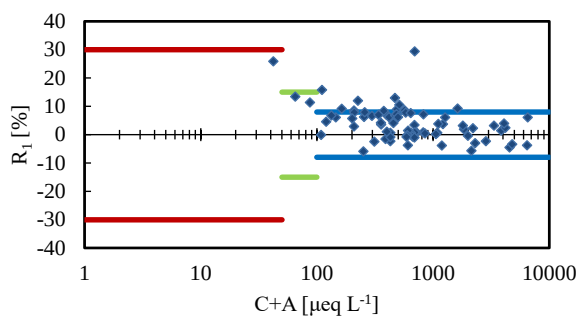


Fig. 3.44 a) Cheju Ion Balance (R_1)

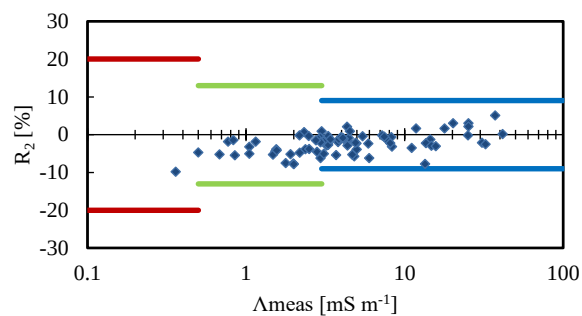


Fig. 3.44 b) Cheju Conductivity Agreement (R_2)

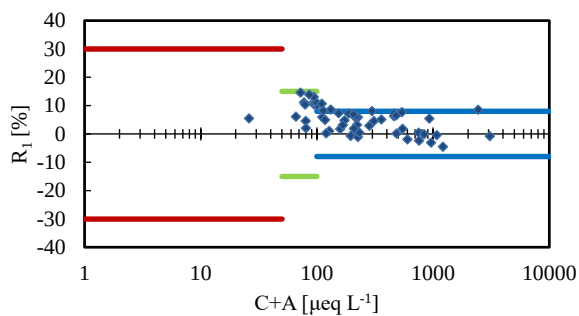


Fig. 3.45 a) Imsil Ion Balance (R_1)

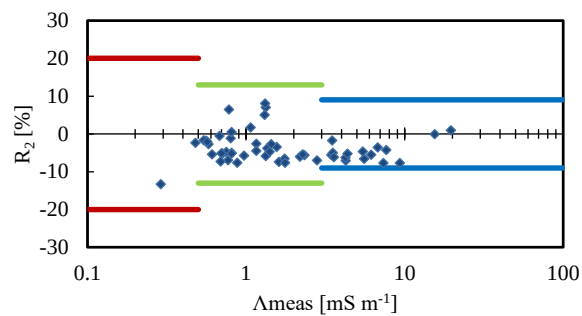


Fig. 3.45 b) Imsil Conductivity Agreement (R_2)

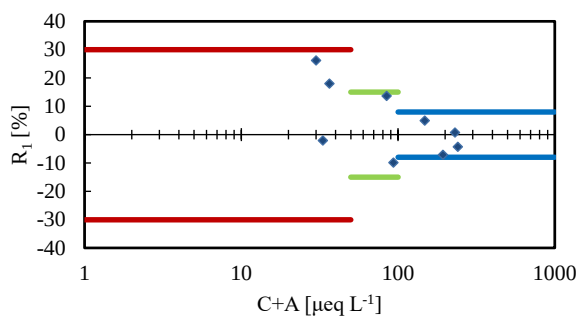


Fig. 3.46 a) Mondy Ion Balance (R_1)

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

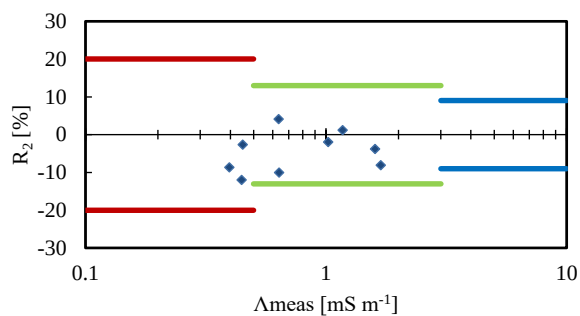


Fig. 3.46 b) Mondy Conductivity Agreement (R_2)

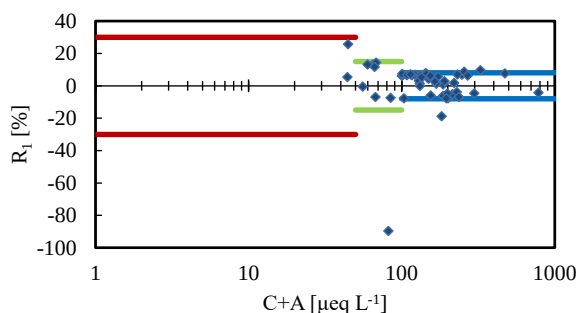


Fig. 3.47 a) Listvyanka Ion Balance (R_1)

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

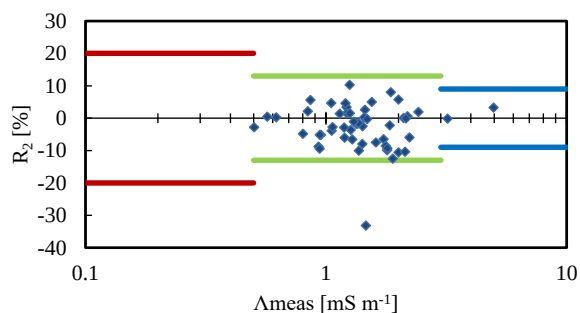


Fig. 3.47 b) Listvyanka Conductivity Agreement (R_2)

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

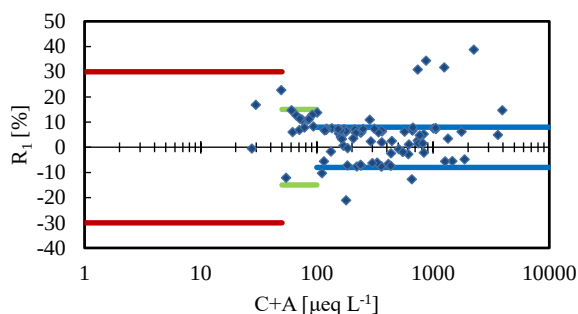


Fig. 3.48 a) Irkutsk Ion Balance (R_1)

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

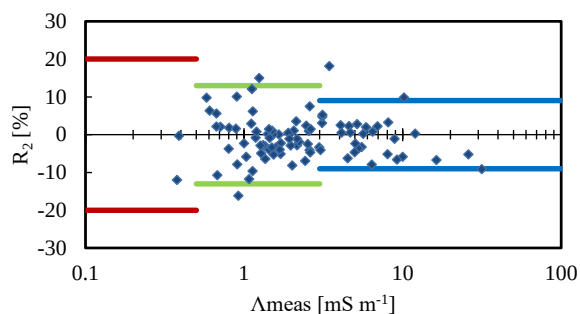


Fig. 3.48 b) Irkutsk Conductivity Agreement (R_2)

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

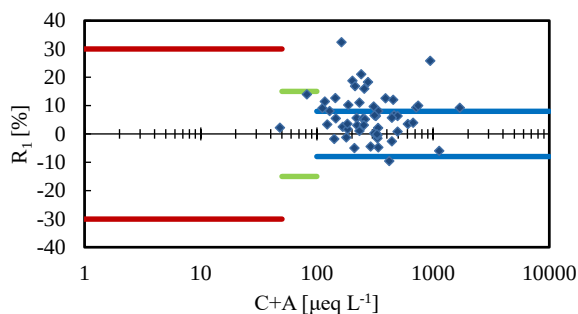


Fig. 3.49 a) Primorskaya Ion Balance (R_1)

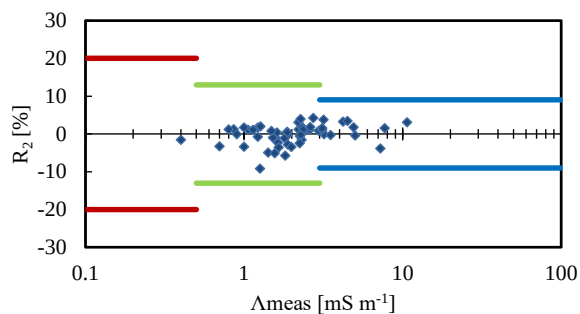


Fig. 3.49 b) Primorskaya Conductivity Agreement (R_2)

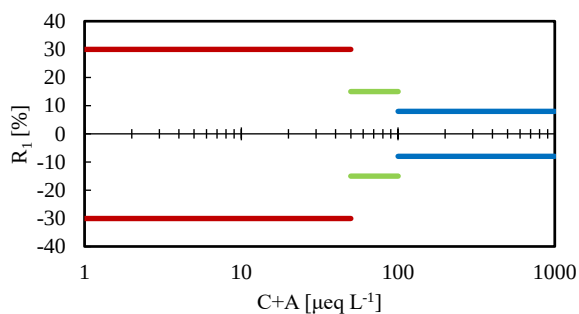


Fig. 3.50 a) Bangkok Ion Balance (R_1)

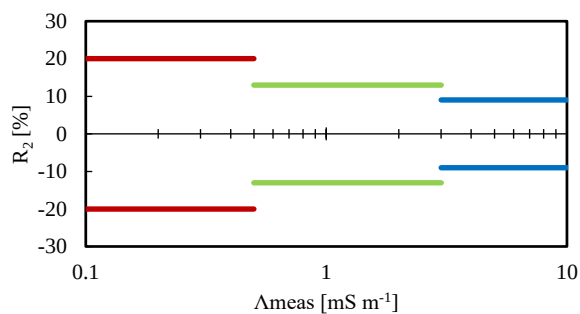


Fig. 3.50 b) Bangkok Conductivity Agreement (R_2)

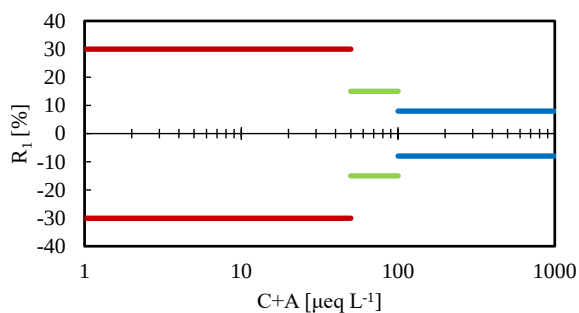


Fig. 3.51 a) Samutprakarn Ion Balance (R_1)

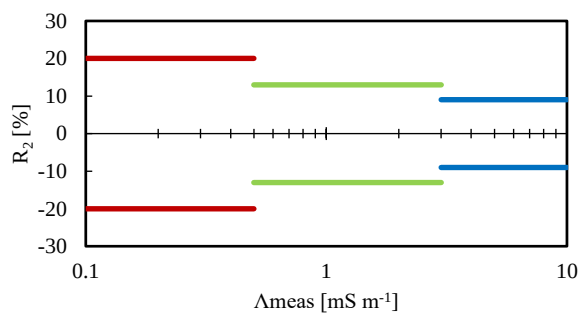


Fig. 3.51 b) Samutprakarn Conductivity Agreement (R_2)

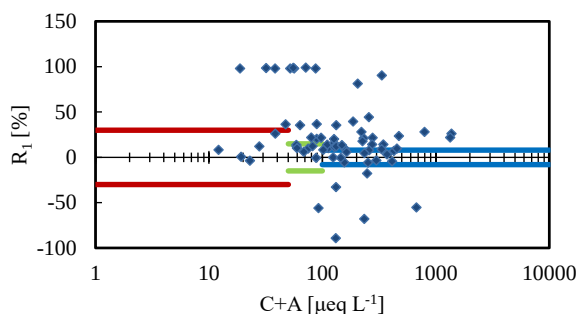


Fig. 3.52 a) Pathumthani Ion Balance (R_1)

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

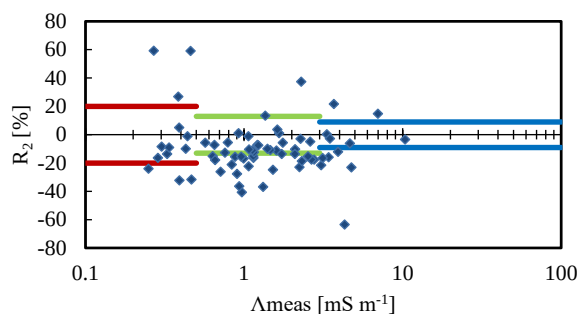


Fig. 3.52 b) Pathumthani Conductivity Agreement (R_2)

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

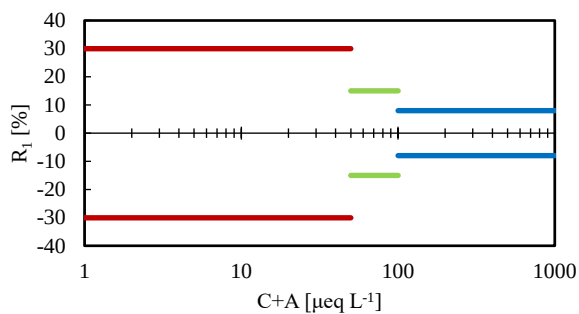


Fig. 3.53 a) Khanchanaburi Ion Balance (R_1)

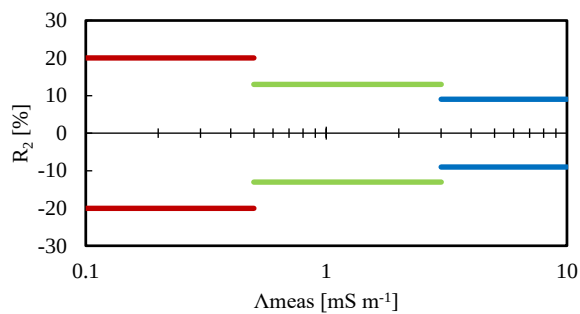


Fig. 3.53 b) Khanchanaburi Conductivity Agreement (R_2)

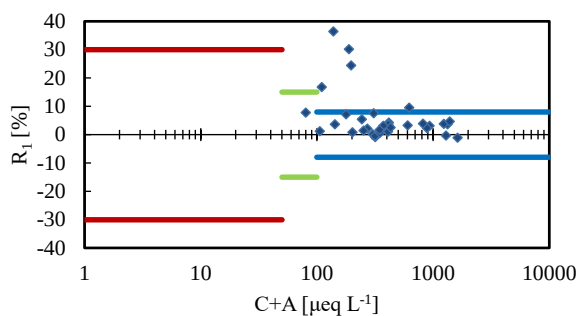


Fig. 3.54 a) Hanoi Ion Balance (R_1)

All of R_1 plots were calculated including F^-

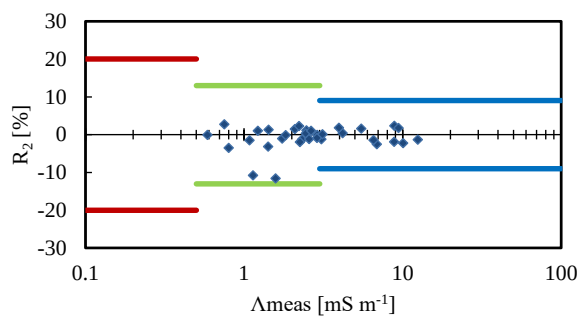


Fig. 3.54 b) Hanoi Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

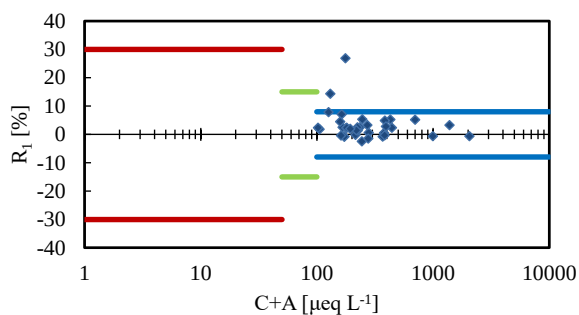


Fig. 3.55 a) Hoa Binh Ion Balance (R_1)

All of R_1 plots were calculated including F^-

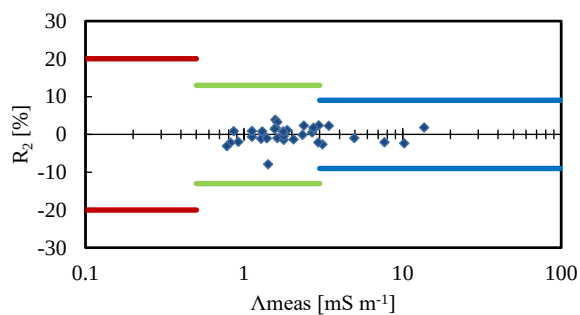


Fig. 3.55 b) Hoa Binh Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

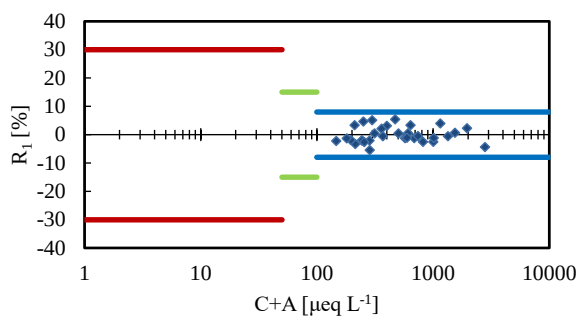


Fig. 3.56 a) Cuc Phuong Ion Balance (R_1)

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

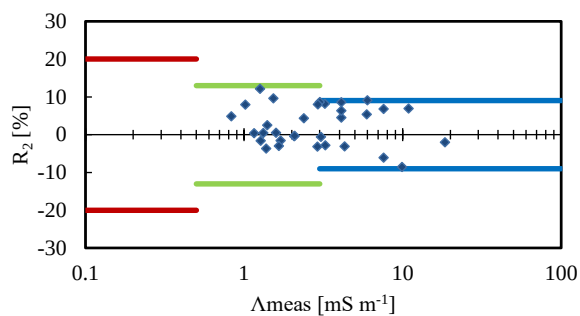


Fig. 3.56 b) Cuc Phuong Conductivity Agreement (R_2)

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

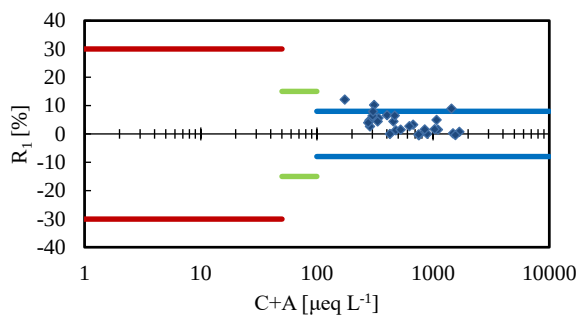


Fig. 3.57 a) Da Nang Ion Balance (R_1)

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

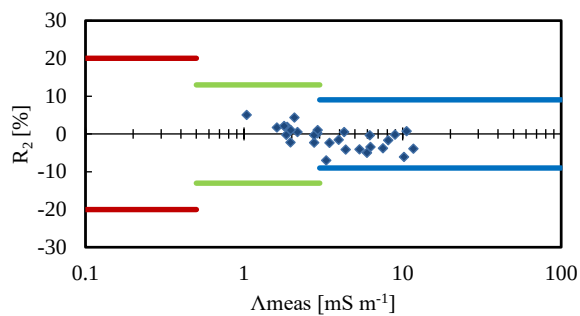


Fig. 3.57 b) Da Nang Conductivity Agreement (R_2)

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

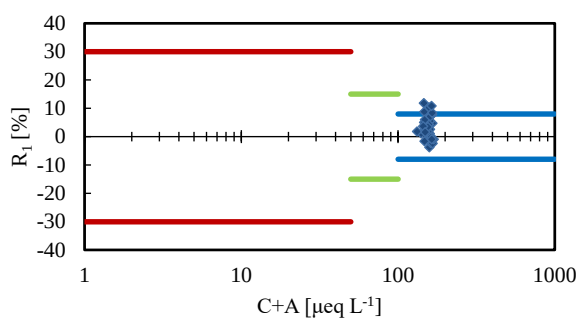


Fig. 3.58 a) Can Tho Ion Balance (R_1)
All of R_1 plots were calculated including F^-

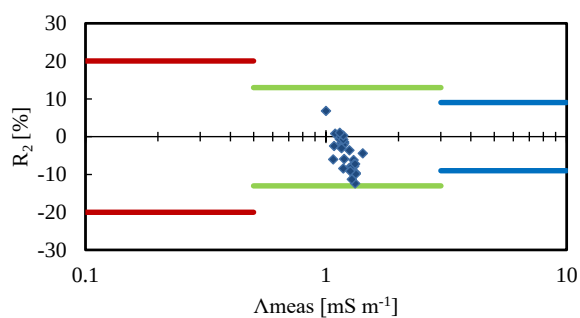


Fig. 3.58 b) Can Tho Conductivity Agreement (R_2)
All of R_2 plots were calculated including F^-

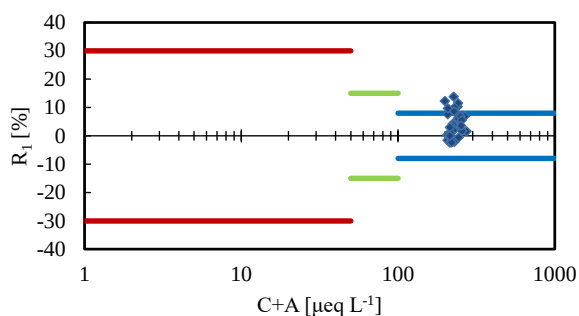


Fig. 3.59 a) Ho Chi Minh Ion Balance (R_1)
All of R_1 plots were calculated including F^-

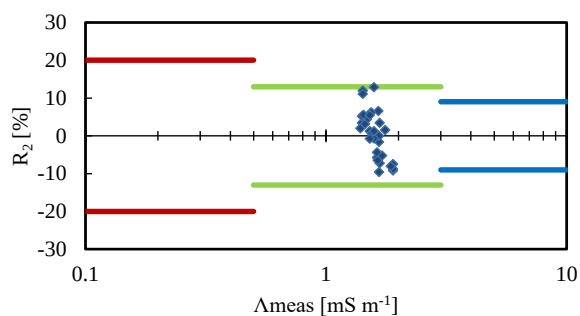


Fig. 3.59 b) Ho Chi Minh Conductivity Agreement (R_2)
All of R_2 plots were calculated including F^-

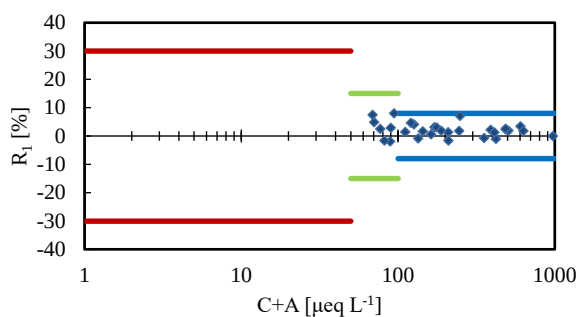


Fig. 3.60 a) Yen Bai Ion Balance (R_1)
All of R_1 plots were calculated including F^-

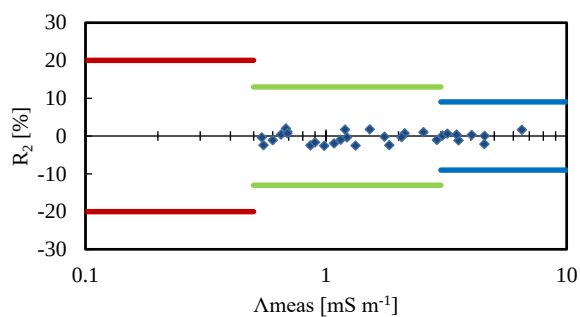


Fig. 3.60 b) Yen Bai Conductivity Agreement (R_2)
All of R_2 plots were calculated including F^-

Table 3.96 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	64.6	46.7	39.4	52.6	60.1	86.4	40.0	29.0	21.4	34.7	27.0	*	43.8
	Jinyunshan	*	27.9	6.62	70.8	37.8	39.7	62.4	48.6	*	*	*	*	38.7
	Shizhan	--	84.4	283	293	296	180	168	146	132	176	786	--	178
	Jiwozi	124	130	163	107	224	36.0	33.9	87.7	62.1	47.4	120	--	76.9
Indonesia	Serpong	14.4	13.6	31.3	39.9	6.20	63.7	20.6	44.3	39.6	34.0	*	*	28.7
Japan	Niigata-maki	130	*	57.0	*	*	8.04	*	*	*	*	*	*	21.0
Malaysia	Kuching	*	*	*	11.1	*	*	*	66.6	*	*	*	*	48.2
	Gunung Brinchang	*	--	11.6	--	--	--	--	--	--	--	--	5.67	8.87
Philippines	Metro Manila	13.7	40.0	40.0	40.7	20.0	41.3	6.82	19.6	7.58	9.42	30.5	23.9	15.2
Russia	Mondy	--	--	--	--	--	--	86.9	29.3	30.4	--	--	21.3	32.3
	Listvyanka	3.90	7.82	22.1	9.00	<1	<1	<1	9.04	<1	<1	2.79	<1	1.80
	Irkutsk	22.8	44.9	81.9	38.7	<1	2.86	<1	<1	1.19	142	82.2	67.8	6.42
Vietnam	Cuc Phuong	480	50.0	135	170	221	91.3	124	111	60.6	39.8	<1	200	93.3
	Da Nang	64.1	292	200	150	*	83.3	110	200	12.5	52.8	39.2	20.9	41.1
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
China	Haifu	1.91	1.14	4.15	2.02	9.90	2.96	10.7	6.72	5.50	3.72	1.10	*	57.7
	Jinyunshan	*	0.899	0.397	4.75	6.43	2.65	16.5	13.8	*	*	*	*	59.2
	Shizhan	0.00	2.12	3.32	12.8	16.6	12.0	17.9	20.1	36.4	16.1	10.0	0.00	147
	Jiwozi	1.77	2.85	4.25	15.0	8.44	3.19	3.19	7.98	16.3	6.37	1.80	0.00	71.2
Indonesia	Serpong	2.76	4.99	2.94	12.9	2.17	16.4	0.744	2.28	4.81	7.09	*	*	64.4
Japan	Niigata-maki	31.5	*	3.56	*	*	0.599	*	*	*	*	*	*	37.3
Malaysia	Kuching	*	*	*	1.92	*	*	*	22.0	*	*	*	*	214
	Gunung Brinchang	*	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.934	5.07
Philippines	Metro Manila	2.52	0.720	4.00	2.34	1.31	10.0	6.31	4.73	3.25	1.40	1.46	2.29	38.7
Russia	Mondy	0.00	0.00	0.00	0.00	0.00	0.00	0.252	0.524	1.05	0.00	0.00	0.0724	1.89
	Listvyanka	0.0418	0.0258	0.102	0.0720	<0.01	0.0654	<0.01	0.697	<0.01	<0.01	0.0106	<0.01	1.01
	Irkutsk	0.683	0.571	0.0819	0.561	<0.01	0.305	<0.01	0.0229	0.0612	1.00	0.658	0.689	3.80
Vietnam	Cuc Phuong	3.02	2.64	8.59	26.5	16.7	26.2	37.9	13.5	26.0	15.5	<0.01	2.64	179
	Da Nang	2.22	9.30	2.92	3.62	*	3.21	1.36	11.5	10.2	43.1	10.0	10.0	106
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
China	Haifu	17.6	98.8	54.7	74.2	100	100	13.7	58.5	30.3	41.0	7.6	0.0	46.4
	Jinyunshan	0.0	55.9	4.5	9.5	92.1	90.9	1.4	2.3	0.0	0.0	0.0	0.0	16.6
	Shizhan	--	100	100	100	100	100	100	100	100	100	100	--	100
	Jiwozi	100	100	100	100	100	100	100	100	100	100	100	--	100
Indonesia	Serpong	56.2	32.4	35.3	11.4	2.7	16.7	15.8	27.8	100	4.6	0.0	0.0	22.3
Japan	Niigata-maki	2.2	0.0	2.4	0.0	0.0	65.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1
Malaysia	Kuching	0.0	0.0	0.0	27.0	0.0	0.0	0.0	28.4	0.0	0.0	0.0	0.0	3.2
	Gunung Brinchang	0.0	--	12.2	--	--	--	--	--	--	--	--	10.3	6.5
Philippines	Metro Manila	86.6	26.7	100	9.4	100	100	100	100	100	100	100	100	96.5
Russia	Mondy	--	--	--	--	--	--	100	100	100	--	--	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	87.0	100	80.0	98.6	100	100	100	80.3	99.3	32.7	61.4	97.6	94.2
Vietnam	Cuc Phuong	100	90.7	100	97.1	94.4	99.7	100	98.9	100	100	100	98.5	99.1
	Da Nang	99.4	100	80.1	100	0.0	94.0	84.7	92.7	100	100	100	100	99.5

Terms and abbreviations are given in Table 3.5.

Table 3.97 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	5.77	4.38	2.70	2.73	2.28	3.54	1.58	1.37	1.04	3.32	2.24	3.75	2.04	
	Jinyunshan	5.50	4.70	2.57	2.80	1.67	2.36	1.52	1.23	1.29	1.29	1.85	3.17	1.70	
	Hongwen	--	--	2.31	4.70	6.06	2.60	1.58	6.27	2.38	1.74	31.5	2.80	4.64	
	Xiaoping	--	2.00	1.58	3.23	3.01	1.03	1.39	<1	5.46	<1	--	2.07	1.80	
	Xiang Zhou	--	1.20	2.17	<1	<1	1.05	1.24	<1	<1	<1	--	1.24	<1	
	Zhuxiandong	--	2.17	2.31	1.08	<1	1.09	<1	1.20	1.80	<1	--	1.22	<1	
	Wuzhishan	--	--	--	<1	<1	<1	<1	<1	<1	<1	--	<1	<1	
Lijiang	--	--	--	<1	<1	<1	1.31	<1	<1	--	--	--	<1		
Japan	Yusuhara	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Malaysia	Petaling Jaya	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
	Danum Valley	<1	<1	<1	<1	<1	<1	1.38	<1	<1	1.08	<1	<1	<1	
	Kuching	4.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	*	<1	<1	
	Gunung Brinchang	2.44	--	2.45	--	--	--	--	--	--	--	--	<1	1.78	
Philippines	Metro Manila	<1	*	<1	<1	<1	<1	3.56	<1	<1	<1	1.33	1.05	2.08	
Russia	Mondy	--	--	--	--	--	--	<1	<1	<1	--	--	1.26	<1	
	Listvyanka	14.6	11.8	13.9	5.31	2.33	4.86	3.70	2.21	2.81	5.32	6.32	6.58	3.72	
Irkutsk	14.2	14.3	56.1	12.6	4.16	1.51	1.43	2.71	1.89	29.1	25.9	17.7	4.26		
Vietnam	Hanoi	*	10.3	28.8	11.8	8.40	13.2	2.46	8.05	3.02	5.78	6.47	--	7.08	
	Hoa Binh	8.04	2.60	17.6	2.89	3.90	5.74	5.64	7.51	1.83	1.11	1.68	*	4.08	
	Cuc Phuong	27.2	4.74	7.21	6.25	4.60	3.11	1.07	<1	1.20	2.07	4.82	13.1	2.63	
	Da Nang	6.04	6.24	6.58	5.63	*	6.23	7.16	6.00	5.32	6.27	6.96	6.87	6.14	
	Can Tho	--	*	--	1.00	1.00	1.00	1.23	2.00	1.00	1.44	1.00	1.00	1.16	
	Ho Chi Minh	--	2.00	--	1.00	1.22	1.13	1.12	1.14	1.00	1.00	1.21	1.00	1.12	
	Yen Bai	12.2	4.02	6.02	12.8	12.3	2.53	5.36	1.77	5.03	1.84	11.0	--	6.68	
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	0.170	0.107	0.284	0.105	0.375	0.121	0.422	0.317	0.267	0.355	0.0912	0.0697	2.68	
	Jinyunshan	0.126	0.151	0.154	0.188	0.285	0.158	0.402	0.350	0.464	0.176	0.0755	0.0726	2.60	
	Hongwen	0.00	0.00	0.0557	0.109	0.476	0.301	0.0199	0.640	0.0606	0.0459	0.274	0.0734	2.06	
	Xiaoping	0.00	0.0304	0.0419	0.121	0.342	0.217	0.116	0.119	0.291	<0.01	0.00	0.0477	1.33	
	Xiang Zhou	0.00	0.0771	0.0184	<0.01	<0.01	0.608	0.317	0.193	0.186	0.528	0.00	0.0318	1.96	
	Zhuxiandong	0.00	0.153	0.0208	0.102	<0.01	0.575	0.269	0.269	0.379	0.384	0.00	0.0291	2.19	
	Wuzhishan	0.00	0.00	0.00	0.0736	0.0373	<0.01	<0.01	<0.01	<0.01	<0.01	0.00	<0.01	0.118	
Lijiang	0.00	0.00	0.00	<0.01	<0.01	0.151	0.182	0.0289	0.0145	0.00	0.00	0.00	0.384		
Japan	Yusuhara	0.0646	0.109	0.103	0.143	0.275	0.0904	0.128	0.220	0.128	0.0257	0.0571	0.0317	1.36	
Malaysia	Petaling Jaya	0.126	0.0888	0.154	0.280	0.165	0.145	0.0329	0.0875	0.0514	0.114	0.187	0.121	1.57	
	Danum Valley	<0.01	0.0486	0.0895	0.0119	0.110	0.0499	0.557	0.0833	0.0716	0.299	0.214	0.0529	1.84	
	Kuching	3.74	<0.01	0.0468	<0.01	0.0250	0.0948	0.0338	0.0357	0.0244	0.0759	*	0.0120	4.25	
	Gunung Brinchang	0.588	0.00	0.405	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0260	1.02	
Philippines	Metro Manila	0.0870	*	0.0368	0.0301	0.0106	<0.01	3.30	0.0785	0.158	0.0506	0.0639	0.101	5.32	
Russia	Mondy	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	<0.01	0.0134	0.00	0.00	<0.01	0.0229	
	Listvyanka	0.156	0.0390	0.0640	0.0424	0.293	0.352	0.740	0.170	0.117	0.0372	0.0240	0.0606	2.10	
Irkutsk	0.425	0.182	0.0561	0.182	0.374	0.161	0.216	0.295	0.0977	0.205	0.207	0.180	2.52		
Vietnam	Hanoi	*	0.647	0.867	2.37	1.01	2.63	0.587	2.22	1.31	2.39	0.0925	0.00	14.1	
	Hoa Binh	0.0804	0.0702	0.134	0.278	0.650	1.88	2.26	2.37	0.719	0.486	0.0141	*	8.94	
	Cuc Phuong	0.171	0.250	0.458	0.975	0.347	0.894	0.327	0.103	0.514	0.811	0.0526	0.173	5.04	
	Da Nang	0.210	0.199	0.0961	0.136	*	0.240	0.0888	0.344	4.35	5.12	1.78	3.28	15.9	
	Can Tho	0.00	*	0.00	0.146	0.286	0.561	0.788	0.310	0.250	0.313	0.133	0.134	2.93	
	Ho Chi Minh	0.00	0.0600	0.00	0.0820	0.376	0.395	0.393	0.378	0.339	0.209	0.248	0.0857	2.57	
	Yen Bai	0.340	0.189	0.225	2.01	2.81	0.295	1.01	0.185	1.05	0.390	0.922	0.00	9.43	
Data completeness														%TP	
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
China	Haifu	100	98.8	99.7	100	100	100	100	99.8	99.9	100	100	100	99.9	
	Jinyunshan	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Hongwen	--	--	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	100	
	Zhuxiandong	--	100	100	100	100	100	100	100	100	100	--	100	100	
	Wuzhishan	--	--	--	100	100	100	100	100	100	100	--	100	100	
Lijiang	--	--	--	100	100	100	100	100	100	--	--	--	100		
Japan	Yusuhara	100	72.1	100	100	100	100	100	100	100	100	100	100	98.8	
Malaysia	Petaling Jaya	76.1	100	100	92.2	100	100	100	100	100	42.1	100	100	91.3	
	Danum Valley	47.0	70.9	100	71.9	100	100	88.5	95.4	100	100	100	63.4	80.4	
	Kuching	91.8	99.8	100	100	100	100	100	100	93.4	76.3	0.0	100	88.7	
	Gunung Brinchang	100	--	100	--	--	--	--	--	--	--	--	100	100	
Philippines	Metro Manila	24.1	0.0	100	9.4	100	16.4	100	100	13.0	100	100	100	69.2	
Russia	Mondy	--	--	--	--	--	--	100	100	100	--	--	100	100	
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100	
Irkutsk	87.0	100	100	100	100	100	100	100	80.3	100	100	68.6	100	95.3	
Vietnam	Hanoi	0.0	99.8	96.3	99.0	100	99.1	100	100	100	100	100	--	99.6	
	Hoa Binh	100	96.7	96.1	100	100	100	100	100	100	100	84.5	0.0	99.9	
	Cuc Phuong	100	90.7	100	97.1	94.4	99.7	100	98.9	100	100	100	98.5	99.1	
	Da Nang	99.4	100	80.1	100	0.0	94.0	84.7	92.7	100	100	100	100	99.5	
	Can Tho	--	0.0	--	100	100	100	100	100	100	100	100	100	99.5	
	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		

Terms and abbreviations are given in Table 3.5.

Table 3.98 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
Philippines	Metro Manila	<1	*	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Russia	Mondy	--	--	--	--	--	--	<1	<1	<1	--	--	<1	<1
	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
Philippines	Metro Manila	<0.01	*	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.036	<0.01	<0.01	<0.01	0.038
Russia	Mondy	0.000	0.000	0.000	0.000	0.000	0.000	<0.01	<0.01	<0.01	0.000	0.000	<0.01	<0.01
	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	0.010
Data completeness														
%TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Philippines	Metro Manila	24.1	0.0	100	9.4	100	16.4	100	100	13.0	100	100	100	69.2
Russia	Mondy	--	--	--	--	--	--	100	100	100	--	--	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	87.0	100	100	100	100	100	100	80.3	100	98.0	68.6	100	95.3

Terms and abbreviations are given in Table 3.5.

Table 3.99 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	Yusuhara	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ogasawara	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Tokyo	1.9	1.4	*	1.1	1.5	1.1	<1	<1	<1	<1	1.6	1.8	<1
Philippines	Metro Manila	<1	<1	4.3	3.3	<1	<1	<1	<1	<1	<1	1.1	1.4	<1
Russia	Mondy	--	--	--	--	--	--	<1	<1	<1	--	--	<1	<1
	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	1.6	<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	Yusuhara	0.0395	0.0517	0.0618	0.0697	0.158	0.0581	0.0863	0.154	0.0803	0.0182	0.0399	0.0169	0.831
	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	0.0187
	Tokyo	0.0787	0.108	*	0.149	0.124	0.194	0.218	0.131	0.137	0.133	0.214	0.102	1.74
Philippines	Metro Manila	<0.01	0.0161	0.434	0.187	<0.01	<0.01	<0.01	<0.01	0.195	0.0456	0.0549	0.131	1.06
Russia	Mondy	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	<0.01	<0.01	0.00	0.00	<0.01	<0.01
	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	0.0374
	Irkutsk	<0.01	<0.01	<0.01	<0.01	<0.01	0.0124	<0.01	0.0154	<0.01	<0.01	0.0126	<0.01	0.0795
Data completeness														
%TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Yusuhara	100	72.1	100	100	100	100	100	100	100	100	100	100	98.8
	Ogasawara	99.7	99.9	98.3	99.8	99.9	99.8	99.6	99.8	99.0	99.8	99.7	100	99.7
	Tokyo	98.8	100	0.0	100	93.9	99.7	88.0	100	99.8	78.7	100	100	87.8
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100	100
Russia	Mondy	--	--	--	--	--	--	100	100	100	--	--	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	87.0	96.9	60.0	100	100	100	100	79.4	100	98.0	65.7	97.6	94.9

Terms and abbreviations are given in Table 3.5.

Table 3.100 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	Yusuhara	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
Philippines	Metro Manila	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
Russia	Mondy	--	--	--	--	--	--	3.10	<1	2.57	--	--	<1	1.94		
	Listvyanka	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
	Irkutsk	<1	<1	*	1.40	<1	<1	<1	1.04	<1	13.2	<1	<1	<1		
Thailand	Pathumthani	--	<1	66.4	<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	Yusuhara	<0.01	<0.01	<0.01	0.0143	<0.01	<0.01	<0.01	0.0511	0.0105	0.0272	<0.01	<0.01	0.146		
Philippines	Metro Manila	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0122	<0.01	<0.01	0.0202		
Russia	Mondy	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	0.0159	0.0883	0.00	0.00	<0.01	0.114		
	Listvyanka	<0.01	<0.01	<0.01	<0.01	0.0741	0.0115	0.0212	0.0565	0.0317	<0.01	<0.01	<0.01	0.212		
	Irkutsk	<0.01	<0.01	*	0.0203	0.0508	0.0575	0.0478	0.113	0.0298	0.0928	<0.01	<0.01	0.420		
Thailand	Pathumthani	0.00	<0.01	0.0332	<0.01	<0.01	<0.01	<0.01	0.00	0.212	<0.01	<0.01	<0.01	0.267		
Data completeness															%TP	
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		
Japan	Yusuhara	100	72.1	100	100	100	100	100	100	100	100	100	100	98.8		
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100	100		
Russia	Mondy	--	--	--	--	--	--	100	100	100	--	--	100	100		
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100		
	Irkutsk	87.0	96.9	0.0	100	99.9	100	100	79.4	99.3	98.0	68.6	100	94.8		
Thailand	Pathumthani	--	100	100	100	100	100	100	--	100	100	100	100	100		

Terms and abbreviations are given in Table 3.5.

Table 3.101 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
	Danum Valley	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Kuching	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	*	<1	<1
	Gunung Brinchang	<1	--	<1	--	--	--	--	--	--	--	--	<1	<1
Thailand	Pathumthani	--	29.2	<1	<1	<1	5.71	<1	--	<1	<1	<1	<1	1.01
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	<0.01
	Danum Valley	<0.01	<0.01	0.0962	0.0592	<0.01	<0.01	0.0449	<0.01	0.0490	<0.01	<0.01	<0.01	0.185
	Kuching	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	*	<0.01	<0.01
	Gunung Brinchang	<0.01	0.00	<0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	<0.01
Thailand	Pathumthani	0.00	0.204	<0.01	0.0193	0.0234	0.625	<0.01	0.00	<0.01	<0.01	<0.01	<0.01	0.890
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	76.1	100	100	92.2	100	100	100	100	100	42.1	100	100	91.3
	Danum Valley	47.0	70.9	100	71.9	100	100	88.5	95.4	100	100	100	63.4	80.4
	Kuching	91.8	99.8	100	100	100	100	100	100	93.4	76.3	0.0	100	88.7
	Gunung Brinchang	100	--	100	--	--	--	--	--	--	--	--	100	100
Thailand	Pathumthani	--	100	100	100	100	100	100	--	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.102 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
	Danum Valley	<1	<1	<1	<1	<1	<1	<1	6.88	<1	<1	<1	<1	<1
	Kuching	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	*	<1	<1
	Gunung Brinchang	<1	--	<1	--	--	--	--	--	--	--	--	<1	<1
Thailand	Pathumthani	--	20.6	<1	<1	<1	<1	<1	--	<1	<1	1.17	1.01	<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	0.0469	<0.01	<0.01	0.0422	<0.01	<0.01	0.0708
	Danum Valley	<0.01	<0.01	<0.01	<0.01	<0.01	0.0145	0.144	1.31	0.0199	0.0395	<0.01	<0.01	1.82
	Kuching	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	*	<0.01	<0.01
	Gunung Brinchang	<0.01	0.00	<0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0471	0.0569
Thailand	Pathumthani	0.00	0.144	<0.01	<0.01	0.0378	<0.01	<0.01	0.00	0.0109	0.0109	0.0400	<0.01	0.260
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	76.1	100	100	92.2	100	100	100	100	100	42.1	100	100	91.3
	Danum Valley	47.0	70.9	100	71.9	100	100	88.5	95.4	100	100	100	63.4	80.4
	Kuching	91.8	99.8	100	100	100	100	100	100	93.4	76.3	0.0	100	88.7
	Gunung Brinchang	100	--	100	--	--	--	--	--	--	--	--	100	100
Thailand	Pathumthani	--	100	100	100	100	100	100	--	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.103 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
	Danum Valley	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Kuching	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	*	<1	<1
	Gunung Brinchang	<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	0.0184	<0.01	<0.01	0.0103	<0.01	0.0458
	Danum Valley	0.127	<0.01	<0.01	0.0109	<0.01	<0.01	0.0126	<0.01	<0.01	<0.01	<0.01	0.0345	0.104
	Kuching	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	*	<0.01	<0.01
	Gunung Brinchang	<0.01	0.00	<0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	0.0103
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	76.1	100	100	92.2	100	100	100	100	100	42.1	100	100	91.3
	Danum Valley	47.0	70.9	100	71.9	100	100	88.5	95.4	100	100	100	63.4	80.4
	Kuching	91.8	99.8	100	100	100	100	100	100	93.4	76.3	0.0	100	88.7
	Gunung Brinchang	100	--	100	--	--	--	--	--	--	--	--	100	100

Terms and abbreviations are given in Table 3.5.

CHAPTER 4

Dry Deposition Monitoring (Air Concentration)

4. Dry Deposition (Air Concentration) Monitoring

4.1 Method

Automatic monitoring and manual monitoring methods were used to implement dry deposition (air concentration) monitoring in 2021. The monitoring items were selected taking into account 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, 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 the 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 (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 the Chapter 4 of the Technical Manual, EANET, 2013.

4.1.3 Monitoring Sites

The measurement methods and parameters at each monitoring site for dry deposition (air concentration) monitoring in 2021 are shown in Table 4.1.1. Automatic monitors were used in Cambodia, China, Indonesia, 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, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia and Vietnam, and the passive sampler method was used in Indonesia and Russia in 2021.

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 dry deposition (air concentration) monitoring in 2021

Country	Site	Method	Parameter
Cambodia	Phnom Penh	AT FP*1	O ₃ , PM _{2.5} SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
China	Chongqing	AT	SO ₂ , NO, NO _x *, PM ₁₀
	- Jinyunshan		
	Xiamen		
	- Hongwen		
	Zhuhai		
	- Haibin-Park		
Indonesia	Wuzhishan	AT	SO ₂ , NO ₂ , PM ₁₀
	Lijiang	AT	SO ₂ , NO ₂ , PM ₁₀
	Jakarta	AT*2	PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
		PS	SO ₂ , NO ₂
	Serpong	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Kototabang	PS	SO ₂ , NO ₂
	Bandung	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
Japan		PS	SO ₂ , NO ₂ , NH ₃ , O ₃
	Rishiri	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Ochiichi	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Sado-seki	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Happo	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Ijira	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Oki	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Yusuhara	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Hedo	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Ogasawara	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Tokyo	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Niigata-maki	AT	SO ₂ , NO, NO _x *, O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Tsushima	AT	O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
Lao PDR	Vientiane	AT*2	NO, NO ₂ , NO _x , PM ₁₀ , PM _{2.5}
		FP*1	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC

Table 4.1.1 Sampling methods and parameters for dry deposition (air concentration) monitoring in 2021 (continued)

Country	Site	Method	Parameter
Malaysia	Petaling Jaya	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Tanah Rata	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Danum Valley	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
Mongolia	Ulaanbaatar	AT	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Terelj	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
Myanmar	Yangon	AT	PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Mandalay	AT* ²	PM _{2.5}
Philippines	Metro Manila	AT* ²	NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Los Baños	FP* ¹	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Mt. Sto. Tomas	AT* ⁴	PM _{2.5}
		FP* ¹	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
Republic of Korea	Kanghwa	AT	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	HNO ₃ , HCl, NH ₃ , PMC in PM _{2.5}
	Cheju (Kosan)	AT	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	HNO ₃ , HCl, NH ₃ , PMC in PM _{2.5}
	Imsil	AT	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP	HNO ₃ , HCl, NH ₃ , PMC in PM _{2.5}
Russia	Mondy	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
		PS	O ₃
	Listvyanka	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
		PS	O ₃
	Irkutsk	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
		PS	O ₃
	Primorskaya	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
Thailand	Bangkok	AT	NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	Samutprakarn	AT	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	Chiang Mai		
	- Chang Phueak	AT	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	- Si Phum	AT	SO ₂ , NO, NO ₂ , NO _x , PM ₁₀ , PM _{2.5}
	Nakhon Ratchasima		
	- Nai Mueang	AT	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
Vietnam	Hanoi	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Hoa Binh	AT	PM _{2.5}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Can Tho	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Ho Chi Minh	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Yen Bai	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC

AT: Automatic monitor, PS: Passive sampler, FP: Filter pack, PMC: particulate matter components.

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

- *1 FP monitoring data at Phnom Penh, Vientiane, Los Baños, and Mt. Sto. Tomas were not submitted.
- *2 Auto monitoring data for NO, NO₂, NO_x and PM₁₀ at Vientiane, for NO, NO₂, NO_x, O₃ and PM₁₀ at Metro Manila, for PM_{2.5} at Jakarta, and for PM_{2.5} at Mandalay were not submitted.
- *3 PS monitoring data at Mondy, Listvyanka, Irkutsk, and Primorskaya were not submitted.
- *4 The PM_{2.5} monitor at Metro Manila was transferred to Mt. Sto. Tomas in October, 2021.

Table 4.1.2 Methods of automatic monitors in 2021

Country	Site	Parameter				
		SO ₂	NO _x	O ₃	PM ₁₀	PM _{2.5}
Cambodia	Phnom Penh	--	--	UVP	--	β-ray
China	Jinyunshan	UVF	CLD	--	β-ray	--
	Hongwen	DOAS	DOAS	--	TEOM	--
	Haibin-Park	DOAS	DOAS	--	TEOM	--
	Wuzhishan	UVF	CLD	--	β-ray	--
	Lijiang	UVF	CLD	--	β-ray	--
Indonesia	Jakarta	--	--	--	--	β-ray
Japan	Rishiri	UVF	CLD	UVP	β-ray	β-ray
	Ochiishi	UVF	CLD	UVP	β-ray	β-ray
	Sado-seki	UVF	CLD	UVP	β-ray	β-ray
	Happo	UVF	CLD	UVP	β-ray	β-ray
	Ijira	UVF	CLD	UVP	β-ray	β-ray
	Oki	UVF	CLD	UVP	β-ray	β-ray
	Yusuhara	UVF	CLD	UVP	β-ray	β-ray
	Hedo	UVF	CLD	UVP	β-ray	β-ray
	Ogasawara	UVF	CLD	UVP	β-ray	β-ray
	Niigata-maki	UVF	CLD	UVP	β-ray	β-ray
	Tsushima	--	--	UVP	β-ray	β-ray
Mongolia	Ulaanbaatar	UVF	CLD	UVP	β-ray	β-ray
Myanmar	Yangon	--	--	--	--	β-ray
	Mandalay	--	--	--	--	β-ray
Philippines	Metro Manila	--	CLD	UVP	LS	β-ray
	Mt. Sto. Tomas	--	--	--	--	β-ray
Republic of Korea	Kanghwa	UVF	CLD	UVP	β-ray	β-ray
	Cheju (Kosan)	UVF	CLD	UVP	β-ray	β-ray
	Imsil	UVF	CLD	UVP	β-ray	β-ray

Table 4.1.2 Methods of automatic monitors in 2021 (continued)

Country	Site	Parameter				
		SO ₂	NO _x	O ₃	PM ₁₀	PM _{2.5}
Thailand	Bangkok	--	CLD	UVP	β-ray	β-ray
	Samutprakarn	UVF	CLD	UVP	β-ray	β-ray
	Chiang Mai					
	- Chang Phueak	UVF	CLD	UVP	β-ray	β-ray
	- Si Phum	UVF	CLD	--	β-ray	β-ray
	Nakhon Ratchasima					
	- Nai Mueang	UVF	CLD	UVP	β-ray	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 averaged values accompanied with maximum, minimum and data completeness on a monthly basis. Summarized data in 2021 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 2021, 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
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-m	Maximum values of monthly data
Min-m	Minimum values of monthly data
%	Percentages of monthly or annual data completeness

Table 4.2 Terms and abbreviations (continued)

Term/Abbreviation	Definition
[<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 2007 to 2021 are summarized in Table 4.21 through Table 4.38.

Monthly and annual dry deposition amounts of gaseous and particulate substances in 2021 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, $F_{\text{dry}} = V_d \times C$, 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. The cloud coverage data are obtained from simulation data by the Meso Scale Model of Japan Meteorological Agency.

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 taking into account 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		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Mean	2.7	3.3	2.3	2.9	3.0	3.5	2.3	1.1	2.0	2.1	4.3	3.6	2.7
		%	97	100	90	97	100	93	97	100	97	94	100	100	97
		Max-d	5.6	4.5	5.3	5.3	5.3	5.6	3.8	1.9	3.4	4.1	5.6	7.5	7.5
		Min-d	0.8	2.3	0.4	1.9	1.5	2.3	1.5	0.4	0.8	0.8	3.0	1.9	0.4
	Hongwen	Mean	2.1	1.5	1.6	1.4	1.4	1.3	1.7	1.5	1.4	1.0	1.3	1.8	1.5
		%	100	100	100	100	100	100	100	94	100	100	100	100	99
		Max-d	3.0	2.6	2.3	2.6	2.6	1.9	2.6	3.0	2.6	1.9	2.6	3.0	3.0
		Min-d	1.5	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.4	0.4	0.8	0.4
	Haibin-Park	Mean	2.6	1.9	2.0	2.1	2.0	1.9	1.9	2.0	2.2	2.0	2.7	2.8	2.2
		%	94	100	100	100	100	100	97	97	100	100	100	94	98
		Max-d	5.3	2.6	3.8	3.4	2.6	3.4	2.6	2.6	2.6	2.6	3.8	3.4	5.3
		Min-d	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5	1.9	1.5	1.9	1.9	1.1
	Wuzhishan	Mean	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	2.1	0.6	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.3	1.3	1.0	2.1
		Min-d	<0.1	0.2	0.2	0.2	0.2	<0.1	0.2	<0.1	0.1	<0.1	0.2	0.2	<0.1
	Lijiang	Mean	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2
		%	100	100	74	100	100	93	100	100	100	100	100	100	97
		Max-d	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.4	0.2	0.3	0.4	0.5	0.5
		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	0.3	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1
		%	99	98	91	93	99	98	98	98	98	91	97	98	97
		Max-d	0.8	0.5	0.5	0.3	0.3	1.0	0.1	0.2	0.2	0.2	0.5	0.5	1.0
		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	0.6	0.3	0.1	0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.1	0.2	0.2
		%	95	96	96	90	84	87	77	91	91	89	87	88	89
		Max-d	2.6	1.3	0.8	0.5	0.4	0.3	0.4	0.5	0.3	1.3	0.4	1.2	2.6
		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
	Sado-seki	Mean	<0.1	***	***	***	***	***	***	***	***	***	***	***	<0.1
		%	33	***	***	***	***	***	***	***	***	***	***	***	3
		Max-d	0.2	***	***	***	***	***	***	***	***	***	***	***	0.2
		Min-d	<0.1	***	***	***	***	***	***	***	***	***	***	***	<0.1
	Happo	Mean	0.1	0.2	0.2	0.2	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
		%	98	98	98	97	98	98	98	98	98	96	96	95	97
		Max-d	0.7	0.6	0.6	0.7	0.4	0.7	0.6	0.5	0.4	0.3	0.3	0.4	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
	Ijira	Mean	<0.1	0.1	0.3	0.1	<0.1	0.1	***	***	***	***	***	***	0.1
		%	100	98	98	98	98	20	***	***	***	***	***	***	42
		Max-d	0.3	0.5	0.8	0.6	0.7	0.3	***	***	***	***	***	***	0.8
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***	***	***	***	***	<0.1
	Okii	Mean	0.2	0.3	0.1	0.2	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.1
		%	98	98	97	98	74	98	98	34	96	97	95	78	88
		Max-d	1.1	0.7	0.4	0.8	0.7	1.4	0.2	0.2	0.2	0.4	1.4	0.4	1.4
		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
	Yusuhara	Mean	0.4	0.4	0.2	0.2	0.3	0.1	0.3	<0.1	0.1	0.3	0.6	0.6	0.3
		%	98	98	97	98	98	98	98	89	98	98	98	98	97
		Max-d	1.2	2.1	1.0	0.9	2.0	0.5	1.7	0.5	1.3	1.9	5.4	3.7	5.4
		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
	Hedo	Mean	<0.1	0.2	0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.2	0.2	0.1
		%	98	70	98	97	98	98	90	98	98	98	95	98	95
		Max-d	0.3	1.0	0.4	1.5	0.3	0.1	0.3	0.3	0.2	0.5	0.5	0.6	1.5
		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
	Ogasawara	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	<0.1
		%	58	91	97	97	98	99	98	99	98	99	95	99	94
		Max-d	<0.1	0.3	0.1	0.1	0.4	<0.1	<0.1	0.1	0.3	0.5	6.5	0.2	6.5
		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
	Niigata-maki	Mean	0.2	0.2	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
		%	97	93	99	98	98	98	98	97	98	98	98	98	97
		Max-d	0.4	0.4	0.6	0.7	0.2	0.5	0.1	0.2	0.2	0.2	0.3	0.3	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
Mongolia	Ulaanbaatar	Mean	53.4	34.6	20.1	8.9	3.8	1.4	2.1	1.5	2.0	10.9	17.1	27.9	15.3
		%	100	100	100	100	98	100	99	99	100	100	100	100	100
		Max-d	113.8	66.3	47.0	17.4	12.6	4.0	6.9	7.7	5.8	22.5	29.0	51.8	113.8
		Min-d	16.2	8.6	4.9	1.6	0.8	<0.1	0.2	0.2	0.6	1.1	3.5	9.7	<0.1

Table 4.3.1 SO₂ - Measured by AT (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	1.9	1.5	1.7	1.5	1.2	1.3	1.4	1.1	1.1	1.4	1.8	1.4	1.4
		%	98	97	98	98	96	97	98	98	85	98	97	95	96
		Max-d	3.5	2.0	3.1	3.3	2.0	2.4	2.1	1.9	1.5	2.4	2.8	2.5	3.5
		Min-d	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
	Cheju (Kosan)	Mean	0.7	0.8	0.6	0.7	0.4	0.6	0.9	0.9	0.8	1.0	0.7	0.5	0.7
		%	99	99	100	97	69	99	99	99	100	100	99	93	96
		Max-d	1.8	2.0	1.5	2.4	1.1	1.8	1.6	1.4	1.0	1.2	1.8	1.4	2.4
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.9	<0.1	<0.1	<0.1
	Imsil	Mean	2.8	1.5	1.8	1.4	1.0	1.2	1.0	1.6	1.3	1.1	1.2	1.5	1.5
		%	94	20	96	93	97	98	97	97	97	98	98	79	89
		Max-d	4.3	2.0	2.3	3.8	1.3	2.2	1.3	2.1	1.9	1.8	1.7	2.0	4.3
		Min-d	2.2	1.1	1.4	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	0.9
Thailand	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	1.4	1.6	1.2	***	***	***	***	***	***	***	***	0.5	1.2
		%	95	95	95	***	***	***	***	***	***	***	***	93	31
		Max-d	1.8	2.3	2.3	***	***	***	***	***	***	***	***	0.9	2.3
		Min-d	1.0	1.0	0.5	***	***	***	***	***	***	***	***	0.1	0.1
	Si Phum	Mean	1.2	1.1	1.4	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1
		%	96	95	96	95	96	96	96	96	96	96	96	96	96
		Max-d	1.8	1.6	2.2	2.1	1.2	1.1	1.1	1.2	1.3	1.2	1.7	1.4	2.2
		Min-d	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
	Nai Mueang	Mean	1.2	1.0	0.6	0.4	0.4	0.3	0.5	0.5	0.5	0.4	0.7	0.5	0.6
		%	94	95	95	94	95	94	94	94	95	95	95	95	95
		Max-d	2.5	1.9	1.3	0.9	1.0	0.7	1.0	1.0	0.8	2.0	1.1	1.3	2.5
		Min-d	0.2	0.3	0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	0.5	<0.1	<0.1

Table 4.3.2 SO₂ - Measured by FP

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.4	3.4	5.6	6.3	4.7	6.6	5.1	3.8	3.6	3.8	***	2.7	4.2
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	0.7	3.8	7.8	7.0	5.2	7.3	6.3	4.0	4.1	4.0	***	4.6	7.8
		Min-2w	0.2	3.0	3.5	5.6	4.4	5.8	3.9	3.6	3.2	3.8	***	0.8	0.2
	Serpong	Mean	0.3	0.6	0.5	1.0	0.8	0.6	0.9	0.8	0.9	0.7	1.5	0.8	0.8
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.3	1.0	0.6	1.0	0.9	0.6	0.9	0.9	0.9	0.8	1.8	1.0	1.8
		Min-2w	0.2	0.2	0.3	1.0	0.8	0.6	0.9	0.8	0.9	0.7	1.3	0.6	0.2
	Bandung	Mean	5.1	4.2	5.7	3.4	5.6	2.3	***	3.1	3.5	4.1	5.3	6.5	4.5
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	5.1	6.6	7.6	5.4	6.5	3.7	***	4.0	4.6	4.5	5.4	9.2	9.2
		Min-2w	5.1	2.2	3.2	1.4	4.9	0.8	***	2.3	3.0	3.2	5.1	4.9	0.8
Japan	Rishiri	Mean	0.3	0.2	0.2	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	50	100	100	96
		Max-2w	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	<0.1	<0.1	0.1	0.2	0.3
		Min-2w	0.3	0.1	0.2	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	0.1	<0.1
	Ochiishi	Mean	0.8	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3
		%	100	100	100	43	100	100	50	100	100	100	67	100	84
		Max-2w	1.0	0.5	0.4	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.4	1.0
		Min-2w	0.5	0.3	0.2	0.2	<0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	<0.1
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.4	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.3	0.5	0.4	0.3	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.5	0.3	0.4	0.4	0.5	0.5	0.5	0.9	0.4	0.6	0.4	0.3	0.9
		Min-2w	0.2	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.2
	Ijira	Mean	<0.1	0.1	0.2	0.3	0.3	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-2w	<0.1	0.1	0.2	0.3	0.6	0.2	0.3	0.1	0.1	<0.1	0.2	<0.1	0.6
		Min-2w	<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

Table 4.3.2 SO₂ - Measured by FP (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Japan	Okai	Mean	0.2	0.3	0.2	0.2	0.5	0.4	0.1	0.1	0.1	0.1	0.2	0.2	0.2
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	0.2	0.3	0.3	0.2	1.1	0.4	0.1	0.1	0.2	0.1	0.3	0.2	1.1
		Min-2w	0.2	0.2	<0.1	0.2	0.1	0.4	<0.1	0.1	<0.1	0.1	0.2	0.1	<0.1
	Yusuhara	Mean	0.3	0.5	0.2	0.2	0.3	0.1	0.3	0.1	0.2	0.2	0.4	0.5	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.5	0.3	0.2	0.4	0.1	0.4	0.2	0.2	0.2	0.9	0.6	0.9
		Min-2w	0.2	0.5	0.2	0.2	0.2	0.1	0.1	<0.1	0.1	<0.1	0.2	0.4	<0.1
	Hedo	Mean	0.3	0.4	0.4	0.3	0.2	0.2	0.1	<0.1	0.1	0.4	0.5	0.4	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.4	0.5	0.4	0.4	0.2	0.2	0.1	0.2	0.4	0.6	0.5	0.6
		Min-2w	0.3	0.3	0.3	0.2	0.1	0.2	<0.1	<0.1	<0.1	0.3	0.3	0.3	<0.1
	Ogasawara	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***	<0.1	0.4	<0.1	<0.1
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***	0.1	0.9	<0.1	0.9
		Min-2w	<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	0.8	0.6	0.7	0.7	1.0	0.9	0.8	0.5	0.6	0.6	0.6	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.7	0.8	0.6	0.7	0.8	1.2	0.9	1.0	0.6	0.7	0.7	0.6	1.2
		Min-2w	0.5	0.8	0.5	0.7	0.7	0.8	0.9	0.6	0.5	0.5	0.6	0.6	0.5
	Niigata-maki	Mean	0.2	0.2	0.3	0.2	0.2	0.5	0.3	0.4	0.4	0.2	0.3	0.2	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.2	0.3	0.3	0.5	0.7	0.4	0.6	0.6	0.2	0.4	0.3	0.7
		Min-2w	0.2	0.2	0.3	0.2	0.1	0.3	0.1	0.2	0.2	0.1	0.2	<0.1	<0.1
	Tsushima	Mean	0.5	0.6	0.4	0.5	0.4	0.2	0.2	0.2	0.2	0.5	0.7	0.6	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.6	0.8	0.5	0.7	0.9	0.4	0.3	0.2	0.2	0.6	0.7	0.8	0.9
		Min-2w	0.5	0.4	0.4	0.4	0.2	0.1	0.2	0.1	0.1	0.4	0.7	0.4	0.1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.1	0.5	0.4	0.4	0.4	0.4	0.6	0.5	0.6	0.5	0.4	0.3	0.4
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	0.3	0.6	0.5	0.4	0.7	0.4	1.2	0.6	0.8	0.8	0.7	0.6	1.2
		Min-w	<0.1	0.4	<0.1	0.4	0.2	0.3	0.3	0.5	0.4	<0.1	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
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	***	<0.1	0.2	<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
	Danum Valley	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
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.1	<0.1	0.1	<0.1	<0.1	0.4	***	<0.1	<0.1	<0.1	<0.1	<0.1	0.4
		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
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Terelj	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Myanmar	Yangon	Mean	2.1	1.4	1.3	0.2	0.3	0.1	<0.1	<0.1	***	***	***	***	0.7
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	3.3	1.7	1.4	0.3	0.5	0.2	0.1	<0.1	***	***	***	***	3.3
		Min-2w	1.0	1.1	1.2	0.2	<0.1	<0.1	<0.1	<0.1	***	***	***	***	<0.1
Philippines	Metro Manila	Mean	0.9	1.3	0.7	1.3	3.3	5.9	1.9	2.5	1.2	2.7	0.8	1.0	2.0
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	2.6	2.1	1.0	1.9	6.3	9.0	6.6	4.3	2.3	6.0	1.4	1.2	9.0
		Min-w	<0.1	0.7	0.4	0.8	0.4	2.7	0.6	0.8	<0.1	0.2	0.4	0.7	<0.1
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.3.2 SO₂ - Measured by FP (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Russia	Mondy	Mean	<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
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	0.4
		Min-m	<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	Mean	7.9	6.1	13.8	4.3	2.6	7.4	0.6	1.4	2.9	4.2	0.9	0.7	4.4
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	13.5	7.1	25.9	5.0	4.5	11.1	1.1	2.2	6.4	9.8	2.6	1.1	25.9
		Min-w	3.3	3.8	6.7	3.5	1.3	1.6	0.2	0.7	0.6	0.6	0.4	0.5	0.2
	Irkutsk	Mean	4.1	9.5	6.6	1.4	2.5	1.0	0.6	0.4	0.3	0.2	0.2	3.1	2.4
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	5.2	13.0	11.8	2.2	3.7	2.2	1.5	0.8	0.5	0.5	0.3	5.4	13.0
		Min-w	3.4	7.3	4.3	1.0	1.7	0.5	0.2	0.2	0.1	0.1	<0.1	<0.1	<0.1
	Primorskaya	Mean	0.2	0.1	0.4	0.6	0.1	0.5	<0.1	<0.1	0.1	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	0.1	0.8	1.0	0.2	0.6	<0.1	0.2	0.2	0.3	0.3	0.2	1.0
		Min-2w	0.2	<0.1	0.1	0.3	<0.1	0.4	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
Vietnam	Hanoi	Mean	1.7	1.2	1.1	1.4	0.8	0.7	0.7	0.8	0.8	0.6	0.7	0.6	0.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.8	1.3	1.7	1.9	0.9	1.0	0.9	1.2	1.5	0.6	0.9	0.9	2.8
		Min-w	1.0	0.9	0.7	1.1	0.6	0.4	0.5	0.6	0.6	0.5	0.6	0.4	0.4
	Hoa Binh	Mean	0.7	1.2	1.3	0.8	0.7	1.0	1.0	1.0	1.1	1.2	0.7	0.9	1.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.8	1.4	1.4	1.1	0.8	1.2	1.2	1.2	1.4	1.4	0.8	1.2	1.4
		Min-w	0.7	1.0	1.0	0.5	0.6	0.8	0.8	0.5	0.9	0.5	0.5	0.6	0.5
	Can Tho	Mean	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.5	0.5	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.7
		Min-w	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.3	0.4	0.3
	Ho Chi Minh	Mean	0.6	0.5	0.6	0.5	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.7	0.5	0.8	0.7	0.7	1.4	0.7	0.8	0.6	0.6	0.6	0.5	1.4
		Min-w	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4
	Yen Bai	Mean	0.5	0.6	0.9	0.7	0.6	1.4	1.2	0.6	0.7	0.9	0.7	1.0	0.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.6	0.8	1.2	1.2	0.7	2.0	1.8	0.7	1.4	1.9	1.0	1.5	2.0
		Min-w	0.3	0.5	0.4	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.4	0.4	0.3

Table 4.3.3 SO₂ - Measured by PS

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Jakarta ^{*1}	Mean	6	5	7	7	7	6	11	8	8	7	6	8	7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	6	5	7	7	7	6	11	8	8	7	6	8	11
		Min-m	6	5	7	7	7	6	11	8	8	7	6	8	5
	Kototabang ^{*1}	Mean	2	1	1	1	2	2	1	1	***	2	5	2	2
		%	100	100	100	100	100	100	100	100	***	100	100	100	100
		Max-m	2	1	1	1	2	2	1	1	***	2	5	2	5
		Min-m	2	1	1	1	2	2	1	1	***	2	5	2	1
	Bandung	Mean	2.4	3.1	3.4	3.4	1.5	7.6	***	2.2	2.5	2.9	2.1	3.4	2.9
		%	100	100	100	100	100	45	***	100	100	75	100	100	85
		Max-m	3.5	3.9	4.9	4.4	3.1	10.7	***	2.5	4.0	3.0	3.5	4.5	10.7
		Min-m	1.9	1.9	2.0	2.4	0.3	4.6	***	1.6	0.9	2.6	1.2	2.3	0.3

Terms and abbreviations are given in Table 4.2.

*1: Their reported values, using the passive sampler method at Jakarta and Kototabang sites, were expressed as intergers because their significant digits were insufficient.

Table 4.4.1 HNO₃ - Measured by FP

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.2	0.2	0.8	1.4	1.5	1.6	1.8	1.3	1.6	2.2	***	0.9	1.3
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	0.2	0.2	1.1	2.3	1.7	1.9	1.9	1.8	1.9	2.5	***	1.2	2.5
		Min-2w	0.2	0.2	0.5	0.4	1.2	1.2	1.6	0.7	1.3	2.0	***	0.6	0.2
	Serpong	Mean	0.2	<0.1	0.4	0.5	1.2	1.0	1.4	1.4	1.3	1.2	0.6	0.5	0.8
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.3	<0.1	0.5	0.5	1.2	1.1	1.6	1.5	1.4	1.4	1.0	0.5	1.6
		Min-2w	0.1	<0.1	0.3	0.5	1.1	1.0	1.3	1.2	1.1	1.1	0.1	0.4	<0.1
	Bandung	Mean	0.4	0.5	0.5	0.6	0.8	0.7	***	0.4	0.4	0.6	0.4	0.5	0.5
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	0.4	0.9	0.7	1.0	1.0	0.9	***	0.5	0.5	0.7	0.6	0.7	1.0
		Min-2w	0.4	0.3	0.3	0.3	0.6	0.6	***	0.3	0.3	0.4	0.3	0.3	0.3
Japan	Rishiri	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	<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-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	43	100	100	50	50	100	100	67	100	84
		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	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	<0.1	<0.1	0.1	0.1	0.2	0.4	0.4	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-2w	0.1	<0.1	0.1	0.2	0.2	0.6	0.4	0.2	0.2	0.1	0.1	<0.1	0.6
		Min-2w	<0.1	<0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	<0.1	0.1	<0.1	<0.1
	Ijira	Mean	<0.1	0.1	0.1	0.2	0.1	0.3	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-2w	<0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.1	<0.1	0.3
		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
	Oki	Mean	<0.1	<0.1	<0.1	<0.1	0.2	0.2	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	<0.1	<0.1	<0.1	<0.1	0.5	0.3	0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.5
		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
	Yusuhara	Mean	<0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	<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	0.2	0.2	0.3	0.3	0.2	0.2	0.2	<0.1	0.1	0.1	0.1	0.3
		Min-2w	<0.1	0.1	0.1	0.1	0.2	0.2	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
	Hedo	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
	Ogasawara	Mean	<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	85
		Max-2w	<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
	Tokyo	Mean	0.2	0.4	0.3	0.3	0.5	0.7	1.2	0.5	0.3	0.3	0.4	0.2	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.4	0.3	0.4	0.7	1.0	1.7	0.7	0.4	0.3	0.5	0.2	1.7
		Min-2w	0.2	0.3	0.2	0.3	0.3	0.3	0.7	0.2	0.3	0.3	0.3	0.1	0.1
	Niigata-maki	Mean	<0.1	<0.1	<0.1	0.1	0.1	0.4	0.3	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	0.2	0.7	0.3	0.2	0.1	<0.1	<0.1	0.2	0.7
		Min-2w	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Tsushima	Mean	0.1	0.2	0.2	0.2	0.4	0.6	0.2	0.2	0.1	0.3	0.4	0.2	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.3	0.2	0.4	0.7	0.8	0.3	0.3	0.1	0.4	0.5	0.2	0.8
		Min-2w	<0.1	0.1	0.1	<0.1	0.2	0.4	0.2	0.1	0.1	0.1	0.3	0.2	<0.1

Table 4.4.1 HNO₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2021												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	0.6	0.6	0.6	0.7	0.4	0.2	0.4	0.5	0.4	0.4	0.4	0.5
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	0.7	0.7	0.9	0.8	0.9	0.6	0.4	0.6	0.7	0.6	0.6	0.5	0.9
		Min-w	0.2	0.4	0.3	0.3	0.5	0.2	<0.1	0.3	0.3	<0.1	0.3	0.3	<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
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.1	0.3	0.2	<0.1	0.1	<0.1	***	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
	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
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		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
		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
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Terelj	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Myanmar	Yangon	Mean	0.5	0.7	1.3	1.4	0.1	0.1	0.3	0.3	***	***	***	***	0.6
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	0.7	1.1	2.1	2.7	0.3	0.2	0.4	0.3	***	***	***	***	2.7
		Min-2w	0.3	0.2	0.4	0.1	<0.1	<0.1	0.3	0.3	***	***	***	***	<0.1
Philippines	Metro Manila	Mean	0.2	0.2	0.2	0.3	0.4	1.0	0.7	0.7	0.3	0.3	0.2	0.1	0.4
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	0.3	0.2	0.3	0.3	1.0	2.5	2.1	0.8	0.7	0.7	0.4	0.1	2.5
		Min-w	<0.1	<0.1	0.2	0.2	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	<0.1
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	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-m	<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-m	<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	Mean	<0.1	<0.1	0.2	0.1	<0.1	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	0.2	0.1	0.3	0.1	0.1	0.4	0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.4
		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	<0.1	<0.1
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	<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-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-2w	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.2	<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

Table 4.4.1 HNO₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	1.0	1.0	0.7	0.9	0.7	0.6	0.8	0.9	0.7	0.6	0.8	0.5	0.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.8	1.2	1.0	1.2	0.8	0.8	1.1	1.4	1.0	0.7	0.9	0.7	1.8
		Min-w	0.6	0.5	0.3	0.7	0.5	0.4	0.5	0.6	0.5	0.5	0.7	0.4	0.3
	Hoa Binh	Mean	0.4	0.4	0.7	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.5	0.4	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.5	0.5	1.1	0.6	0.6	0.6	0.7	0.6	0.5	0.5	0.7	0.6	1.1
		Min-w	0.2	0.3	0.5	0.5	0.4	0.3	0.3	0.5	0.3	0.4	0.4	0.2	0.2
	Can Tho	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	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	0.2	<0.1	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	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.5	0.3	0.4	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.5	0.4	0.6	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.3	0.5	0.6
		Min-w	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.2
	Yen Bai	Mean	0.4	0.6	1.0	1.1	1.2	2.1	1.8	1.9	0.8	1.0	1.0	0.8	1.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.4	0.7	1.5	1.8	2.0	2.7	2.9	2.7	1.1	1.3	1.9	1.2	2.9
		Min-w	0.2	0.4	0.7	0.7	0.7	1.6	1.0	1.2	0.5	0.7	0.6	0.4	0.2

Table 4.4.2 HNO₃ - Measured by FP with PM_{2.5} cyclone

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa FP with PM _{2.5} cyclone	Mean	<0.1	0.2	0.2	0.7	0.5	1.1	0.4	0.3	0.1	0.3	0.4	0.2	0.4
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	0.1	0.3	0.3	1.7	0.9	1.7	0.5	0.6	0.2	0.5	0.8	0.4	1.7
		Min-d	<0.1	<0.1	0.1	0.2	<0.1	0.4	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
	Cheju (Kosan) FP with PM _{2.5} cyclone	Mean	0.4	0.4	0.7	0.5	0.5	0.6	0.4	0.2	<0.1	0.4	0.9	1.0	0.4
		%	16	11	13	17	16	13	16	13	10	13	13	16	14
		Max-d	1.2	0.7	2.1	1.0	0.7	1.5	0.7	0.4	<0.1	1.1	1.5	1.9	2.1
		Min-d	<0.1	<0.1	<0.1	0.1	0.2	0.2	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1
	Imsil FP with PM _{2.5} cyclone	Mean	<0.1	<0.1	0.2	0.4	0.3	0.6	1.2	0.1	0.2	0.2	0.1	0.1	0.3
		%	16	18	16	17	16	13	16	19	17	16	17	16	16
		Max-d	0.2	0.1	0.3	0.9	0.6	1.3	5.3	0.4	0.5	0.3	0.2	0.2	5.3
		Min-d	<0.1	<0.1	<0.1	0.1	0.2	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Terms and abbreviations are given in Table 4.2.

Table 4.5.1 HCl - Measured by FP

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.6	0.9	1.0	1.2	1.2	1.3	1.5	1.2	2.5	2.7	***	1.9	1.5
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	0.9	1.4	1.0	1.3	1.3	1.5	1.8	2.3	2.6	3.2	***	2.1	3.2
		Min-2w	0.4	0.5	0.9	1.1	1.1	1.0	1.1	<0.1	2.5	2.3	***	1.6	<0.1
	Serpong	Mean	0.7	1.1	0.9	0.9	1.1	0.5	1.0	1.2	1.2	1.0	1.6	2.2	1.1
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.9	1.2	1.0	0.9	1.1	0.6	1.0	1.3	1.4	1.0	2.0	2.4	2.4
		Min-2w	0.5	1.0	0.7	0.9	1.1	0.3	0.9	1.1	1.0	1.0	1.1	2.0	0.3
	Bandung	Mean	0.9	0.8	0.7	0.7	0.9	0.7	***	0.9	0.9	0.8	0.7	0.8	0.8
		%	25	100	100	100	100	100	45	***	79	88	90	100	77
		Max-2w	0.9	1.6	1.0	0.8	0.9	0.7	***	1.0	1.1	0.9	0.8	1.1	1.6
		Min-2w	0.9	0.3	0.4	0.6	0.8	0.7	***	0.6	0.7	0.7	0.6	0.6	0.3
Japan	Rishiri	Mean	0.3	0.2	0.3	0.2	0.3	0.5	0.5	0.5	0.3	0.2	0.3	0.2	0.3
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	0.3	0.2	0.4	0.3	0.4	0.6	0.6	0.5	0.3	0.2	0.3	0.3	0.6
		Min-2w	0.3	0.2	0.3	0.2	0.3	0.3	0.5	0.5	0.2	0.2	0.2	0.2	0.2
	Ochiishi	Mean	0.2	0.1	0.3	0.2	0.3	0.5	0.6	0.7	0.2	0.2	<0.1	0.1	0.3
		%	100	100	100	43	100	100	50	50	100	100	67	100	84
		Max-2w	0.2	0.1	0.4	0.2	0.5	0.5	0.6	0.7	0.4	0.2	0.2	0.1	0.7
		Min-2w	0.1	0.1	0.1	0.2	0.2	0.4	0.6	0.7	<0.1	0.2	<0.1	<0.1	<0.1
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.1	0.1	0.2	0.2	0.2	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	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2
		Min-2w	<0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	<0.1	<0.1	0.2	<0.1	<0.1
	Ijira	Mean	<0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	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	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.1	<0.1	0.3
		Min-2w	<0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1
	Oki	Mean	0.2	0.6	0.4	0.5	0.7	0.4	0.5	0.5	0.3	0.2	0.5	0.4	0.4
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	0.3	0.7	0.5	0.6	1.0	0.5	0.5	0.5	0.3	0.3	0.7	0.6	1.0
		Min-2w	0.2	0.5	0.3	0.3	0.5	0.3	0.5	0.5	0.2	0.2	0.4	0.3	0.2
	Yusuhara	Mean	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.1	<0.1	0.3	0.2	0.3	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.4	0.3	0.4	0.4	0.2	0.3	0.2	<0.1	0.3	0.2	0.3	0.4
		Min-2w	0.1	0.3	0.3	0.3	0.1	0.1	0.2	<0.1	<0.1	0.2	<0.1	0.3	<0.1
	Hedo	Mean	0.7	0.6	0.7	0.6	0.3	0.4	0.2	0.3	0.4	0.5	0.8	0.6	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.8	0.7	0.8	0.7	0.4	0.4	0.2	0.4	0.7	0.6	1.1	0.8	1.1
		Min-2w	0.6	0.5	0.7	0.6	<0.1	0.3	0.1	0.2	0.2	0.3	0.6	0.5	<0.1
	Ogasawara	Mean	0.3	0.5	0.6	0.3	0.3	0.2	0.2	***	***	0.3	0.3	0.4	0.3
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	0.4	0.5	0.8	0.4	0.4	0.2	0.2	***	***	0.3	0.3	0.4	0.8
		Min-2w	0.2	0.5	0.4	0.3	0.2	0.2	0.1	***	***	0.3	0.2	0.3	0.1
	Tokyo	Mean	0.3	0.4	0.7	0.8	0.9	0.8	0.8	0.9	0.9	0.8	0.5	0.3	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.4	0.7	0.9	0.9	0.9	0.8	1.2	1.0	1.1	0.6	0.4	1.2
		Min-2w	0.3	0.4	0.6	0.8	0.9	0.7	0.8	0.7	0.8	0.5	0.4	0.3	0.3
	Niigata-maki	Mean	0.3	0.5	0.4	0.6	0.6	0.3	0.5	0.4	0.3	0.3	0.2	0.4	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.5	0.6	0.6	0.6	0.7	0.5	0.5	0.5	0.3	0.4	0.3	0.5	0.7
		Min-2w	0.2	0.5	0.3	0.6	0.5	0.2	0.4	0.3	0.2	0.2	0.1	0.3	0.1
	Tsushima	Mean	0.3	0.5	0.7	0.7	0.6	0.4	0.6	0.4	0.4	0.6	0.6	0.5	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.6	0.7	0.9	0.6	0.5	0.6	0.4	0.5	0.7	0.6	0.6	0.9
		Min-2w	0.3	0.5	0.6	0.4	0.5	0.3	0.6	0.4	0.4	0.4	0.6	0.5	0.3

Table 4.5.1 HCl - Measured by FP (continued)

Unit : ppb

Country	Site		2021												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	0.3	1.1	1.9	0.9	1.0	1.0	1.2	0.8	1.1	0.7	2.2	1.1	1.1
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	1.1	1.4	3.7	1.1	1.2	1.1	1.6	1.3	1.3	2.2	2.7	1.5	3.7
		Min-w	<0.1	0.8	1.1	0.5	0.7	0.7	1.0	0.6	1.0	<0.1	0.8	0.8	<0.1
	Tanah Rata	Mean	<0.1	0.5	0.4	0.1	0.2	0.2	***	0.1	0.2	0.1	1.0	0.3	0.3
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.3	0.7	0.4	0.2	0.3	0.3	***	0.2	0.3	0.3	1.5	0.7	1.5
		Min-w	<0.1	0.4	0.4	<0.1	0.1	0.2	***	<0.1	0.2	<0.1	0.6	<0.1	<0.1
	Danum Valley	Mean	0.1	0.3	0.3	0.1	0.2	1.4	***	0.2	0.2	1.2	0.3	1.3	0.6
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	0.1	0.4	0.3	0.1	0.2	2.6	***	0.3	0.2	1.9	0.4	2.4	2.6
		Min-2w	0.1	0.2	0.1	0.1	0.2	0.2	***	0.1	0.2	0.5	0.1	0.2	0.1
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Terelj	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
Myanmar	Yangon	Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Yangon	Mean	0.8	1.5	1.5	0.5	<0.1	0.2	0.6	0.2	***	***	***	***	0.7
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
Philippines	Metro Manila	Max-2w	1.6	1.8	2.6	0.8	<0.1	0.4	0.8	0.2	***	***	***	***	2.6
		Min-2w	<0.1	1.2	0.4	0.1	<0.1	<0.1	0.3	0.2	***	***	***	***	<0.1
		Mean	0.5	0.9	1.3	1.6	1.2	0.9	0.8	1.3	0.5	1.0	1.0	0.9	1.0
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
	Los Baños	Max-w	0.7	1.2	1.3	2.3	1.8	1.4	1.0	1.8	0.7	1.2	1.1	1.0	2.3
		Min-w	0.2	0.5	1.3	1.2	0.7	0.8	0.6	0.8	0.4	0.9	0.8	0.7	0.2
		Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Listvyanka	Mean	<0.1	<0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	<0.1	0.2	<0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	<0.1	<0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.2	0.1	0.2	<0.1	0.3
		Min-m	<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
	Irkutsk	Mean	0.6	0.3	1.1	1.3	0.8	0.7	0.5	0.4	<0.1	0.3	0.3	<0.1	0.6
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	1.0	0.6	1.4	2.5	1.8	0.8	0.7	0.6	0.2	0.7	0.6	0.1	2.5
		Min-w	0.4	0.1	0.9	0.8	0.2	0.4	0.2	0.2	<0.1	<0.1	0.2	<0.1	<0.1
	Primorskaya	Mean	0.5	0.4	0.4	0.3	0.5	0.4	0.4	0.3	0.2	0.3	0.4	0.3	0.4
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	0.9	0.5	0.5	0.4	0.6	0.5	0.6	0.4	0.3	0.3	0.5	0.4	0.9
		Min-w	0.3	0.3	0.4	0.3	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2
	Primorskaya	Mean	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.3	0.2	0.3	0.3	0.4	0.2	0.2	0.3	0.4	0.2	0.3	0.4
		Min-2w	0.4	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1

Table 4.5.1 HCl - Measured by FP (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	5.9	5.0	2.7	4.6	3.4	1.9	2.0	3.0	2.6	2.7	2.7	2.6	3.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	7.3	6.0	3.3	6.9	4.4	2.4	2.2	3.5	3.9	3.2	3.6	3.5	7.3
		Min-w	4.8	4.2	2.3	3.5	2.8	1.4	1.7	2.3	1.5	1.7	1.9	1.7	1.4
	Hoa Binh	Mean	1.9	2.0	1.8	2.2	2.0	2.3	2.1	2.5	2.1	2.0	2.1	2.0	2.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.1	2.3	2.1	2.5	2.2	2.4	2.3	2.8	2.5	2.3	2.5	2.2	2.8
		Min-w	1.4	1.6	1.5	2.1	1.8	2.2	1.9	2.2	1.7	1.9	1.8	1.9	1.4
	Can Tho	Mean	1.4	1.5	1.4	1.7	1.5	1.5	1.7	1.5	1.6	1.5	1.9	1.9	1.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.5	1.8	2.1	1.9	1.7	1.7	2.1	1.9	2.0	1.7	2.1	2.1	2.1
		Min-w	1.3	1.0	0.7	1.1	1.1	1.3	1.5	1.2	1.2	1.3	1.8	1.7	0.7
	Ho Chi Minh	Mean	1.5	1.5	1.1	1.6	1.3	1.4	1.3	1.5	1.6	1.4	1.6	1.2	1.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.6	1.8	1.3	1.9	1.7	1.9	1.6	2.0	1.8	1.6	2.1	1.3	2.1
		Min-w	1.2	0.9	0.8	1.1	1.0	1.1	1.0	1.1	1.4	1.1	1.3	1.0	0.8
	Yen Bai	Mean	1.5	1.8	1.6	2.2	2.0	2.2	2.7	2.5	2.7	2.2	2.7	3.2	2.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.7	2.2	2.0	2.6	2.2	2.5	3.2	2.7	3.4	2.7	3.1	4.1	4.1
		Min-w	1.3	1.6	1.4	1.4	1.6	1.9	2.2	2.2	2.0	1.6	2.0	1.7	1.3

Table 4.5.2 HCl - Measured by FP with PM_{2.5} cyclone

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.1	0.1	0.2	0.1	0.1	0.1	<0.1	<0.1	<0.1	0.1	0.1	0.2	0.1
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	0.4	0.3	0.4	0.2	0.2	0.2	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
	Cheju (Kosan)	Mean	0.2	0.3	0.1	0.2	0.2	0.1	0.2	<0.1	<0.1	0.1	0.1	0.3	0.2
		%	16	11	13	17	16	13	16	13	10	13	13	16	14
		Max-d	0.4	0.4	0.2	0.2	0.4	0.3	0.3	0.2	0.1	0.2	0.3	0.7	0.4
		Min-d	0.2	0.2	<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	<0.1	0.1	<0.1	<0.1
		%	16	18	16	17	16	13	16	19	17	16	17	16	16
		Max-d	0.1	0.2	0.2	0.1	<0.1	<0.1	0.1	0.1	<0.1	0.1	0.1	0.1	0.2
		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

Terms and abbreviations are given in Table 4.2.

Table 4.6.1 NH₃ - Measured by FP

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	1.2	5.5	7.6	11.0	14.2	15.8	17.3	12.8	11.2	9.3	***	12.2	10.8
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	1.6	6.0	8.3	14.1	15.7	17.5	17.6	15.1	11.3	9.5	***	13.2	17.6
		Min-2w	0.8	5.0	6.8	8.0	12.9	14.2	16.9	10.5	11.1	8.9	***	11.2	0.8
	Serpong	Mean	0.9	5.5	6.4	6.2	7.7	7.7	9.3	8.0	6.5	6.1	3.5	4.0	6.1
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	1.2	6.4	7.6	6.2	8.7	8.0	9.4	9.4	6.8	6.4	4.7	5.0	9.4
		Min-2w	0.5	4.6	5.1	6.2	6.6	7.4	9.3	7.0	6.3	5.8	2.4	2.9	0.5
	Bandung	Mean	8.6	6.9	7.2	9.3	12.4	13.4	***	11.9	11.4	12.5	9.7	10.5	10.3
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	8.6	7.7	11.4	10.8	13.4	13.8	***	14.2	12.5	13.6	10.2	14.2	14.2
		Min-2w	8.6	5.8	4.2	7.9	11.1	13.0	***	10.4	10.6	11.6	9.3	8.4	4.2
Japan	Rishiri	Mean	0.1	0.2	0.4	0.4	0.6	0.7	1.0	0.9	0.5	0.4	0.3	0.2	0.5
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	0.1	0.2	0.5	0.5	0.6	0.9	1.3	1.0	0.5	0.4	0.4	0.2	1.3
		Min-2w	0.1	0.2	0.3	0.3	0.6	0.5	0.8	0.8	0.5	0.4	0.2	0.1	0.1
	Ochiishi	Mean	0.1	0.2	0.3	0.1	0.4	0.3	0.3	0.5	0.4	0.4	0.6	0.2	0.3
		%	100	100	100	43	100	100	50	50	100	100	67	100	84
		Max-2w	0.2	0.2	0.5	0.1	0.4	0.3	0.3	0.5	0.4	0.4	0.6	0.3	0.6
		Min-2w	<0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.5	0.3	0.4	0.5	0.2	<0.1
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.3	0.4	0.6	0.6	0.8	1.2	0.7	1.4	0.5	0.5	0.3	0.3	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.6	0.9	0.6	0.8	1.6	0.7	2.2	0.6	0.6	0.3	0.3	2.2
		Min-2w	0.2	0.3	0.3	0.6	0.8	0.7	0.7	0.7	0.4	0.4	0.3	0.3	0.2
	Ijira	Mean	0.3	0.5	0.6	0.9	1.2	1.2	1.7	1.2	1.1	0.8	0.5	0.3	0.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.5	0.7	0.9	1.6	1.2	2.0	1.3	1.1	0.9	0.7	0.4	2.0
		Min-2w	0.3	0.5	0.6	0.8	0.9	1.2	1.4	1.2	1.1	0.7	0.3	0.3	0.3
	Oki	Mean	0.3	0.8	0.9	0.9	1.3	1.4	1.0	1.4	0.7	0.7	0.9	0.5	0.9
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	0.4	0.9	1.3	1.1	1.7	1.4	1.1	1.4	0.7	0.8	1.0	0.6	1.7
		Min-2w	0.3	0.6	0.4	0.7	0.8	1.3	1.0	1.4	0.7	0.6	0.8	0.4	0.3
	Yusuhara	Mean	0.2	0.6	0.6	1.1	0.8	0.7	0.7	0.5	0.4	0.6	0.3	0.2	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.6	0.7	1.3	1.1	0.8	0.8	0.5	0.5	0.7	0.4	0.2	1.3
		Min-2w	0.2	0.6	0.4	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2
	Hedo	Mean	0.9	1.2	1.2	1.2	1.0	1.1	1.1	1.0	1.0	0.9	1.0	0.9	1.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.9	1.4	1.5	1.3	1.4	1.2	1.1	1.1	1.2	1.0	1.2	1.2	1.5
		Min-2w	0.9	1.1	0.9	1.2	0.6	1.1	1.1	1.0	0.8	0.8	0.7	0.6	0.6
	Ogasawara	Mean	0.4	0.6	0.8	0.9	0.7	0.6	0.5	***	***	0.5	0.5	0.3	0.6
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	0.5	0.6	1.1	1.2	0.8	0.6	0.5	***	***	0.5	0.8	0.3	1.2
		Min-2w	0.4	0.5	0.5	0.5	0.6	0.5	0.5	***	***	0.4	0.4	0.3	0.3
	Tokyo	Mean	3.3	2.9	3.2	3.2	3.6	4.1	5.0	4.1	3.6	3.6	3.8	3.5	3.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.4	3.1	3.4	3.3	4.0	5.1	5.4	4.7	3.6	4.1	4.1	3.9	5.4
		Min-2w	3.2	2.7	3.0	3.0	3.0	3.1	4.5	3.4	3.5	3.0	3.3	3.0	2.7
	Niigata-maki	Mean	0.3	0.6	1.0	1.3	1.5	3.6	2.0	1.8	2.4	1.4	0.9	0.7	1.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.7	1.2	1.5	1.9	4.1	2.0	1.8	2.8	1.5	1.1	1.0	4.1
		Min-2w	0.3	0.6	0.8	1.1	1.3	3.0	1.9	1.8	2.0	1.3	0.4	0.4	0.3
	Tsushima	Mean	0.5	0.8	0.9	1.4	1.6	1.3	1.1	0.7	0.8	0.9	1.1	0.6	1.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.6	0.9	1.4	1.6	2.6	1.4	1.2	0.7	0.8	1.1	1.2	0.7	2.6
		Min-2w	0.4	0.7	0.5	1.1	1.0	1.1	1.1	0.7	0.8	0.8	1.1	0.6	0.4

Table 4.6.1 NH₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2021												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	2.8	7.0	10.6	6.9	6.4	5.5	6.6	5.1	5.7	5.8	6.1	6.7	6.2
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	7.4	7.6	21.2	7.7	7.6	6.1	8.7	5.9	6.6	7.2	7.1	7.9	21.2
		Min-w	0.1	6.6	6.5	6.0	5.6	4.3	5.0	3.9	4.7	2.2	5.4	5.4	0.1
	Tanah Rata	Mean	0.7	2.4	1.8	1.3	1.1	1.7	***	1.2	1.2	1.6	0.9	1.2	1.4
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	1.9	3.3	2.4	2.0	1.6	2.2	***	1.3	1.9	2.0	1.1	1.7	3.3
		Min-w	<0.1	1.9	1.4	0.6	0.8	1.2	***	1.0	0.8	1.0	0.6	0.6	<0.1
	Danum Valley	Mean	<0.1	<0.1	1.1	1.0	1.3	11.8	***	1.0	1.4	3.8	1.1	2.3	2.4
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.1	<0.1	1.2	1.0	1.4	22.4	***	1.4	1.4	4.2	1.2	2.4	22.4
		Min-2w	<0.1	<0.1	1.0	1.0	1.2	1.2	***	0.6	1.4	3.4	1.0	2.3	<0.1
Mongolia	Ulaanbaatar	Mean	4.5	4.2	7.6	7.2	6.7	8.8	7.7	7.6	6.2	5.8	5.2	3.8	6.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	5.6	5.3	11.0	10.1	9.1	10.9	8.5	10.4	7.7	6.1	5.7	6.5	11.0
		Min-w	3.8	3.1	4.3	4.6	4.3	7.4	6.5	5.2	4.5	5.6	4.3	2.0	2.0
	Terej	Mean	1.3	0.8	1.1	1.4	1.4	3.0	2.4	1.7	1.7	1.3	1.1	0.7	1.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.4	0.9	1.2	1.6	1.8	4.0	2.6	2.3	2.2	1.4	1.2	0.8	4.0
		Min-2w	1.1	0.8	1.0	1.3	1.2	2.0	2.2	1.1	1.1	0.9	0.6	0.6	0.6
Myanmar	Yangon	Mean	5.7	1.4	10.9	1.9	0.3	0.4	0.4	0.4	***	***	***	***	2.7
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	8.8	2.2	21.6	3.6	0.5	0.8	0.4	0.4	***	***	***	***	21.6
		Min-2w	2.6	0.6	0.1	0.2	<0.1	<0.1	0.3	0.4	***	***	***	***	<0.1
Philippines	Metro Manila	Mean	9.9	12.2	12.2	16.6	17.2	4.3	4.6	1.8	0.6	1.7	4.0	6.9	7.8
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	14.0	15.0	12.3	18.4	22.5	8.2	9.5	2.5	0.9	2.2	6.2	12.6	22.5
		Min-w	3.6	10.5	12.2	13.5	12.4	0.6	<0.1	1.2	<0.1	1.0	1.7	2.8	<0.1
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	Mean	0.3	0.6	1.1	1.0	1.8	0.4	0.3	0.6	0.8	0.6	0.2	0.2	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	0.3	0.6	1.1	1.5	2.5	0.4	0.3	0.6	0.9	0.8	0.3	0.3	2.5
		Min-m	0.3	0.6	1.1	0.5	1.1	0.4	0.3	0.6	0.7	0.4	<0.1	0.2	<0.1
	Listvyanka	Mean	3.7	3.7	6.6	6.9	7.3	5.6	4.6	5.5	4.0	2.8	0.7	0.5	4.3
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	5.7	4.9	8.1	11.0	13.3	8.2	6.2	6.7	7.6	4.3	1.0	1.1	13.3
		Min-w	2.5	2.3	5.6	4.6	3.8	3.1	1.9	4.4	<0.1	1.5	0.2	<0.1	<0.1
	Irkutsk	Mean	2.7	2.7	2.2	2.8	3.2	2.0	1.6	2.3	1.5	1.3	0.6	1.5	2.0
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	5.5	3.1	3.1	3.4	4.8	3.2	3.3	2.9	1.9	2.3	0.9	2.5	5.5
		Min-w	1.2	2.1	<0.1	1.9	2.7	1.5	<0.1	1.6	1.1	0.5	0.4	0.7	<0.1
	Primorskaya	Mean	1.0	0.6	0.9	0.8	1.4	2.1	2.0	1.8	0.9	0.8	0.3	<0.1	1.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.7	1.1	1.1	1.5	1.6	2.1	2.1	2.0	1.0	1.0	0.4	<0.1	2.1
		Min-2w	0.3	<0.1	0.7	0.2	1.2	2.1	2.0	1.5	0.9	0.6	0.2	<0.1	<0.1

Table 4.6.1 NH₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	4.0	2.9	3.5	3.0	3.6	4.2	3.5	3.5	5.2	3.1	5.0	4.1	3.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.9	3.5	4.6	4.3	4.0	4.6	4.0	4.5	6.3	3.6	5.7	4.5	6.3
		Min-w	3.3	2.3	2.7	2.4	3.4	3.1	3.0	3.0	3.7	2.6	4.5	3.6	2.3
	Hoa Binh	Mean	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.3	1.3	1.2	1.3	1.2	1.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.4	1.2	1.3	1.4	1.3	1.3	1.3	1.4	1.4	1.2	1.3	1.3	1.4
		Min-w	1.2	1.1	1.1	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.3	1.2	1.1
	Can Tho	Mean	3.7	4.2	4.3	4.4	4.4	4.7	4.4	4.0	4.3	4.4	4.2	4.3	4.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.4	4.9	4.5	5.2	5.0	5.4	5.6	4.9	5.3	5.1	5.2	5.5	5.6
		Min-w	3.3	3.5	4.0	3.5	3.7	3.4	3.3	3.1	3.1	3.1	3.2	3.7	3.1
	Ho Chi Minh	Mean	4.0	4.2	3.8	4.3	3.7	3.6	4.1	4.4	4.0	4.1	4.2	4.6	4.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.7	4.9	5.0	5.0	3.9	4.5	5.0	4.9	5.6	4.9	5.2	5.1	5.6
		Min-w	2.7	3.9	2.3	3.3	3.5	2.7	3.3	3.6	2.7	3.6	2.9	4.0	2.3
	Yen Bai	Mean	2.6	3.2	2.9	3.2	3.1	3.0	3.2	3.0	2.9	3.4	3.3	3.3	3.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.2	3.4	3.2	3.8	3.6	3.1	3.7	3.1	3.3	3.8	3.7	4.0	4.0
		Min-w	1.5	3.1	2.7	2.7	2.6	2.9	2.7	2.9	2.6	2.6	3.1	2.8	1.5

Table 4.6.2 NH₃ - Measured by FP with PM_{2.5} cyclone

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	1.6	2.3	3.5	4.5	8.0	4.2	6.6	2.7	3.0	3.6	2.4	2.5	3.8
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	3.1	4.2	4.1	5.4	10.6	5.8	9.2	3.0	3.6	6.9	5.7	4.3	10.6
		Min-d	<0.1	0.5	2.8	4.0	5.3	3.4	4.3	2.3	2.2	2.5	0.9	0.5	<0.1
	Cheju (Kosan)	Mean	1.5	1.6	3.7	2.9	1.4	5.5	5.8	3.4	1.6	3.3	3.5	1.9	3.3
		%	16	11	13	17	16	13	16	13	10	13	13	16	14
		Max-d	5.3	3.9	4.6	3.4	2.9	7.0	7.2	4.9	2.8	10.4	4.8	3.0	10.4
		Min-d	0.1	<0.1	2.4	2.7	0.2	4.7	4.5	1.8	0.3	0.3	2.1	1.1	<0.1
	Imsil	Mean	2.2	2.4	2.8	3.1	0.8	7.8	8.7	4.7	4.0	2.4	4.4	3.6	4.0
		%	16	18	16	17	16	13	16	19	17	16	17	16	16
		Max-d	3.7	5.8	3.2	5.5	1.7	8.9	17.5	7.0	6.6	3.5	6.2	5.0	17.5
		Min-d	0.6	0.2	2.1	2.0	<0.1	6.4	0.2	2.5	2.5	1.3	1.7	2.1	<0.1

Table 4.6.3 NH₃ - Measured by PS

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Bandung	Mean	12.0	14.3	23.5	19.3	18.8	17.3	***	21.3	20.2	19.3	3.4	2.6	15.5
		%	100	100	100	100	100	45	***	100	100	100	100	100	87
		Max-m	13.1	17.2	51.1	30.9	21.0	19.4	***	24.3	21.5	24.1	4.5	3.3	51.1
		Min-m	11.6	11.2	12.6	12.5	16.0	15.3	***	19.7	18.8	15.0	2.5	1.8	1.8

Terms and abbreviations are given in Table 4.2.

Table 4.7 NO - Measured by AT

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Mean	3.8	2.7	3.2	2.6	2.7	2.5	2.4	2.5	2.6	2.7	3.0	3.3	2.8
		%	100	100	94	97	100	93	97	100	97	90	100	100	97
		Max-d	8.0	4.0	4.8	3.2	3.2	3.2	3.2	3.2	4.0	3.2	4.8	11.2	11.2
		Min-d	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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	97	90	93	98	98	98	98	98	90	96	98	96
		Max-d	<0.1	<0.1	0.2	0.2	0.2	0.3	0.2	0.1	<0.1	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
	Ochiishi	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	95	96	96	96	89	96	90	96	95	96	91	74	92
		Max-d	0.1	0.3	0.1	0.3	0.3	0.4	0.5	0.4	0.2	0.1	<0.1	<0.1	0.5
		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
		%	33	***	***	***	***	***	***	***	***	***	***	***	3
		Max-d	<0.1	***	***	***	***	***	***	***	***	***	***	***	<0.1
		Min-d	<0.1	***	***	***	***	***	***	***	***	***	***	***	<0.1
	Happo	Mean	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***	***	***	<0.1
		%	98	97	98	96	98	98	97	20	***	***	***	***	58
		Max-d	0.3	0.2	0.4	0.4	0.2	0.1	0.1	0.1	***	***	***	***	0.4
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	***	***	***	<0.1
	Ijira	Mean	0.9	0.4	0.6	0.2	***	0.5	0.3	0.7	0.3	<0.1	0.2	0.4	0.4
		%	99	92	86	80	***	47	58	19	68	54	46	93	62
		Max-d	2.0	1.4	1.1	0.6	***	1.6	0.7	0.8	1.0	0.5	0.4	1.5	2.0
		Min-d	0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1
	Okii	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
		%	97	97	96	98	73	98	98	34	96	97	95	78	88
		Max-d	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.2	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
	Yusuhara	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	***	***	<0.1
		%	98	97	96	97	97	98	98	97	88	76	***	***	78
		Max-d	0.2	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.3	0.1	***	***	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
	Hedo	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	70	97	96	97	98	97	97	98	97	94	98	95
		Max-d	<0.1	0.2	<0.1	<0.1	0.1	0.3	0.2	0.1	0.2	<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
	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
		%	16	90	97	97	98	99	98	99	98	99	95	99	90
		Max-d	0.1	0.1	0.2	0.1	0.3	0.1	0.3	0.3	1.0	0.2	<0.1	<0.1	1.0
		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
	Niigata-maki	Mean	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	<0.1	0.1	0.2	0.2	0.2
		%	95	91	97	95	96	96	95	96	97	96	96	95	95
		Max-d	1.6	0.8	0.6	0.5	0.3	0.3	0.3	0.3	0.2	0.4	0.7	2.4	2.4
		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
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	Mean	31.5	20.8	17.0	4.9	4.0	4.7	3.4	4.4	9.6	28.1	38.6	52.4	18.3
		%	100	100	100	100	99	100	97	100	100	100	100	100	100
		Max-d	113.5	75.7	44.6	15.5	9.8	11.5	12.4	11.6	31.6	67.9	90.6	116.8	116.8
		Min-d	4.2	0.8	1.2	0.3	0.1	0.9	0.4	0.5	1.2	1.1	3.0	11.4	0.1
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.7 NO - Measured by AT (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	2.4	2.4	1.1	2.9	1.2	3.1	3.0	3.1	4.7	4.0	3.6	3.4	2.9
		%	95	96	95	96	96	96	96	96	96	96	96	83	95
		Max-d	12.4	9.5	6.2	11.8	2.6	13.6	11.2	11.0	14.5	13.0	13.9	8.0	14.5
		Min-d	0.1	0.5	0.1	0.9	0.3	0.9	1.5	1.5	1.9	0.7	1.1	1.2	0.1
	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	0.8	1.6	1.2	***	***	***	***	***	***	***	***	***	1.2
		%	95	95	95	***	***	***	***	***	***	***	***	***	23
		Max-d	2.4	4.5	4.1	***	***	***	***	***	***	***	***	***	4.5
		Min-d	0.4	0.3	0.2	***	***	***	***	***	***	***	***	***	0.2
	Si Phum	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	10.5	8.5	5.5	4.2	3.5	6.4	5.9	5.1	7.2	5.9	5.1	7.2	6.3
		%	94	95	95	93	95	94	94	94	94	95	94	95	95
		Max-d	30.5	25.1	11.3	9.9	7.0	11.6	9.8	11.6	15.1	23.3	15.2	26.4	30.5
		Min-d	1.6	2.2	1.9	1.6	0.9	2.7	2.2	2.1	1.7	2.4	1.6	2.0	0.9

Terms and abbreviations are given in Table 4.2.

Table 4.8.1 NO₂ - Measured by AT

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Hongwen	Mean	15.5	9.2	12.4	9.3	8.4	7.3	8.3	8.5	8.6	7.2	11.9	13.7	10.0
		%	100	100	100	100	100	100	100	94	100	100	100	100	99
		Max-d	27.7	18.8	29.3	17.8	16.7	12.6	12.6	12.0	12.6	13.6	19.3	37.7	37.7
		Min-d	6.3	3.7	5.8	4.7	4.2	3.1	4.7	4.2	5.8	4.7	6.3	7.3	3.1
	Haibin-Park	Mean	26.9	12.2	15.3	10.6	5.2	4.8	5.4	8.0	8.1	11.0	18.8	20.7	12.1
		%	90	100	100	100	100	100	97	97	100	100	100	94	98
		Max-d	47.1	23.0	30.3	20.9	9.9	11.0	10.5	15.7	15.7	24.1	34.0	33.5	47.1
		Min-d	14.6	5.2	6.8	6.3	2.6	1.6	1.0	4.2	3.1	2.1	8.4	12.6	1.0
	Wuzhishan	Mean	2.8	0.9	1.1	1.9	0.4	0.3	0.3	0.2	0.2	0.7	1.5	2.4	1.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	7.8	1.8	3.8	2.8	0.9	0.8	0.6	0.9	0.6	1.6	3.6	4.9	7.8
		Min-d	1.2	0.4	0.1	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.6	<0.1
	Lijiang	Mean	1.3	0.5	1.0	1.0	1.5	1.6	1.8	1.5	1.6	1.7	1.5	1.3	1.4
		%	94	100	74	100	100	93	100	100	100	100	100	100	97
		Max-d	3.6	1.5	2.0	3.0	2.5	2.5	2.9	2.2	2.5	2.2	2.2	2.2	3.6
		Min-d	0.1	<0.1	0.4	0.3	0.3	0.9	1.0	0.9	1.2	1.2	0.9	0.4	<0.1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	Mean	34.3	28.6	25.0	16.6	16.7	16.9	16.1	16.3	18.4	25.3	29.8	37.0	23.4
		%	100	100	100	100	99	100	97	100	100	100	100	100	100
		Max-d	56.1	47.4	37.6	27.3	27.3	24.1	22.7	29.5	24.7	33.6	46.4	48.0	56.1
		Min-d	17.5	12.5	13.4	5.5	7.3	10.0	8.3	10.1	9.5	12.5	11.8	22.8	5.5
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Kanghwa	Mean	8.7	5.1	9.1	5.8	4.9	3.3	4.4	3.2	3.0	5.0	8.9	10.1	6.0
		%	98	93	98	98	96	94	98	98	85	98	97	95	96
		Max-d	46.1	11.3	18.7	14.3	12.0	7.4	6.7	8.7	7.9	16.1	22.1	41.3	46.1
		Min-d	1.9	1.8	2.8	2.7	2.1	0.6	2.1	1.2	0.5	1.3	3.0	3.0	0.5
	Cheju (Kosan)	Mean	3.9	5.5	6.2	3.6	3.3	3.0	2.3	2.4	2.9	3.8	4.4	3.6	3.7
		%	99	98	99	98	95	99	96	96	99	100	98	95	98
		Max-d	7.3	11.5	10.0	6.6	5.7	4.2	4.0	4.4	4.8	5.4	8.0	7.7	11.5
		Min-d	2.0	2.0	2.5	0.3	2.2	1.8	1.3	1.3	1.4	1.8	1.4	1.0	0.3
	Imsil	Mean	7.4	7.1	7.2	5.2	4.0	3.8	2.9	3.0	2.9	4.4	7.0	7.6	5.2
		%	96	97	96	93	98	98	97	97	96	96	95	79	95
		Max-d	11.4	11.7	11.0	10.0	5.6	5.2	4.2	4.1	3.6	6.8	13.0	12.8	13.0
		Min-d	3.9	3.5	5.0	3.3	2.6	2.8	2.3	2.3	2.3	2.9	3.8	4.7	2.3
Thailand	Bangkok	Mean	22.3	18.9	11.3	13.8	9.9	7.4	8.2	8.4	12.1	15.5	18.2	24.4	14.0
		%	95	96	95	96	96	96	96	96	96	96	96	83	95
		Max-d	51.9	38.4	22.2	24.0	22.1	12.6	23.0	16.5	30.2	29.2	26.6	37.9	51.9
		Min-d	11.4	6.9	6.2	4.9	4.6	3.0	3.4	3.7	5.4	5.9	9.7	13.7	3.0
	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	10.5	10.1	14.9	***	***	***	***	***	***	***	***	***	11.9
		%	95	95	95	***	***	***	***	***	***	***	***	***	23
		Max-d	14.4	16.7	26.9	***	***	***	***	***	***	***	***	***	26.9
		Min-d	3.8	4.3	2.5	***	***	***	***	***	***	***	***	***	2.5
	Si Phum	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	24.5	24.3	20.4	14.5	11.6	11.2	9.4	9.4	8.7	9.4	11.8	18.6	14.4
		%	94	95	95	93	95	94	94	94	95	95	94	95	95
		Max-d	48.6	38.1	28.7	23.5	16.4	17.0	14.0	16.9	12.8	16.7	20.4	35.7	48.6
		Min-d	8.5	11.9	13.0	7.3	6.8	5.2	4.3	4.6	3.0	4.3	4.0	8.4	3.0

Table 4.8.2 NO₂ - Measured by PS

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Jakarta ^{*1}	Mean	13	11	18	21	18	23	19	17	17	18	16	16	17
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	13	11	18	21	18	23	19	17	17	18	16	16	23
		Min-m	13	11	18	21	18	23	19	17	17	18	16	16	11
	Kototabang ^{*1}	Mean	1	1	1	1	1	1	1	1	1	1	1	1	1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	1	1	1	1	1	1	1	1	1	1	1	1	1
		Min-m	1	1	1	1	1	1	1	1	1	1	1	1	1
	Bandung	Mean	26.5	29.0	8.5	14.1	14.3	17.1	***	14.5	14.8	18.5	16.6	17.5	17.3
		%	100	100	100	100	100	45	***	100	100	100	100	100	87
		Max-m	28.2	34.5	11.5	17.3	15.6	18.0	***	16.5	15.7	24.0	18.4	20.0	34.5
		Min-m	23.8	25.0	5.1	9.8	11.3	16.2	***	12.7	13.9	14.6	14.0	14.9	5.1

Terms and abbreviations are given in Table 4.2.

*1: Their reported values, using the passive sampler method at Jakarta and Kototabang sites, were expressed as intergers because their significant digits were insufficient.

Table 4.9 NOx - Measured by AT

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan (NOx*)	Mean	20.1	14.4	14.0	11.2	12.1	11.9	9.3	8.7	10.0	10.6	13.4	18.1	12.9
		%	100	100	94	97	100	93	97	100	97	90	100	100	97
		Max-d	29.9	22.3	22.6	18.4	16.8	19.4	12.3	12.1	15.2	17.3	24.7	42.1	42.1
		Min-d	12.6	8.7	9.0	8.7	8.7	8.2	7.6	6.1	7.1	6.1	5.5	11.3	5.5
Japan	Rishiri (NOx*)	Mean	0.5	0.6	0.8	0.7	0.5	0.7	0.6	0.4	0.4	0.6	0.6	0.6	0.6
		%	98	97	90	93	98	98	98	98	98	90	96	98	96
		Max-d	1.1	1.2	1.5	1.3	1.3	1.2	1.7	0.6	0.8	1.1	1.8	1.5	1.8
		Min-d	0.1	0.3	0.4	0.3	<0.1	0.2	<0.1	0.2	0.2	0.2	0.2	0.3	<0.1
	Ochiishi (NOx*)	Mean	0.8	1.1	1.0	1.2	1.2	1.4	1.4	1.0	0.9	0.7	0.7	0.7	1.0
		%	95	96	96	96	89	96	90	96	95	96	91	74	92
		Max-d	1.6	3.8	2.0	3.1	2.7	2.9	2.4	1.8	1.7	1.5	1.5	1.2	3.8
		Min-d	0.5	0.5	0.5	0.5	0.3	0.5	0.6	0.3	0.3	0.3	0.3	0.4	0.3
	Sado-seki (NOx*)	Mean	0.4	***	***	***	***	***	***	***	***	***	***	***	0.4
		%	33	***	***	***	***	***	***	***	***	***	***	***	3
		Max-d	0.7	***	***	***	***	***	***	***	***	***	***	***	0.7
		Min-d	0.2	***	***	***	***	***	***	***	***	***	***	***	0.2
	Happo (NOx*)	Mean	0.8	0.6	0.5	0.8	0.5	0.7	0.3	0.6	***	***	***	***	0.6
		%	98	97	98	96	98	98	97	20	***	***	***	***	58
		Max-d	1.2	1.2	1.2	1.4	1.2	1.4	0.7	1.2	***	***	***	***	1.4
		Min-d	0.4	<0.1	<0.1	0.3	<0.1	0.3	<0.1	0.4	***	***	***	***	<0.1
	Ijira (NOx*)	Mean	1.6	0.9	1.9	1.8	***	1.7	1.3	1.2	1.5	1.4	1.0	1.6	1.5
		%	98	90	89	80	***	47	58	19	70	54	46	93	62
		Max-d	3.6	2.5	4.4	4.6	***	5.6	3.2	1.4	4.9	5.6	2.3	5.5	5.6
		Min-d	0.2	<0.1	0.5	0.4	***	<0.1	0.1	1.0	0.3	<0.1	0.5	0.3	<0.1
	Okii (NOx*)	Mean	0.3	0.8	0.6	0.3	0.6	0.4	0.4	0.5	0.4	0.4	0.7	0.9	0.5
		%	97	97	96	98	73	98	98	34	96	97	95	78	88
		Max-d	2.1	3.1	1.9	1.6	1.6	1.6	1.7	1.1	1.0	0.9	1.4	2.1	3.1
		Min-d	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1
	Yusuhara (NOx*)	Mean	1.6	1.6	1.3	1.1	1.0	1.0	0.7	0.5	0.6	0.6	***	***	1.0
		%	98	97	96	97	97	98	98	97	88	76	***	***	78
		Max-d	2.9	3.0	2.8	2.4	2.2	1.8	1.7	0.9	1.2	1.2	***	***	3.0
		Min-d	0.4	0.4	0.4	0.5	0.3	0.6	0.2	<0.1	<0.1	<0.1	***	***	<0.1
	Hedo (NOx*)	Mean	0.6	0.7	0.5	0.4	0.5	0.6	0.3	0.3	0.4	0.5	0.9	0.8	0.5
		%	98	70	97	96	97	98	97	97	98	97	94	98	95
		Max-d	1.9	1.1	1.0	1.0	0.7	2.1	0.8	0.6	0.7	1.1	1.7	1.9	2.1
		Min-d	<0.1	0.3	<0.1	<0.1	0.2	0.2	<0.1	<0.1	0.2	0.2	0.4	0.4	<0.1
	Ogasawara (NOx*)	Mean	0.5	0.7	0.4	0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.1	0.4	0.5	0.2
		%	16	90	97	97	98	99	98	99	98	99	95	99	90
		Max-d	1.5	1.9	1.9	0.3	0.7	0.8	0.2	0.4	1.6	0.9	1.9	2.3	2.3
		Min-d	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Niigata-maki (NOx*)	Mean	3.1	2.2	2.4	2.2	1.6	1.8	1.5	1.7	1.5	1.5	1.8	2.6	2.0
		%	95	91	97	95	96	96	95	96	97	96	96	95	95
		Max-d	8.5	7.1	5.6	5.1	3.0	2.9	3.2	3.3	2.6	3.0	4.4	11.0	11.0
		Min-d	0.5	0.6	1.1	0.7	0.5	0.8	0.5	0.5	0.7	0.5	0.5	0.6	0.5
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	Mean	65.8	49.4	42.0	21.4	20.7	21.6	19.5	20.8	28.0	53.4	68.5	89.4	41.8
		%	100	100	100	100	99	100	97	100	100	100	100	100	100
		Max-d	169.6	123.1	82.2	42.8	37.1	35.6	35.2	35.1	54.7	101.1	133.6	161.0	169.6
		Min-d	25.4	13.3	14.9	6.3	7.5	10.9	8.8	11.1	10.8	14.5	14.7	34.2	6.3
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.9 NO_x - Measured by AT (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	24.7	21.4	12.5	16.6	11.1	10.5	11.3	11.5	16.8	19.4	21.7	27.7	16.9
		%	95	96	95	96	96	96	96	96	96	96	96	83	95
		Max-d	64.2	46.4	27.4	34.3	24.2	26.1	34.0	24.7	44.6	36.0	32.5	43.7	64.2
		Min-d	11.9	8.2	6.7	5.7	5.2	5.4	5.2	5.2	7.8	7.7	11.1	14.7	5.2
	Samutprakarn	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi(NO _x *) (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	11.1	11.7	15.9	***	***	***	***	***	***	***	***	***	13.0
		%	95	95	95	***	***	***	***	***	***	***	***	***	23
		Max-d	15.2	17.3	28.5	***	***	***	***	***	***	***	***	***	28.5
		Min-d	4.5	4.8	2.8	***	***	***	***	***	***	***	***	***	2.8
	Si Phum	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Nai Mueang	Mean	34.2	32.6	25.9	18.6	15.1	17.6	15.3	14.5	15.9	15.4	16.9	25.7	20.6
		%	94	95	95	93	95	94	94	94	94	95	94	95	95
		Max-d	72.9	63.0	38.7	32.0	20.2	27.7	22.9	24.4	26.8	36.4	27.8	62.1	72.9
		Min-d	10.0	14.9	15.3	8.9	8.6	7.9	7.2	7.1	4.8	9.0	11.1	10.9	4.8

NO_x* : NO_x 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		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	35	33	32	28	24	15	7	15	10	16	22	31	24
		%	100	100	100	100	100	97	90	39	39	39	71	100	81
		Max-d	47	46	40	38	40	31	19	26	21	25	36	45	47
		Min-d	23	22	19	19	12	7	3	6	5	5	9	17	3
Indonesia	Bandung	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	37	42	46	44	42	33	22	27	29	33	33	34	35
		%	23	94	92	95	100	99	99	99	99	92	97	99	91
		Max-d	40	48	53	52	62	56	31	40	44	49	44	40	62
		Min-d	35	38	38	33	28	18	14	14	21	25	26	27	14
	Ochiishi	Mean	35	37	42	40	39	32	25	30	32	34	33	32	34
		%	100	100	100	100	93	100	97	100	99	100	95	100	99
		Max-d	38	43	49	51	50	50	37	43	38	46	43	39	51
		Min-d	30	34	39	35	28	24	11	14	23	26	26	26	11
	Sado-seki	Mean	36	***	***	***	***	***	***	***	***	***	***	***	36
		%	33	***	***	***	***	***	***	***	***	***	***	***	3
		Max-d	38	***	***	***	***	***	***	***	***	***	***	***	38
		Min-d	34	***	***	***	***	***	***	***	***	***	***	***	34
	Happo	Mean	43	48	54	55	58	55	41	35	41	43	45	42	47
		%	99	99	99	97	99	99	99	99	99	96	97	96	98
		Max-d	50	61	64	75	71	85	60	49	62	53	52	51	85
		Min-d	35	37	45	45	35	39	21	19	29	33	39	35	19
	Ijira	Mean	***	***	33	38	30	29	15	13	17	25	25	20	25
		%	***	***	99	99	99	99	99	99	72	55	99	100	77
		Max-d	***	***	48	51	46	58	25	28	29	34	38	33	58
		Min-d	***	***	19	22	7	12	3	3	8	15	12	8	3
	Oki	Mean	41	46	50	51	53	45	31	32	41	42	43	40	43
		%	97	100	99	97	63	100	100	34	98	99	97	80	88
		Max-d	49	66	65	71	69	66	51	44	60	59	62	53	71
		Min-d	33	39	38	42	30	27	16	22	26	27	34	34	16
	Yusuhara	Mean	39	44	46	49	48	39	22	20	32	36	41	38	38
		%	99	99	98	99	99	99	99	99	86	99	99	99	98
		Max-d	49	57	66	66	65	65	40	32	62	54	50	46	66
		Min-d	29	32	31	36	23	20	9	7	15	20	32	31	7
	Hedo	Mean	39	42	40	45	25	23	10	10	17	30	36	33	29
		%	99	71	99	98	99	99	99	99	99	99	97	99	97
		Max-d	47	50	54	55	56	47	21	27	43	48	46	38	56
		Min-d	30	31	22	27	9	11	<1	5	5	13	29	28	<1
	Ogasawara	Mean	44	44	43	45	20	17	12	11	20	32	36	42	29
		%	17	92	98	98	99	99	98	99	99	99	95	99	91
		Max-d	46	52	58	63	57	42	28	25	45	46	47	47	63
		Min-d	43	30	27	25	8	6	4	5	6	10	19	27	4
	Niigata-maki	Mean	35	41	43	43	46	40	30	28	32	33	34	32	36
		%	98	94	99	99	99	99	99	96	99	99	99	99	98
		Max-d	40	56	63	58	56	56	44	50	45	44	43	44	63
		Min-d	28	32	35	34	33	30	19	13	23	20	25	17	13
	Tsushima	Mean	42	47	52	58	56	52	30	36	42	48	47	34	45
		%	99	99	97	98	79	99	99	99	99	99	97	99	97
		Max-d	52	60	80	98	74	88	48	62	62	69	65	52	98
		Min-d	35	37	37	42	24	26	11	17	21	38	23	27	11
Mongolia	Ulaanbaatar	Mean	5	10	14	20	19	15	13	17	11	7	5	2	11
		%	100	100	100	100	100	100	88	100	100	100	100	100	99
		Max-d	14	25	30	32	31	25	24	33	18	17	15	8	33
		Min-d	<1	2	3	9	9	8	4	7	5	1	<1	<1	<1
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.10.1 O₃ - Measured by AT (continued)

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	31	40	48	54	55	54	46	44	38	40	39	31	43
		%	98	97	98	98	96	97	98	98	85	98	97	95	96
		Max-d	41	56	74	92	79	83	66	62	53	60	64	46	92
		Min-d	6	29	27	40	35	34	22	29	22	24	26	3	3
	Cheju (Kosan)	Mean	40	46	50	56	55	49	28	35	42	45	49	42	45
		%	100	99	100	100	96	99	99	96	100	100	100	100	99
		Max-d	52	60	72	73	73	79	55	57	90	63	64	52	90
		Min-d	34	38	37	45	27	33	12	14	22	29	38	32	12
	Imsil	Mean	26	33	39	44	40	39	22	23	26	27	28	27	31
		%	94	97	96	93	98	98	97	97	97	98	98	79	95
		Max-d	34	43	50	71	53	55	37	40	36	41	34	36	71
		Min-d	15	11	22	29	24	21	7	13	16	16	18	18	7
Thailand	Bangkok	Mean	44	46	35	29	31	23	18	19	17	23	28	38	29
		%	95	96	95	96	96	94	96	96	96	96	96	96	96
		Max-d	67	68	64	42	51	40	27	31	37	49	44	52	68
		Min-d	25	26	17	13	19	16	12	7	9	11	12	24	7
	Samutprakarn	Mean	29	36	34	26	26	19	16	17	17	24	29	42	26
		%	95	94	95	95	94	94	95	90	95	96	96	96	95
		Max-d	46	53	64	39	40	25	27	33	39	46	46	53	64
		Min-d	13	21	18	12	17	12	10	9	8	12	13	27	8
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	34	38	44	41	36	25	21	25	21	23	27	32	31
		%	95	95	91	93	93	95	94	94	82	52	71	95	87
		Max-d	60	52	57	64	45	38	29	43	29	32	32	39	64
		Min-d	22	25	37	<1	28	13	13	14	15	17	16	24	<1
	Nai Mueang	Mean	33	34	37	31	32	22	18	20	12	13	29	34	26
		%	94	95	95	96	95	95	94	95	95	95	95	95	95
		Max-d	49	48	53	40	41	28	25	37	20	23	47	48	53
		Min-d	21	5	19	21	18	12	11	8	1	4	14	20	1

Table 4.10.2 O₃ - Measured by PS

Unit : ppb

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Bandung	Mean	6	7	6	8	9	12	***	7	7	8	2	5	7
		%	100	100	100	100	100	45	***	100	100	100	100	100	87
		Max-m	7	8	7	10	10	13	***	8	10	10	3	6	13
		Min-m	2	6	5	5	8	11	***	6	3	6	2	4	2
Russia	Mondy	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min	***	***	***	***	***	***	***	***	***	***	***	***	***
	Listvyanka	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Irkutsk	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.11 PM₁₀ - Measured by ATUnit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Mean	67	51	36	27	32	31	27	25	25	25	51	60	38
		%	100	100	90	97	100	93	97	100	97	90	100	100	97
		Max-d	110	90	66	44	61	62	52	44	41	44	102	130	130
		Min-d	29	12	13	11	11	9	9	9	12	8	19	21	8
	Hongwen	Mean	49	37	42	40	29	24	25	21	27	33	42	48	35
		%	100	100	100	93	100	100	100	97	100	100	100	100	99
		Max-d	84	61	112	113	54	43	56	36	42	66	56	84	113
		Min-d	26	8	17	15	15	12	13	11	12	9	21	12	8
	Haibin-Park	Mean	69	35	40	38	18	19	16	15	20	31	47	58	34
		%	100	100	97	100	100	97	97	100	100	100	93	94	98
		Max-d	119	48	124	94	39	49	37	30	42	57	84	98	124
		Min-d	35	11	18	18	6	8	4	5	5	9	21	19	4
	Wuzhishan	Mean	21	15	13	12	8	12	7	8	7	5	15	15	12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-d	83	24	26	24	16	28	14	20	18	18	34	41	83
		Min-d	4	2	1	6	3	1	1	2	2	<1	3	<1	<1
	Lijiang	Mean	8	11	19	23	8	5	5	5	5	5	6	7	9
		%	100	100	71	100	100	93	84	100	100	100	100	100	96
		Max-d	24	19	42	46	21	13	10	18	10	12	13	18	46
		Min-d	2	1	10	9	1	<1	2	<1	2	<1	2	1	<1
Japan	Rishiri	Mean	14	20	30	27	20	18	20	18	13	16	10	11	19
		%	100	100	100	95	100	100	100	100	99	92	28	79	91
		Max-d	42	65	129	58	101	85	50	66	39	93	16	27	129
		Min-d	3	8	7	4	3	6	7	4	5	2	4	3	2
	Ochiishi	Mean	13	16	25	21	15	12	10	17	13	17	18	16	16
		%	97	93	99	97	97	99	99	99	100	99	99	98	98
		Max-d	31	42	138	47	85	40	23	37	24	33	52	35	138
		Min-d	6	7	8	10	4	3	3	4	6	6	7	6	3
	Sado-seki	Mean	21	***	***	***	***	***	***	***	***	***	***	***	21
		%	21	***	***	***	***	***	***	***	***	***	***	***	2
		Max-d	31	***	***	***	***	***	***	***	***	***	***	***	31
		Min-d	9	***	***	***	***	***	***	***	***	***	***	***	9
	Happo	Mean	6	8	17	13	19	16	8	6	6	6	6	3	9
		%	99	99	76	84	100	41	99	100	95	99	95	94	90
		Max-d	75	32	83	35	69	32	18	15	13	16	13	8	83
		Min-d	1	2	2	1	2	4	1	<1	<1	<1	<1	<1	<1
	Ijira	Mean	7	11	19	16	15	16	17	15	13	7	9	6	13
		%	99	100	100	100	76	100	96	100	72	55	100	82	90
		Max-d	41	25	116	60	40	23	37	28	25	14	21	15	116
		Min-d	2	3	2	3	5	4	5	4	5	2	3	1	1
	Oki	Mean	36	28	***	***	***	***	***	***	***	***	***	***	36
		%	99	0	***	***	***	***	***	***	***	***	***	***	8
		Max-d	93	28	***	***	***	***	***	***	***	***	***	***	93
		Min-d	13	28	***	***	***	***	***	***	***	***	***	***	13
	Yusuhara	Mean	13	15	25	15	17	12	10	9	12	11	12	11	14
		%	100	100	100	100	100	100	100	96	95	99	100	100	99
		Max-d	49	31	133	61	53	26	26	29	29	21	30	23	133
		Min-d	2	2	1	2	<1	2	<1	<1	2	2	3	5	<1
	Hedo	Mean	24	26	27	32	27	30	31	25	29	38	30	25	29
		%	85	100	100	98	100	100	100	100	100	96	98	100	98
		Max-d	43	54	39	59	40	68	66	60	68	66	48	42	68
		Min-d	9	13	17	20	15	13	12	10	12	21	16	8	8
	Ogasawara	Mean	15	19	22	20	15	15	14	13	14	25	13	14	16
		%	99	100	100	82	100	100	99	100	99	92	100	100	98
		Max-d	28	38	37	37	27	35	26	35	44	57	19	24	57
		Min-d	5	5	10	8	8	7	6	6	7	7	8	8	5
	Niigata-maki	Mean	21	28	37	21	31	23	17	21	17	16	21	21	23
		%	99	100	99	24	44	100	66	100	100	100	95	98	85
		Max-d	50	83	214	43	55	48	24	63	36	31	41	51	214
		Min-d	8	14	11	14	19	11	7	4	6	8	8	9	4
	Tsushima	Mean	24	26	50	27	26	18	14	12	14	15	23	17	22
		%	100	100	96	100	100	100	100	93	100	100	100	100	99
		Max-d	81	66	415	61	169	33	21	21	27	29	54	40	415
		Min-d	5	10	6	11	3	2	7	3	1	2	7	6	1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.11 PM₁₀ - Measured by AT (continued)

Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	122	104	102	64	57	49	51	44	45	103	120	151	84
		%	100	100	98	100	98	99	99	100	100	100	100	83	98
		Max-d	256	174	177	122	146	94	89	107	88	189	211	289	289
		Min-d	43	36	32	24	23	13	23	14	14	35	37	51	13
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Kanghwa	Mean	35	41	60	34	48	26	15	13	11	24	39	33	32
		%	98	97	97	97	96	97	96	97	84	98	97	95	96
		Max-d	101	91	362	76	326	54	28	25	24	45	101	74	362
		Min-d	14	15	10	12	5	7	5	4	4	4	10	14	4
	Cheju (Kosan)	Mean	34	29	47	40	45	22	17	17	17	26	39	28	30
		%	98	91	88	91	98	97	97	93	67	88	97	97	92
		Max-d	91	113	93	73	282	47	25	34	27	56	73	62	282
		Min-d	15	11	12	22	9	6	7	9	7	16	13	12	6
	Imsil	Mean	45	49	59	50	62	39	12	14	16	27	39	40	38
		%	97	96	91	93	97	97	87	95	96	98	93	79	93
		Max-d	91	91	147	115	331	64	29	26	24	54	68	74	331
		Min-d	19	26	20	16	20	20	1	9	10	11	15	22	1
Thailand	Bangkok	Mean	54	54	38	29	23	23	20	21	21	25	31	46	32
		%	100	100	100	100	100	99	100	100	99	100	100	100	100
		Max-d	101	79	61	41	36	45	30	28	39	43	40	78	101
		Min-d	29	34	23	18	16	16	15	14	14	16	20	26	14
	Samutprakarn	Mean	65	62	38	30	23	25	19	19	23	27	35	57	35
		%	100	100	100	99	100	100	100	100	100	100	99	100	100
		Max-d	131	98	67	51	44	55	30	28	53	50	53	108	131
		Min-d	32	35	19	14	12	14	11	10	12	12	19	26	10
	Chang Phueak	Mean	67	70	113	57	34	29	24	28	24	27	33	44	46
		%	100	99	100	99	99	99	99	100	96	98	99	99	99
		Max-d	92	113	168	151	51	51	35	40	31	36	44	57	168
		Min-d	49	29	64	23	21	20	18	21	19	16	21	33	16
	Si Phum	Mean	55	56	98	48	27	23	19	22	19	21	29	39	38
		%	99	100	99	98	100	100	100	100	100	100	100	100	100
		Max-d	74	97	147	146	42	39	27	38	26	35	40	52	147
		Min-d	30	19	51	17	15	14	14	14	13	11	16	30	11
	Nai Mueang	Mean	76	77	76	40	31	31	26	26	24	27	38	52	44
		%	100	99	100	100	99	100	100	100	100	100	100	100	100
		Max-d	128	112	104	59	42	61	35	37	39	42	54	89	128
		Min-d	34	36	38	22	20	18	17	16	13	15	25	26	13

Terms and abbreviations are given in Table 4.2.

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

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	32	35	29	23	16	13	11	11	11	12	13	17	18
		%	100	100	95	99	100	100	100	94	100	99	99	100	99
		Max-d	69	51	40	42	27	21	19	17	21	24	23	39	69
		Min-d	12	20	15	11	7	7	7	7	6	5	5	9	5
Indonesia	Jakarta	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	6	6	9	8	6	6	8	6	4	4	3	4	6
		%	100	100	100	100	100	100	100	100	100	92	28	79	92
		Max-d	16	18	27	15	23	15	28	14	8	15	5	12	28
		Min-d	1	3	3	1	1	2	2	2	2	<1	1	<1	<1
	Ochiishi	Mean	6	7	10	9	6	5	5	7	4	6	6	5	6
		%	98	94	99	97	97	99	99	99	100	99	99	100	99
		Max-d	15	19	40	22	32	14	13	12	8	11	19	14	40
		Min-d	2	3	4	4	<1	1	<1	1	2	2	2	1	<1
	Sado-seki	Mean	4	***	***	***	***	***	***	***	***	***	***	***	4
		%	21	***	***	***	***	***	***	***	***	***	***	***	2
		Max-d	6	***	***	***	***	***	***	***	***	***	***	***	6
		Min-d	2	***	***	***	***	***	***	***	***	***	***	***	2
	Happo	Mean	3	4	8	8	10	12	6	4	4	3	3	<1	5
		%	99	99	76	84	100	41	99	100	95	99	95	94	90
		Max-d	27	16	30	16	27	24	14	11	9	9	7	4	30
		Min-d	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1
	Ijira	Mean	4	7	9	8	8	9	5	5	5	4	6	4	6
		%	99	100	100	100	76	100	96	100	72	55	100	82	90
		Max-d	20	17	43	26	18	15	12	11	12	8	14	10	43
		Min-d	1	2	<1	<1	2	<1	1	<1	<1	<1	1	<1	<1
	Oki	Mean	11	9	***	***	***	***	***	***	***	***	***	***	11
		%	99	0	***	***	***	***	***	***	***	***	***	***	8
		Max-d	27	9	***	***	***	***	***	***	***	***	***	***	27
		Min-d	4	9	***	***	***	***	***	***	***	***	***	***	4
	Yusuhara	Mean	8	10	13	9	10	8	6	6	9	7	9	8	9
		%	100	100	100	100	100	100	100	96	95	99	100	100	99
		Max-d	18	20	55	30	25	18	17	21	21	14	20	16	55
		Min-d	2	2	1	1	<1	<1	<1	<1	2	2	2	5	<1
	Hedo	Mean	10	11	12	13	7	6	6	5	7	10	10	9	9
		%	85	100	100	98	100	100	100	100	100	96	98	100	98
		Max-d	16	22	19	20	15	12	16	12	16	15	16	17	22
		Min-d	3	4	8	7	5	3	3	2	2	5	6	4	2
	Ogasawara	Mean	5	7	8	7	5	5	4	5	5	8	5	5	6
		%	99	100	100	82	100	100	99	100	99	92	100	100	98
		Max-d	10	12	13	12	9	11	8	12	13	18	7	9	18
		Min-d	<1	3	4	3	3	2	2	2	3	3	2	3	<1
	Niigata-maki	Mean	6	9	9	5	7	8	6	6	4	4	5	6	6
		%	99	100	99	24	66	100	66	100	100	100	95	98	87
		Max-d	12	23	41	8	13	18	10	13	7	9	13	13	41
		Min-d	2	4	3	3	2	2	2	<1	<1	<1	2	2	<1
	Tsushima	Mean	10	13	17	11	12	10	7	6	6	8	11	9	10
		%	100	100	96	100	100	100	100	93	100	100	100	100	99
		Max-d	24	35	121	20	58	21	11	11	15	17	22	25	121
		Min-d	3	4	2	5	2	<1	2	1	<1	<1	3	3	<1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	30	43	72	49
		%	***	***	***	***	***	***	***	***	***	96	100	99	25
		Max-d	***	***	***	***	***	***	***	***	***	48	98	152	152
		Min-d	***	***	***	***	***	***	***	***	***	8	13	24	8
Myanmar	Yangon	Mean	59	72	57	35	13	9	7	7	9	14	30	46	28
		%	93	91	58	34	99	94	100	100	92	65	97	99	85
		Max-d	85	107	77	84	27	14	9	10	19	29	49	61	107
		Min-d	31	38	43	15	5	4	3	<1	1	6	13	30	<1
	Mandalay	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

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

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila	Mean	9	13	13	15	10	***	***	***	***	***	***	***	13
		%	37	62	100	100	18	***	***	***	***	***	***	***	26
		Max-d	11	21	21	35	14	***	***	***	***	***	***	***	35
		Min-d	3	6	6	8	7	***	***	***	***	***	***	***	3
	Mt. Sto. Tomas	Mean										6	2	2	3
		%										81	82	97	22
		Max-d										11	5	9	11
		Min-d										2	<1	<1	<1
	Kanghwa	Mean	20	27	33	17	19	18	12	11	8	14	27	22	19
		%	97	97	97	97	94	91	80	78	68	96	96	94	90
		Max-d	39	75	77	36	79	35	23	20	15	29	78	52	79
		Min-d	10	11	6	7	3	4	3	3	3	2	7	7	2
	Cheju (Kosan)	Mean	14	19	20	12	14	12	8	6	6	9	14	12	12
		%	98	91	91	91	94	87	88	91	68	82	94	90	89
		Max-d	29	73	48	35	78	32	17	12	10	23	34	48	78
		Min-d	5	6	7	2	3	2	3	2	1	3	2	4	1
	Imsil	Mean	24	24	26	21	20	18	7	10	11	17	13	16	18
		%	95	96	94	93	97	58	53	77	81	94	77	79	83
		Max-d	35	44	48	33	65	32	13	17	17	29	29	33	65
		Min-d	14	15	12	8	8	8	<1	3	7	7	3	6	<1
Thailand	Bangkok	Mean	38	37	23	16	11	10	8	8	9	13	18	29	18
		%	100	100	100	100	99	99	100	100	99	100	100	100	100
		Max-d	79	58	43	25	23	20	15	13	24	26	25	56	79
		Min-d	18	22	10	7	4	5	4	4	5	5	9	11	4
	Samutprakarn	Mean	40	39	22	17	12	11	9	8	11	13	20	37	20
		%	100	99	100	100	100	100	100	100	100	100	99	100	100
		Max-d	88	64	40	32	25	22	15	14	31	29	34	71	88
		Min-d	18	22	10	6	4	5	4	4	5	6	11	17	4
	Chang Phueak	Mean	44	47	78	38	21	16	14	15	13	15	20	28	29
		%	100	99	100	99	99	99	99	100	96	98	99	99	99
		Max-d	60	77	131	101	33	27	19	23	17	24	27	38	131
		Min-d	25	18	40	14	11	10	10	11	11	9	12	21	9
	Si Phum	Mean	41	39	78	33	16	11	8	9	8	9	14	24	24
		%	97	99	98	97	99	100	100	100	100	100	100	100	99
		Max-d	58	76	116	111	26	22	13	17	13	17	21	35	116
		Min-d	22	9	36	5	5	6	4	6	5	4	6	15	4
	Nai Mueang	Mean	44	44	46	24	17	15	13	15	13	16	21	31	25
		%	100	99	100	100	99	100	100	100	100	100	100	100	100
		Max-d	71	62	68	39	23	25	19	21	22	27	31	58	71
		Min-d	17	18	19	12	11	9	9	9	7	8	12	13	7
Vietnam	Hoa Binh	Mean	65	49	***	25	22	***	***	***	***	15	6	2	24
		%	58	2	***	98	21	***	***	***	***	80	100	6	30
		Max-d	282	49	***	56	34	***	***	***	***	50	22	3	282
		Min-d	23	49	***	5	4	***	***	***	***	3	1	2	1

Terms and abbreviations are given in Table 4.2.

Table 4.13.1 Particulate matter component: SO₄²⁻ - Measured by FPUnit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	2.41	1.47	4.45	7.28	8.59	8.39	8.35	7.23	6.65	7.68	***	6.37	6.42
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	2.68	2.89	5.71	9.65	9.30	8.81	8.43	8.39	7.57	9.47	***	7.61	9.65
		Min-2w	2.14	0.04	3.20	4.91	8.14	7.97	8.27	6.08	5.74	4.99	***	5.13	0.04
	Serpong	Mean	2.66	2.63	3.32	5.16	7.98	7.29	8.65	7.46	6.52	6.87	4.50	2.83	5.49
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	3.60	2.91	3.42	5.16	8.34	8.46	8.79	8.61	7.04	7.67	8.28	3.20	8.79
		Min-2w	1.72	2.35	3.18	5.16	7.62	6.11	8.51	6.52	6.01	6.07	0.72	2.45	0.72
	Bandung	Mean	4.04	5.81	7.46	7.12	9.18	7.02	***	7.83	7.48	7.47	5.93	6.85	7.14
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	4.04	9.47	11.55	8.83	10.39	7.52	***	9.00	8.10	9.61	7.49	7.93	11.55
		Min-2w	4.04	3.31	4.29	3.95	7.37	6.51	***	6.37	6.81	5.63	4.29	4.38	3.31
Japan	Rishiri	Mean	1.77	1.68	2.32	1.79	1.51	1.89	2.73	2.36	1.02	1.12	1.92	1.19	1.81
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	2.12	1.91	2.42	2.11	1.88	2.02	2.83	2.73	1.07	1.12	2.18	1.46	2.83
		Min-2w	1.42	1.45	2.21	1.47	1.15	1.64	2.64	2.00	0.97	1.12	1.62	0.91	0.91
	Ochiishi	Mean	2.21	1.96	2.11	3.40	1.40	1.75	1.44	2.93	1.46	2.73	3.44	1.75	2.14
		%	100	50	100	43	100	100	50	50	100	100	67	100	80
		Max-2w	2.61	1.96	2.93	3.40	2.13	1.83	1.44	2.93	2.03	3.22	4.33	2.39	4.33
		Min-2w	1.81	1.96	1.30	3.40	0.79	1.68	1.44	2.93	0.88	2.23	2.56	1.10	0.79
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.4	1.3	1.3	1.2	0.4	2.2	1.7	0.7	1.2	1.1	1.0	0.2	1.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.6	1.5	1.6	1.2	0.4	2.6	2.3	1.0	1.4	1.7	1.0	0.3	2.6
		Min-2w	0.1	1.1	1.1	1.2	0.4	1.7	1.1	0.4	1.0	0.5	1.0	0.1	0.1
	Ijira	Mean	1.08	2.03	1.78	2.13	1.42	2.43	1.87	1.32	1.60	1.45	1.36	0.95	1.60
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.10	2.24	2.33	2.38	1.88	2.44	2.24	1.43	1.60	1.94	1.85	0.99	2.44
		Min-2w	1.05	1.83	1.23	1.88	0.99	2.41	1.50	1.22	1.59	0.96	0.76	0.92	0.76
	Oki	Mean	4.14	4.06	3.40	2.26	1.77	2.77	2.47	2.01	1.83	2.13	3.36	3.21	2.79
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	4.49	4.21	4.19	2.41	2.92	3.11	3.32	2.01	1.99	2.51	4.40	3.36	4.49
		Min-2w	3.78	3.92	2.60	2.12	0.46	2.44	1.62	2.01	1.66	1.75	2.33	3.07	0.46
	Yusuhara	Mean	2.29	2.44	3.00	2.10	2.23	2.32	2.01	1.29	2.43	1.75	1.92	2.08	2.15
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.59	2.55	3.29	2.44	2.39	2.64	2.51	1.41	3.29	1.88	2.79	2.23	3.29
		Min-2w	2.00	2.34	2.71	1.76	1.97	2.01	1.50	1.18	1.57	1.62	1.34	1.92	1.18
	Hedo	Mean	4.07	3.78	4.07	3.84	1.55	2.19	1.54	1.61	1.82	3.57	3.53	3.05	2.86
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	4.64	4.38	4.11	4.26	2.43	2.22	2.20	2.21	2.62	3.89	4.37	3.28	4.64
		Min-2w	3.50	3.17	4.02	3.41	0.60	2.17	0.87	1.01	1.01	3.26	3.02	2.83	0.60
	Ogasawara	Mean	2.05	3.12	3.22	2.39	1.54	1.14	0.65	***	***	2.40	1.78	2.00	2.00
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	2.66	3.27	3.97	2.81	2.11	1.32	0.72	***	***	2.54	1.97	2.30	3.97
		Min-2w	1.44	2.97	2.48	1.98	0.97	0.97	0.58	***	***	2.27	1.57	1.69	0.58
	Tokyo	Mean	1.71	2.07	2.33	2.55	2.52	2.65	2.83	2.34	2.50	1.87	1.68	1.26	2.18
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.98	2.21	2.77	2.95	2.68	3.47	3.25	3.28	2.62	2.43	2.02	1.50	3.47
		Min-2w	1.45	1.92	1.90	2.15	2.27	1.83	2.42	1.40	2.38	1.31	1.13	1.01	1.01
	Niigata-maki	Mean	2.1	3.0	2.5	2.49	1.81	2.00	1.78	0.78	0.75	1.06	0.75	0.80	1.62
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.1	3.4	3.0	2.79	2.04	3.44	2.07	1.20	1.24	1.57	1.06	1.54	3.44
		Min-2w	2.0	2.7	1.9	2.19	1.59	0.55	1.50	0.36	0.26	0.55	0.29	0.06	0.06
	Tsushima	Mean	2.9	3.3	3.5	2.77	2.88	3.49	2.20	1.98	2.03	2.57	3.08	2.58	2.78
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.2	3.7	3.6	2.83	3.34	3.53	2.53	2.25	2.29	3.76	3.29	2.65	3.76
		Min-2w	2.6	2.9	3.4	2.70	1.98	3.44	1.86	1.70	1.76	1.38	2.87	2.51	1.38

Table 4.13 Particulate matter component: SO₄²⁻ - Measured by FP (continued)Unit : µg/m³

Country	Site		2021												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	1.69	3.57	1.95	2.59	3.53	2.64	2.26	2.65	2.55	1.77	1.72	2.25	2.39
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	2.57	4.12	3.88	4.24	4.70	3.38	3.41	3.11	3.15	2.76	2.05	3.56	4.70
		Min-w	0.83	2.88	<0.01	0.79	2.16	1.86	0.97	1.44	1.88	<0.01	1.54	1.31	<0.01
	Tanah Rata	Mean	0.64	2.11	1.54	0.80	1.31	1.74	***	1.42	1.35	0.63	0.45	0.56	1.09
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	1.15	2.89	2.76	1.96	1.96	2.02	***	2.01	2.05	1.14	0.88	1.16	2.89
		Min-w	0.07	1.27	0.56	0.16	0.54	1.33	***	0.35	1.05	0.06	0.15	0.02	0.02
	Danum Valley	Mean	<0.01	0.93	0.76	1.23	0.38	0.45	***	0.87	0.47	1.84	0.42	0.34	0.72
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.01	1.16	0.90	1.23	0.41	0.88	***	1.29	0.47	2.26	0.63	0.65	2.26
		Min-2w	<0.01	0.70	0.52	1.23	0.34	0.02	***	0.45	0.47	1.42	0.22	0.04	<0.01
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Terelj	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Myanmar	Yangon	Mean	3.66	1.03	0.33	0.14	0.15	0.07	1.41	0.38	***	***	***	***	0.88
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	6.03	1.67	0.53	0.22	0.16	0.14	1.51	0.38	***	***	***	***	6.03
		Min-2w	1.29	0.39	0.12	0.05	0.15	<0.01	1.32	0.38	***	***	***	***	<0.01
Philippines	Metro Manila	Mean	1.21	2.09	4.16	4.09	3.56	9.16	4.34	4.19	2.88	3.10	2.75	5.27	3.88
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	2.68	2.83	4.31	6.58	7.07	17.19	8.01	5.97	4.46	6.26	4.89	10.54	17.19
		Min-w	0.15	1.34	4.01	2.20	1.00	4.42	1.35	2.40	0.26	1.42	1.33	0.83	0.15
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	Mean	0.03	0.02	0.03	0.03	0.07	0.08	0.05	0.13	0.12	0.05	0.05	0.05	0.06
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	0.03	0.02	0.03	0.04	0.07	0.08	0.05	0.13	0.13	0.07	0.10	0.08	0.13
		Min-m	0.03	0.02	0.03	0.02	0.06	0.08	0.05	0.13	0.11	0.03	<0.01	0.03	<0.01
	Listvyanka	Mean	0.42	0.37	0.73	0.53	0.55	0.42	0.23	0.39	0.43	0.26	0.07	0.13	0.38
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	0.60	0.62	1.19	0.73	1.16	0.73	0.29	0.57	0.60	0.50	0.10	0.30	1.19
		Min-w	0.18	0.20	0.50	0.44	0.14	0.12	0.11	0.12	0.30	0.08	0.04	0.06	0.04
	Irkutsk	Mean	2.10	1.52	1.03	1.12	0.65	0.72	0.95	0.99	0.76	0.26	0.23	2.10	1.01
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	3.58	2.36	1.13	1.97	0.95	0.85	2.21	1.62	1.31	0.63	0.46	3.71	3.71
		Min-w	1.23	0.51	0.95	0.65	0.31	0.63	0.41	0.48	0.04	0.12	0.09	1.35	0.04
	Primorskaya	Mean	0.18	1.31	1.12	0.93	0.95	1.26	0.81	0.35	0.07	0.15	0.36	0.38	0.66
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.18	1.48	1.39	1.00	1.02	1.41	0.81	0.60	0.07	0.22	0.42	0.62	1.48
		Min-2w	0.18	1.15	0.86	0.87	0.88	1.10	0.80	0.10	0.06	0.09	0.31	0.14	0.06

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

 Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	9.89	10.05	8.49	9.24	9.13	8.97	7.19	10.33	4.28	7.14	7.41	8.48	8.30
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	10.56	12.08	10.52	12.86	10.57	10.65	11.87	15.42	6.83	9.55	13.08	11.35	15.42
		Min-w	8.77	7.75	5.61	6.21	7.62	7.32	2.97	5.80	2.08	2.97	4.06	3.99	2.08
	Hoa Binh	Mean	3.96	4.16	3.79	2.95	3.40	3.76	3.19	3.94	3.16	3.40	3.45	3.07	3.49
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.67	6.19	4.18	3.20	4.17	4.24	3.62	4.75	4.41	5.04	4.57	4.02	6.19
		Min-w	2.47	3.21	2.98	2.63	2.96	3.22	2.67	3.12	2.24	2.08	2.75	2.15	2.08
	Can Tho	Mean	5.21	6.09	5.61	5.01	5.32	5.26	4.96	5.13	5.10	5.10	5.49	5.10	5.26
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	5.89	6.39	5.85	5.65	6.01	5.77	5.91	5.65	6.23	5.91	6.37	6.39	6.39
		Min-w	4.52	5.75	5.08	4.50	4.68	5.04	4.11	4.42	4.38	4.64	4.31	4.58	4.11
	Ho Chi Minh	Mean	5.73	5.93	6.05	5.88	5.87	5.37	5.52	6.12	5.97	5.39	6.19	5.83	5.82
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	6.09	6.63	6.67	6.67	6.65	6.07	6.25	6.71	6.47	5.67	6.63	6.17	6.71
		Min-w	4.98	4.98	5.63	5.56	5.60	4.84	5.16	5.65	5.60	5.18	5.67	5.58	4.84
	Yen Bai	Mean	4.16	5.98	5.89	5.84	6.75	12.76	6.66	9.09	9.71	10.39	8.97	6.97	7.73
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	7.28	7.19	7.11	7.89	9.60	18.14	8.92	12.27	11.69	16.53	10.91	12.08	18.14
		Min-w	2.74	4.66	5.01	3.88	4.12	9.19	4.67	6.70	8.29	6.12	6.47	4.83	2.74

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

 Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	2.53	4.60	3.55	2.47	2.88	5.90	3.91	4.08	1.46	1.33	4.55	4.89	3.58
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	4.05	9.70	6.52	3.66	4.13	8.55	5.69	6.89	2.26	1.84	11.53	8.33	9.70
		Min-d	1.56	1.98	2.47	1.38	1.62	2.95	2.59	1.99	0.31	0.68	1.26	1.33	0.31
	Cheju (Kosan)	Mean	2.09	2.60	2.62	1.50	2.23	4.40	1.70	1.99	***	1.91	2.50	3.31	2.31
		%	13	7	13	17	16	13	16	10	***	13	13	16	12
		Max-d	3.00	3.22	5.11	2.14	2.82	5.85	2.96	3.71	***	3.24	4.65	7.10	5.85
		Min-d	1.12	1.97	1.14	0.85	0.86	3.29	0.41	1.08	***	1.08	0.26	1.20	0.41
	Imsil	Mean	2.50	2.16	2.66	1.65	1.69	3.46	1.72	1.92	1.68	1.26	2.52	3.61	2.13
		%	16	18	16	17	16	13	13	19	17	16	17	16	16
		Max-d	4.04	3.64	5.15	3.15	2.29	4.33	4.26	3.15	3.27	2.09	4.95	6.58	5.15
		Min-d	1.34	0.69	1.36	1.08	1.13	2.27	0.37	0.57	0.54	0.14	1.37	1.67	0.37

Terms and abbreviations are given in Table 4.2.

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

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	1.60	1.02	1.13	1.27	0.79	1.84	1.61	1.86	2.58	1.42	***	1.92	1.51
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	1.85	1.86	1.19	1.68	1.21	2.48	2.00	2.39	2.61	1.77	***	2.20	2.61
		Min-2w	1.35	0.18	1.06	0.86	<0.01	1.20	1.22	1.33	2.55	1.21	***	1.64	<0.01
	Serpong	Mean	1.01	1.08	0.31	0.48	0.66	0.84	1.03	1.17	0.73	0.73	0.31	0.51	0.75
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	1.69	1.28	0.57	0.48	0.76	1.09	1.10	1.64	0.78	0.90	0.32	0.53	1.69
		Min-2w	0.34	0.88	0.10	0.48	0.56	0.59	0.96	0.67	0.69	0.57	0.30	0.49	0.10
	Bandung	Mean	1.29	2.46	3.02	1.99	2.63	2.55	***	2.47	2.13	2.11	1.31	1.55	2.16
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	1.29	3.89	5.62	2.75	2.86	3.03	***	2.79	2.38	2.34	1.67	1.97	5.62
		Min-2w	1.29	1.09	1.72	1.04	2.27	2.08	***	1.76	1.51	1.86	0.98	1.21	0.98
Japan	Rishiri	Mean	0.40	0.56	0.90	0.80	0.90	0.72	0.64	0.55	0.41	0.62	0.75	0.60	0.66
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	0.43	0.84	1.12	0.94	1.04	1.10	0.99	0.60	0.49	0.62	1.12	0.82	1.12
		Min-2w	0.36	0.28	0.68	0.67	0.76	0.49	0.30	0.50	0.33	0.62	0.48	0.37	0.28
	Ochiishi	Mean	0.61	0.99	0.70	1.41	0.78	0.84	0.51	1.08	0.68	0.68	0.85	0.63	0.78
		%	100	50	100	43	100	100	50	50	100	100	67	100	80
		Max-2w	0.70	0.99	0.85	1.41	1.00	1.00	0.51	1.08	1.00	0.85	1.04	0.96	1.41
		Min-2w	0.51	0.99	0.54	1.41	0.49	0.69	0.51	1.08	0.36	0.51	0.66	0.30	0.30
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.1	0.8	0.9	0.9	0.1	0.3	0.1	0.1	0.2	0.2	0.4	0.1	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	1.0	1.0	1.3	0.1	0.4	0.1	0.1	0.2	0.3	0.4	0.2	1.3
		Min-2w	0.1	0.6	0.9	0.6	0.1	0.2	0.1	0.0	0.1	0.1	0.4	0.0	0.0
	Ijira	Mean	0.40	0.77	0.97	1.42	0.50	0.21	0.19	0.31	0.25	0.60	0.53	0.38	0.54
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.51	0.82	1.19	1.62	0.85	0.22	0.20	0.38	0.36	0.80	0.81	0.41	1.62
		Min-2w	0.29	0.71	0.76	1.22	0.30	0.19	0.18	0.23	0.14	0.40	0.28	0.36	0.14
	Okii	Mean	2.30	2.99	2.87	1.79	1.32	0.71	0.94	0.46	1.12	1.02	2.63	2.31	1.76
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	2.46	4.02	3.95	2.13	2.42	0.80	1.10	0.46	1.23	1.37	3.96	3.31	4.02
		Min-2w	2.14	1.96	1.79	1.44	0.39	0.62	0.77	0.46	1.02	0.68	1.29	1.73	0.39
	Yusuhara	Mean	1.57	1.84	1.41	1.21	0.62	0.05	0.04	0.17	0.22	0.55	1.22	1.73	0.89
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.83	2.37	1.56	1.40	1.14	0.07	0.06	0.26	0.42	0.65	1.89	2.02	2.37
		Min-2w	1.30	1.31	1.25	1.02	0.21	0.03	0.02	0.08	0.02	0.44	0.55	1.43	0.02
	Hedo	Mean	1.83	1.91	1.86	1.86	0.89	1.05	0.44	0.51	1.07	1.10	2.18	2.04	1.41
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.05	2.16	2.02	2.11	1.78	1.37	0.62	0.74	1.90	1.10	2.49	2.55	2.55
		Min-2w	1.61	1.66	1.70	1.61	0.25	0.74	0.26	0.28	0.24	1.10	1.64	1.53	0.24
	Ogasawara	Mean	0.62	1.16	1.31	1.02	0.55	0.21	0.12	***	***	0.43	0.51	0.73	0.65
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	0.74	1.24	1.71	1.53	0.92	0.23	0.14	***	***	0.44	0.59	0.82	1.71
		Min-2w	0.50	1.09	0.92	0.52	0.27	0.18	0.11	***	***	0.41	0.36	0.63	0.11
	Tokyo	Mean	3.74	2.91	3.19	3.36	3.04	2.34	1.96	2.74	2.73	2.71	2.57	3.10	2.86
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	4.26	2.99	3.38	4.03	3.12	2.37	2.27	3.46	2.95	3.58	3.35	3.72	4.26
		Min-2w	3.23	2.82	3.00	2.69	2.90	2.30	1.66	2.03	2.50	1.84	1.86	2.47	1.66
	Niigata-maki	Mean	1.2	1.8	2.0	2.01	1.36	0.32	0.59	0.32	0.38	0.61	0.48	0.43	0.95
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.3	1.9	2.5	2.31	1.57	0.42	0.62	0.39	0.56	0.96	0.80	0.82	2.47
		Min-2w	1.0	1.7	1.4	1.70	1.00	0.23	0.55	0.26	0.20	0.25	0.10	0.03	0.03
	Tsushima	Mean	3.0	4.2	4.2	3.15	1.98	0.58	0.95	0.49	1.05	1.34	3.64	4.36	2.39
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.3	5.4	4.4	3.21	3.74	0.86	1.04	0.70	1.25	1.43	4.46	5.20	5.40
		Min-2w	2.6	2.9	4.1	3.09	0.97	0.31	0.86	0.29	0.84	1.25	2.81	3.52	0.29

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

Country	Site		2021												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	1.31	2.49	0.99	0.84	1.08	0.93	0.84	1.20	1.12	1.30	1.07	1.35	1.21
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	1.90	3.57	1.39	1.17	1.40	1.21	1.51	1.45	1.43	2.33	1.73	2.07	3.57
		Min-w	0.78	1.27	0.05	0.63	0.95	0.78	0.43	1.04	0.77	0.03	0.60	0.86	0.03
	Tanah Rata	Mean	0.16	0.61	0.30	0.13	0.11	0.10	***	0.12	0.09	0.15	0.06	0.17	0.18
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.34	0.89	0.69	0.26	0.19	0.12	***	0.20	0.11	0.31	0.11	0.41	0.89
		Min-w	0.04	0.16	0.10	0.05	0.01	0.08	***	0.06	0.06	0.02	0.02	0.03	0.01
	Danum Valley	Mean	0.01	0.29	0.17	<0.01	0.07	0.12	***	0.01	0.20	0.08	0.03	0.16	0.11
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	0.01	0.34	0.24	<0.01	0.08	0.22	***	0.01	0.20	0.13	0.04	0.25	0.34
		Min-2w	0.01	0.25	0.09	<0.01	0.05	0.03	***	<0.01	0.20	0.04	<0.01	0.08	<0.01
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Terelj	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Myanmar	Yangon	Mean	0.07	0.97	0.84	0.48	0.09	0.47	1.27	0.38	***	***	***	***	0.58
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	0.14	1.80	1.59	0.80	0.09	1.19	1.70	0.38	***	***	***	***	1.80
		Min-2w	<0.01	0.15	0.10	0.16	0.09	0.02	0.84	0.38	***	***	***	***	<0.01
Philippines	Metro Manila	Mean	1.31	2.53	2.67	4.00	1.34	1.12	1.39	1.92	0.66	1.35	1.32	1.52	1.64
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	2.95	2.95	2.84	5.92	2.05	2.15	1.99	1.96	0.99	2.17	2.00	1.71	5.92
		Min-w	0.18	1.72	2.49	1.56	0.37	0.20	0.50	1.88	<0.01	0.60	0.68	1.13	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	Mean	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01	0.02	<0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	<0.01	0.02	0.03
		Min-m	<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
	Listvyanka	Mean	0.05	0.02	0.09	<0.01	0.39	<0.01	0.05	<0.01	0.01	0.01	0.02	0.01	0.06
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	0.14	0.03	0.18	<0.01	0.99	<0.01	0.12	0.02	0.04	0.04	0.03	0.02	0.99
		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
	Irkutsk	Mean	0.82	0.39	0.26	0.35	0.03	0.07	0.04	0.03	0.08	0.05	0.06	0.96	0.25
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	1.61	0.66	0.56	0.69	0.09	0.16	0.14	0.11	0.21	0.11	0.13	2.10	2.10
		Min-w	0.51	0.08	<0.01	0.17	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.37	<0.01
	Primorskaya	Mean	1.03	0.11	0.11	0.10	0.11	0.27	0.10	0.30	0.37	0.24	0.11	0.43	0.27
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.08	0.11	0.12	0.11	0.11	0.41	0.11	0.49	0.40	0.43	0.13	0.60	1.08
		Min-2w	0.99	0.10	0.11	0.10	0.10	0.12	0.10	0.11	0.34	0.06	0.08	0.26	0.06

Table 4.14.1 Particulate matter component: NO₃⁻ - Measured by FP (continued)

 Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	5.95	4.63	4.24	5.59	7.02	7.26	7.83	6.67	8.40	6.30	7.13	6.63	6.52
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	7.55	5.41	5.16	6.96	9.99	9.67	9.76	9.21	12.86	11.05	11.90	10.27	12.86
		Min-w	4.44	3.38	3.22	4.05	5.43	4.60	5.04	3.94	3.84	3.30	3.78	3.59	3.22
	Hoa Binh	Mean	2.03	3.17	2.62	2.38	2.27	2.81	2.71	2.85	2.69	2.98	2.39	2.49	2.61
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.18	4.16	3.12	2.50	2.48	3.35	4.15	3.43	4.52	3.43	2.76	2.75	4.52
		Min-w	1.85	2.31	2.09	2.13	2.05	2.17	1.95	1.95	2.07	2.58	2.05	2.19	1.85
	Can Tho	Mean	1.57	1.66	1.82	1.91	1.82	1.99	2.41	1.88	1.79	1.98	1.89	2.69	1.97
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.64	1.73	2.54	2.44	2.16	2.28	3.93	2.42	2.00	2.58	2.24	3.93	3.93
		Min-w	1.07	1.51	1.51	1.39	1.45	1.69	1.63	1.47	1.67	1.57	1.35	1.39	1.07
	Ho Chi Minh	Mean	5.41	4.62	4.13	5.00	4.47	5.15	5.28	5.39	5.54	5.16	4.84	5.15	5.03
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	6.51	5.06	5.36	6.39	5.32	6.65	5.71	5.69	6.69	5.44	5.58	6.67	6.69
		Min-w	4.70	4.01	2.66	3.89	3.93	3.61	3.91	5.22	4.31	4.70	3.43	4.35	2.66
	Yen Bai	Mean	6.12	6.33	4.12	6.18	5.57	4.81	5.16	5.64	4.73	7.89	5.74	6.28	5.71
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	9.92	9.29	5.38	9.77	7.00	6.35	9.42	7.56	7.23	9.54	7.17	9.52	9.92
		Min-w	1.79	2.34	2.03	3.22	4.37	2.43	2.76	4.76	2.43	6.14	4.82	3.09	1.79

Table 4.14.2 Particulate matter component: NO₃⁻ - Measured by FP with PM_{2.5} cyclone

 Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	4.93	10.90	8.31	2.04	4.88	4.86	0.09	0.20	0.14	1.05	10.14	11.26	4.15
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	11.78	27.36	17.67	3.49	9.52	11.66	0.18	0.66	0.20	2.27	29.88	21.90	27.36
		Min-d	1.24	1.61	1.42	0.59	0.24	0.32	<0.01	0.03	0.07	0.18	0.29	2.31	<0.01
	Cheju (Kosan)	Mean	0.50	0.84	1.38	0.22	0.54	0.10	0.32	0.16	***	0.28	0.38	2.22	0.49
		%	13	7	13	17	16	13	16	10	***	13	13	16	12
		Max-d	1.17	1.40	4.33	0.34	1.59	0.17	0.43	0.24	***	0.58	0.74	4.07	4.33
		Min-d	0.08	0.27	0.23	0.15	0.17	0.05	0.03	0.03	***	0.17	0.10	0.38	0.03
	Imsil	Mean	4.13	3.15	5.64	1.06	0.28	0.55	0.07	<0.01	0.05	0.41	2.48	8.83	1.65
		%	16	18	16	17	16	13	13	19	17	16	17	16	16
		Max-d	6.70	11.17	14.79	2.16	0.48	1.01	0.18	0.03	0.08	0.99	5.24	13.94	14.79
		Min-d	2.71	0.15	2.08	0.15	0.14	0.08	0.01	<0.01	0.03	0.07	0.25	4.08	<0.01

Terms and abbreviations are given in Table 4.2.

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

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.68	0.62	0.30	0.55	0.10	0.75	0.14	0.22	0.48	0.06	***	0.75	0.39
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	0.88	1.17	0.47	0.89	0.25	1.41	0.21	0.34	0.55	0.10	***	0.86	1.41
		Min-2w	0.49	0.07	0.12	0.21	<0.01	0.08	0.06	0.09	0.41	<0.01	***	0.64	<0.01
	Serpong	Mean	0.38	0.34	0.14	0.11	0.26	0.19	0.17	0.19	0.16	0.01	1.62	0.55	0.34
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.63	0.35	0.16	0.11	0.32	0.26	0.23	0.21	0.22	0.02	1.76	0.98	1.76
		Min-2w	0.12	0.33	0.12	0.11	0.19	0.13	0.12	0.14	0.10	<0.01	1.48	0.12	<0.01
	Bandung	Mean	0.32	0.46	0.42	0.21	0.28	0.27	***	0.51	0.42	0.33	0.31	0.28	0.35
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	0.32	0.60	0.59	0.32	0.29	0.38	***	0.63	0.64	0.44	0.39	0.37	0.64
		Min-2w	0.32	0.22	0.17	0.13	0.27	0.15	***	0.41	0.28	0.21	0.23	0.20	0.13
Japan	Rishiri	Mean	1.58	2.77	4.56	4.43	2.90	1.32	0.77	1.31	1.83	3.10	5.49	1.50	2.67
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	2.44	3.21	5.07	5.41	5.18	3.08	1.44	2.00	2.09	3.10	6.77	2.11	6.77
		Min-2w	0.72	2.34	4.05	3.44	0.61	0.37	0.11	0.61	1.58	3.10	3.13	0.89	0.11
	Ochiishi	Mean	4.83	3.89	6.15	14.33	5.60	1.36	0.79	3.45	2.86	12.76	17.14	5.77	6.72
		%	100	50	100	43	100	100	50	50	100	100	67	100	80
		Max-2w	4.90	3.89	8.32	14.33	10.31	1.59	0.79	3.45	3.05	17.95	24.30	8.37	24.30
		Min-2w	4.76	3.89	3.99	14.33	2.83	1.14	0.79	3.45	2.68	7.57	9.98	3.17	0.79
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.0	0.1	0.1	0.1	<0.01	<0.01	<0.01	<0.01	0.0	0.0	0.0	0.0	0.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.0	0.1	0.2	0.1	<0.01	<0.01	<0.01	<0.01	0.0	0.0	0.0	0.0	0.2
		Min-2w	<0.01	0.1	0.0	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	0.0	0.0	<0.01	<0.01
	Ijira	Mean	0.11	0.11	0.18	0.15	0.03	0.01	0.01	0.04	0.02	0.12	0.11	0.11	0.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.11	0.12	0.21	0.17	0.06	0.02	0.02	0.08	0.03	0.15	0.17	0.14	0.21
		Min-2w	0.11	0.11	0.16	0.14	0.02	<0.01	<0.01	0.01	<0.01	0.08	0.06	0.08	<0.01
	Oki	Mean	12.67	9.25	4.38	3.44	1.71	0.82	0.38	12.26	3.19	4.15	7.23	11.19	5.68
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	16.22	11.58	4.70	3.72	2.79	0.94	0.52	12.26	3.90	6.18	10.48	12.68	16.22
		Min-2w	9.13	6.92	4.05	3.16	0.88	0.70	0.23	12.26	2.48	2.11	3.98	9.01	0.23
	Yusuhara	Mean	0.42	0.24	0.10	0.19	0.03	0.01	<0.01	0.04	0.04	0.14	0.22	0.37	0.15
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.54	0.27	0.10	0.24	0.08	0.02	<0.01	0.05	0.07	0.16	0.42	0.43	0.54
		Min-2w	0.30	0.22	0.10	0.14	<0.01	<0.01	<0.01	0.03	<0.01	0.13	0.04	0.32	<0.01
	Hedo	Mean	10.20	9.43	7.21	10.41	3.63	4.27	7.90	4.54	2.12	11.60	8.78	9.42	7.36
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	11.39	10.80	8.94	12.61	4.65	4.74	11.43	6.92	3.09	13.26	12.15	11.36	13.26
		Min-2w	9.00	8.05	5.48	8.21	1.61	3.81	4.37	2.17	1.16	9.93	6.89	7.47	1.16
	Ogasawara	Mean	5.37	6.58	7.10	7.62	4.21	4.02	2.77	***	***	8.56	4.56	4.83	5.46
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	7.57	7.93	7.61	8.24	7.22	4.87	3.75	***	***	9.59	5.69	5.01	9.59
		Min-2w	3.18	5.23	6.59	6.99	2.48	3.17	1.80	***	***	7.53	2.87	4.66	1.80
	Tokyo	Mean	0.78	0.61	1.01	1.66	0.56	0.28	0.16	0.84	0.87	0.89	0.54	0.56	0.72
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.78	0.66	1.08	1.84	0.76	0.36	0.21	1.52	1.51	1.41	0.68	0.81	1.84
		Min-2w	0.78	0.57	0.94	1.48	0.25	0.20	0.12	0.16	0.22	0.37	0.46	0.31	0.12
	Niigata-maki	Mean	4.0	5.9	2.1	3.10	1.49	0.06	0.08	1.17	0.33	1.12	1.25	1.79	1.82
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	5.0	8.0	2.4	4.62	2.45	0.10	0.09	2.24	0.36	1.25	1.80	3.44	8.02
		Min-2w	2.9	3.7	1.8	1.57	0.77	0.03	0.07	0.09	0.30	0.99	0.51	0.13	0.03
	Tsushima	Mean	1.2	1.3	1.3	1.92	0.14	0.15	0.19	0.34	0.89	0.37	0.56	0.81	0.74
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.3	2.0	1.5	2.63	0.36	0.30	0.19	0.35	1.25	0.58	0.57	0.88	2.63
		Min-2w	1.0	0.6	1.2	1.21	0.02	<0.01	0.18	0.33	0.52	0.17	0.55	0.74	<0.01

Table 4.15 Particulate matter component: Cl⁻ - Measured by FP (continued)Unit : µg/m³

Country	Site		2021												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	0.24	0.11	0.07	0.06	0.07	0.10	0.12	0.07	0.17	0.12	0.06	0.11
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	0.28	0.62	0.25	0.11	0.11	0.11	0.18	0.15	0.08	0.33	0.27	0.14	0.62
		Min-w	0.06	0.06	0.04	0.03	0.02	0.04	0.04	0.08	0.05	<0.01	0.05	<0.01	<0.01
	Tanah Rata	Mean	0.05	0.14	0.08	0.03	0.02	0.02	***	<0.01	<0.01	0.02	0.01	0.09	0.04
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.10	0.32	0.22	0.06	0.04	0.02	***	<0.01	0.01	0.06	0.02	0.38	0.38
		Min-w	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	***	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Danum Valley	Mean	<0.01	0.82	0.07	<0.01	0.02	<0.01	***	<0.01	<0.01	0.08	0.01	0.12	0.12
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.01	0.89	0.09	<0.01	0.03	0.01	***	<0.01	<0.01	0.16	0.01	0.25	0.89
		Min-2w	<0.01	0.76	0.05	<0.01	<0.01	<0.01	***	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Terelj	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Myanmar	Yangon	Mean	<0.01	0.28	0.18	0.10	0.04	0.15	1.09	0.53	***	***	***	***	0.27
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	<0.01	0.38	0.21	0.13	0.08	0.37	1.50	0.53	***	***	***	***	1.50
		Min-2w	<0.01	0.17	0.14	0.08	<0.01	0.01	0.67	0.53	***	***	***	***	<0.01
Philippines	Metro Manila	Mean	0.62	1.02	1.16	1.45	0.83	0.24	2.89	0.27	0.08	0.77	0.70	1.20	1.00
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	1.13	1.68	1.42	1.92	1.84	0.70	8.62	0.28	0.15	1.62	1.30	1.89	8.62
		Min-w	0.21	0.66	0.89	0.76	0.01	<0.01	0.08	0.25	<0.01	0.38	0.22	0.44	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	Mean	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.01	0.01	0.04
		Min-m	<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
	Listvyanka	Mean	0.05	0.03	0.03	0.08	0.09	0.07	0.07	0.05	0.05	0.10	0.05	0.01	0.06
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	0.06	0.07	0.05	0.12	0.15	0.11	0.14	0.06	0.07	0.25	0.09	0.03	0.25
		Min-w	0.03	<0.01	0.02	0.05	0.01	0.04	0.03	0.04	0.03	0.03	0.01	<0.01	<0.01
	Irkutsk	Mean	0.08	0.02	0.11	0.14	0.03	0.03	0.13	0.04	0.08	0.01	0.07	0.43	0.10
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	0.13	0.03	0.16	0.17	0.05	0.03	0.49	0.09	0.23	0.02	0.15	0.63	0.63
		Min-w	0.04	0.01	0.08	0.08	0.01	0.02	0.01	0.02	<0.01	<0.01	0.01	0.19	<0.01
	Primorskaya	Mean	0.51	0.40	0.45	0.57	0.54	0.65	0.35	0.32	0.28	0.26	0.26	0.30	0.41
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.59	0.44	0.47	0.57	0.58	0.70	0.40	0.35	0.28	0.32	0.27	0.30	0.70
		Min-2w	0.43	0.36	0.43	0.57	0.50	0.59	0.31	0.29	0.27	0.19	0.25	0.29	0.19

Table 4.15.1 Particulate matter component: Cl^- - Measured by FP (continued)

 Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	5.17	6.12	6.93	5.97	6.65	5.60	6.23	5.71	3.19	4.01	5.27	3.09	5.27
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	6.99	7.52	10.10	9.21	8.36	7.23	9.94	7.77	4.52	6.14	7.86	4.82	10.10
		Min-w	3.29	4.64	4.80	4.49	5.02	4.36	3.36	3.65	2.10	1.85	2.14	1.79	1.79
	Hoa Binh	Mean	2.03	2.04	2.28	2.15	1.81	1.91	1.99	1.96	1.90	1.85	1.82	1.87	1.97
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.29	2.28	2.66	2.62	1.92	2.10	2.28	2.06	1.98	1.91	1.88	2.05	2.66
		Min-w	1.87	1.82	2.02	1.84	1.73	1.82	1.77	1.85	1.81	1.75	1.77	1.73	1.73
	Can Tho	Mean	1.71	1.90	1.44	2.15	2.13	2.04	2.07	1.92	2.00	2.50	2.17	2.03	2.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.26	2.50	1.83	2.50	2.32	2.32	2.50	2.32	2.44	2.78	2.38	2.52	2.78
		Min-w	1.29	1.45	1.25	1.88	1.96	1.79	1.65	1.79	1.29	2.30	1.98	1.53	1.25
	Ho Chi Minh	Mean	3.75	3.84	4.06	3.64	3.50	3.16	3.48	3.83	3.82	3.79	3.81	3.75	3.70
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.19	4.54	4.62	4.21	3.73	3.75	4.19	4.62	4.68	4.33	3.87	4.15	4.68
		Min-w	3.45	3.04	3.69	2.94	3.19	2.40	2.86	3.39	3.04	3.37	3.69	3.39	2.40
	Yen Bai	Mean	1.25	1.76	2.08	3.57	2.42	3.08	3.77	4.06	3.78	4.39	4.04	3.74	3.20
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.54	2.04	2.43	5.50	2.79	3.78	7.46	4.79	4.95	7.15	4.38	4.64	7.46
		Min-w	0.92	1.53	1.65	2.52	1.97	2.08	2.28	3.38	2.33	2.05	3.63	2.47	0.92

Table 4.15.2 Particulate matter component: Cl^- - Measured by FP with $PM_{2.5}$ cyclone

 Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.35	0.34	0.29	0.03	0.09	0.11	0.01	0.01	0.01	0.05	0.14	0.50	0.15
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	0.77	0.88	0.64	0.05	0.16	0.32	0.01	0.01	0.01	0.13	0.45	1.47	0.88
		Min-d	0.06	0.04	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.07	0.01
	Cheju (Kosan)	Mean	0.14	0.23	0.08	0.03	0.03	0.03	0.21	0.01	***	0.03	0.02	0.11	0.08
		%	6	7	13	13	16	13	13	6	***	13	13	16	10
		Max-d	0.25	0.40	0.12	0.04	0.06	0.04	0.58	0.01	***	0.07	0.02	0.29	0.58
		Min-d	0.02	0.05	0.02	0.02		0.02	0.01	***	***	0.01	0.01	0.03	0.01
	Imsil	Mean	0.29	0.16	0.12	0.01	0.01	0.17	0.01	0.01	0.01	0.01	0.13	0.54	0.08
		%	16	18	16	17	16	13	13	19	17	16	17	16	16
		Max-d	0.54	0.32	0.27	0.02	0.01	0.64	0.01	0.01	0.02	0.03	0.42	0.93	0.64
		Min-d	0.10	0.04	0.05	<0.01	0.01	<0.01	0.01	0.01	0.01	<0.01	0.03	0.30	<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		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.38	0.12	0.91	1.60	1.68	2.08	1.54	1.00	1.26	1.71	***	1.14	1.26
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	0.50	0.20	1.27	2.31	1.88	2.53	1.86	1.62	1.34	2.24	***	1.46	2.53
		Min-2w	0.25	0.04	0.55	0.88	1.55	1.62	1.22	0.38	1.19	1.30	***	0.82	0.04
	Serpong	Mean	0.40	0.32	0.52	0.94	1.54	1.48	1.57	1.22	0.88	1.08	0.29	0.28	0.87
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.55	0.38	0.53	0.94	1.55	1.71	1.71	1.47	1.05	1.14	0.53	0.34	1.71
		Min-2w	0.25	0.27	0.50	0.94	1.53	1.25	1.42	0.97	0.70	1.01	0.04	0.23	0.04
	Bandung	Mean	1.09	1.45	1.99	2.11	2.56	2.33	***	2.07	1.71	2.16	1.34	1.91	1.93
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	1.09	1.87	2.87	3.18	3.10	2.50	***	2.28	1.95	2.53	1.69	2.65	3.18
		Min-2w	1.09	0.93	1.05	1.38	2.24	2.16	***	1.70	1.51	1.51	1.00	1.48	0.93
Japan	Rishiri	Mean	0.35	0.37	0.43	0.32	0.22	0.34	0.41	0.40	0.16	0.20	0.35	0.32	0.33
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	0.39	0.50	0.45	0.38	0.23	0.47	0.43	0.52	0.19	0.20	0.48	0.40	0.52
		Min-2w	0.31	0.24	0.41	0.26	0.22	0.17	0.39	0.29	0.14	0.20	0.26	0.25	0.14
	Ochiishi	Mean	0.42	0.48	0.32	0.44	0.17	0.27	0.14	0.38	0.18	0.15	0.29	0.30	0.28
		%	100	50	100	43	100	100	50	50	100	100	67	100	80
		Max-2w	0.50	0.48	0.46	0.44	0.24	0.27	0.14	0.38	0.27	0.18	0.33	0.40	0.50
		Min-2w	0.34	0.48	0.19	0.44	0.14	0.26	0.14	0.38	0.09	0.13	0.26	0.20	0.09
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.1	0.4	0.3	0.3	0.1	0.6	0.5	0.2	0.3	0.3	0.3	0.0	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.4	0.3	0.4	0.1	0.7	0.7	0.2	0.4	0.4	0.3	0.1	0.7
		Min-2w	0.0	0.3	0.3	0.3	0.1	0.6	0.4	0.1	0.3	0.1	0.3	0.0	0.0
	Ijira	Mean	0.34	0.64	0.48	0.46	0.31	0.60	0.41	0.25	0.38	0.31	0.38	0.30	0.40
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.35	0.74	0.66	0.48	0.39	0.61	0.55	0.29	0.40	0.37	0.52	0.33	0.74
		Min-2w	0.34	0.54	0.30	0.44	0.24	0.60	0.26	0.21	0.36	0.25	0.19	0.27	0.19
	Oki	Mean	0.67	0.89	0.86	0.36	0.33	0.58	0.54	0.06	0.29	0.32	0.51	0.42	0.49
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	0.77	1.26	0.93	0.36	0.53	0.67	0.80	0.06	0.33	0.44	0.71	0.64	1.26
		Min-2w	0.57	0.51	0.79	0.35	0.08	0.49	0.28	0.06	0.26	0.19	0.32	0.29	0.06
	Yusuhara	Mean	0.67	0.76	0.80	0.34	0.40	0.50	0.34	0.25	0.61	0.28	0.58	0.81	0.52
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.75	0.95	0.89	0.38	0.46	0.58	0.39	0.25	0.84	0.43	0.87	0.84	0.95
		Min-2w	0.59	0.57	0.72	0.29	0.37	0.42	0.28	0.24	0.39	0.12	0.40	0.78	0.12
	Hedo	Mean	0.43	0.32	0.42	0.29	0.13	0.26	0.05	0.13	0.25	0.19	0.33	0.25	0.25
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.55	0.38	0.51	0.33	0.21	0.31	0.07	0.14	0.34	0.22	0.49	0.31	0.55
		Min-2w	0.31	0.25	0.33	0.26	0.06	0.21	0.04	0.13	0.15	0.17	0.21	0.20	0.04
	Ogasawara	Mean	0.17	0.30	0.26	0.20	0.11	0.05	0.04	***	***	0.11	0.12	0.23	0.16
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	0.18	0.35	0.28	0.28	0.14	0.06	0.05	***	***	0.14	0.13	0.29	0.35
		Min-2w	0.15	0.25	0.24	0.12	0.07	0.05	0.03	***	***	0.09	0.11	0.17	0.03
	Tokyo	Mean	1.22	0.89	0.75	0.71	0.62	0.65	0.63	0.50	0.60	0.43	0.68	0.97	0.72
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.43	0.90	0.81	0.82	0.66	0.78	0.68	0.71	0.70	0.45	0.93	1.11	1.43
		Min-2w	1.01	0.88	0.69	0.60	0.57	0.51	0.58	0.29	0.50	0.42	0.45	0.82	0.29
	Niigata-maki	Mean	0.5	0.7	0.65	0.37	0.26	0.42	0.31	0.07	0.13	0.16	0.16	0.17	0.31
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.6	0.7	0.82	0.40	0.30	0.70	0.41	0.08	0.21	0.23	0.25	0.33	0.82
		Min-2w	0.4	0.7	0.48	0.33	0.23	0.14	0.21	0.07	0.05	0.10	0.02	0.01	0.01
	Tsushima	Mean	0.9	1.4	1.51	0.52	0.53	0.96	0.34	0.31	0.32	0.47	1.09	1.33	0.80
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.1	1.9	1.62	0.60	0.61	1.04	0.39	0.41	0.33	0.65	1.18	1.50	1.90
		Min-2w	0.8	0.9	1.39	0.45	0.46	0.87	0.28	0.21	0.32	0.29	1.01	1.17	0.21

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

Country	Site		2021												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	0.57	0.72	0.58	0.98	0.92	0.75	0.73	0.70	0.78	0.52	0.47	0.67	0.69
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	0.87	1.32	1.12	1.24	1.48	1.05	1.03	0.85	1.03	0.82	0.54	1.10	1.48
		Min-w	0.19	0.33	0.08	0.59	0.51	0.50	0.40	0.39	0.63	<0.01	0.45	0.35	<0.01
	Tanah Rata	Mean	0.19	0.41	0.37	0.28	0.37	0.47	***	0.38	0.29	0.18	0.15	0.15	0.28
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.33	0.57	0.61	0.62	0.61	0.54	***	0.49	0.40	0.25	0.18	0.30	0.62
		Min-w	0.02	0.26	0.20	0.12	0.16	0.32	***	0.17	0.22	0.13	0.12	<0.01	<0.01
	Danum Valley	Mean	<0.01	0.06	0.07	0.16	0.08	0.16	***	0.21	0.06	0.25	0.01	0.04	0.10
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.01	0.07	0.09	0.16	0.09	0.18	***	0.30	0.06	0.26	0.02	0.06	0.30
		Min-2w	<0.01	0.04	0.05	0.16	0.07	0.15	***	0.13	0.06	0.24	<0.01	0.02	<0.01
Mongolia	Ulaanbaatar	Mean	1.59	0.99	0.34	0.24	0.27	0.13	0.24	0.26	0.25	0.29	1.08	1.66	0.61
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.04	1.71	0.69	0.48	0.58	0.19	0.41	0.42	0.66	0.57	2.22	3.99	3.99
		Min-w	0.58	0.07	0.08	0.09	0.07	0.07	0.03	0.19	0.09	0.12	0.17	0.12	0.03
	Terelj	Mean	0.26	0.22	0.15	0.08	0.11	0.07	0.20	0.15	0.12	0.09	0.11	0.12	0.14
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.34	0.23	0.21	0.10	0.13	0.11	0.27	0.20	0.12	0.12	0.15	0.20	0.34
		Min-2w	0.19	0.21	0.10	0.05	0.09	0.02	0.14	0.10	0.11	0.05	0.05	0.04	0.02
Myanmar	Yangon	Mean	0.98	2.61	2.35	1.48	0.13	0.18	0.33	0.43	***	***	***	***	1.05
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	1.47	5.03	4.57	2.48	0.15	0.39	0.46	0.43	***	***	***	***	5.03
		Min-2w	0.50	0.19	0.13	0.49	0.11	0.03	0.21	0.43	***	***	***	***	0.03
Philippines	Metro Manila	Mean	0.09	0.03	0.06	0.06	0.26	2.23	1.83	0.13	0.11	0.16	0.11	0.08	0.51
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	0.29	0.08	0.08	0.08	0.67	7.59	8.54	0.17	0.23	0.34	0.27	0.13	8.54
		Min-w	<0.01	<0.01	0.04	0.02	<0.01	0.38	0.06	0.08	0.04	<0.01	<0.01	<0.01	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	Mean	<0.01	<0.01	<0.01	<0.01	0.02	<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-m	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.02
		Min-m	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	Listvyanka	Mean	0.14	0.05	0.10	0.03	0.22	0.05	0.01	0.02	<0.01	0.01	0.02	<0.01	0.06
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	0.21	0.08	0.25	0.05	0.77	0.12	0.05	0.05	0.01	0.02	0.07	0.02	0.77
		Min-w	0.04	0.03	0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Irkutsk	Mean	0.91	0.35	0.15	0.17	0.09	0.09	0.09	0.30	0.11	0.06	0.02	0.66	0.24
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	1.48	0.52	0.21	0.38	0.18	0.15	0.24	0.70	0.25	0.17	0.08	1.26	1.48
		Min-w	0.55	0.10	0.07	0.05	0.03	0.04	<0.01	0.03	<0.01	0.02	<0.01	0.39	<0.01
	Primorskaya	Mean	0.30	0.44	0.47	0.46	0.44	0.58	0.32	0.23	0.16	0.17	0.17	0.13	0.32
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.31	0.49	0.52	0.49	0.44	0.65	0.34	0.28	0.17	0.20	0.19	0.14	0.65
		Min-2w	0.29	0.39	0.42	0.43	0.43	0.51	0.31	0.19	0.15	0.14	0.15	0.13	0.13

Table 4.16.1 Particulate matter component: NH_4^+ - Measured by FP (continued)

 Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	3.77	3.91	3.31	3.55	3.20	2.65	2.30	2.01	1.62	1.72	2.50	1.78	2.66
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.75	5.18	5.35	4.75	4.78	3.47	3.94	2.34	1.93	2.07	3.75	2.14	5.35
		Min-w	3.03	2.93	1.75	2.57	2.07	1.66	1.35	1.84	1.16	1.21	1.74	1.17	1.16
	Hoa Binh	Mean	0.95	1.07	0.99	0.87	0.83	0.86	0.85	0.78	0.80	0.91	0.64	0.72	0.85
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.25	1.24	1.10	1.04	1.06	0.91	0.91	0.95	0.88	1.32	0.91	0.85	1.32
		Min-w	0.65	0.91	0.91	0.67	0.63	0.81	0.75	0.44	0.74	0.75	0.26	0.42	0.26
	Can Tho	Mean	0.86	0.72	0.99	1.03	0.98	1.06	1.00	1.26	1.02	0.90	1.29	0.68	0.98
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.19	1.21	1.17	1.07	1.25	1.25	1.19	1.63	1.55	1.19	1.63	1.03	1.63
		Min-w	0.71	0.20	0.87	0.95	0.77	0.81	0.56	0.97	0.75	0.54	1.09	0.14	0.14
	Ho Chi Minh	Mean	1.03	1.05	1.10	0.90	0.51	0.68	0.98	1.36	1.26	1.00	1.16	0.42	0.95
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.27	1.25	1.47	1.21	0.63	1.03	1.13	1.88	1.71	1.15	1.41	0.67	1.88
		Min-w	0.85	0.91	0.60	0.48	0.44	0.40	0.63	1.03	1.09	0.69	0.75	0.26	0.26
	Yen Bai	Mean	1.84	2.32	1.36	1.61	2.18	2.02	1.50	2.37	1.90	2.97	2.09	1.65	1.96
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.91	2.68	1.80	2.14	3.13	2.56	2.22	2.97	2.84	3.47	2.37	2.19	3.91
		Min-w	0.79	2.08	0.94	0.69	1.51	1.56	0.68	1.93	1.30	2.28	1.80	0.88	0.68

Table 4.16.2 Particulate matter component: NH_4^+ - Measured by FP with $\text{PM}_{2.5}$ cyclone

 Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	2.34	4.54	3.47	1.28	2.45	3.48	1.30	1.60	0.45	0.72	5.53	6.23	2.38
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	4.80	11.28	6.97	2.26	4.36	6.17	1.87	2.80	0.78	1.16	16.22	12.12	11.28
		Min-d	0.95	0.91	1.09	0.49	0.53	1.53	0.79	0.52	0.06	0.21	0.38	0.82	0.06
	Cheju (Kosan)	Mean	0.72	0.88	1.21	0.67	0.59	1.39	0.34	0.56	***	0.64	0.90	1.47	0.76
		%	13	7	13	17	16	13	16	10	***	13	13	16	12
		Max-d	1.04	1.04	2.81	0.98	0.83	2.07	0.72	1.11	***	1.17	1.72	2.92	2.81
		Min-d	0.52	0.72	0.43	0.38	0.22	0.94	0.07	0.27	***	0.36	0.09	0.40	0.07
	Imsil	Mean	2.09	1.57	2.49	1.02	0.58	1.40	0.59	0.59	0.69	0.51	1.65	4.20	1.21
		%	16	18	16	17	16	13	13	19	17	16	17	16	16
		Max-d	3.15	3.90	5.74	1.92	0.81	1.84	1.62	1.00	1.31	0.79	2.70	7.22	5.74
		Min-d	1.61	0.30	1.49	0.57	0.43	0.78	0.12	0.15	0.25	0.05	0.55	2.37	0.12

Terms and abbreviations are given in Table 4.2.

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

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.98	0.94	0.53	0.73	0.72	0.45	1.00	1.26	1.04	0.60	***	0.50	0.78
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	1.35	1.89	0.74	1.00	0.93	0.52	1.34	1.40	1.17	0.84	***	0.67	1.89
		Min-2w	0.61	<0.01	0.31	0.46	0.53	0.38	0.66	1.12	0.92	0.25	***	0.33	<0.01
	Serpong	Mean	0.58	0.77	0.28	0.17	0.54	0.35	0.58	0.69	0.68	0.43	1.81	0.30	0.61
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.89	0.90	0.41	0.17	0.69	0.38	0.59	0.73	0.79	0.56	3.32	0.37	3.32
		Min-2w	0.27	0.64	0.16	0.17	0.40	0.32	0.58	0.67	0.57	0.31	0.30	0.22	0.16
	Bandung	Mean	0.23	0.76	0.68	0.27	0.42	0.50	***	0.66	0.71	0.39	0.24	0.26	0.47
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	0.23	1.36	1.26	0.52	0.49	0.71	***	0.88	0.93	0.47	0.33	0.36	1.36
		Min-2w	0.23	0.23	0.30	0.18	0.30	0.29	***	0.45	0.48	0.27	0.12	0.11	0.11
Japan	Rishiri	Mean	1.14	1.76	2.86	2.99	2.00	1.19	0.96	1.28	1.37	1.95	3.44	1.06	1.87
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	1.65	1.99	3.15	3.65	3.28	2.09	1.20	1.70	1.54	1.95	4.19	1.47	4.19
		Min-2w	0.64	1.54	2.57	2.32	0.72	0.71	0.72	0.85	1.19	1.95	2.21	0.66	0.64
	Ochiishi	Mean	2.96	2.43	3.70	8.43	3.31	1.33	0.96	2.85	2.03	7.79	10.07	3.44	4.15
		%	100	50	100	43	100	100	50	50	100	100	67	100	80
		Max-2w	3.09	2.43	4.98	8.43	5.99	1.50	0.96	2.85	2.32	10.83	14.11	4.96	14.11
		Min-2w	2.82	2.43	2.42	8.43	1.67	1.16	0.96	2.85	1.75	4.75	6.02	1.92	0.96
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.0	0.2	0.4	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.0	0.2	0.4	0.2	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.4
		Min-2w	<0.01	0.2	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	<0.01	<0.01
	Ijira	Mean	0.14	0.32	0.42	0.53	0.22	0.18	0.19	0.21	0.19	0.36	0.25	0.16	0.26
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.15	0.33	0.42	0.55	0.35	0.19	0.21	0.27	0.25	0.48	0.28	0.21	0.55
		Min-2w	0.14	0.30	0.41	0.50	0.13	0.17	0.17	0.15	0.12	0.25	0.23	0.12	0.12
	Oki	Mean	7.50	5.94	3.07	2.51	1.45	0.98	0.77	7.11	2.38	2.80	5.03	6.93	3.77
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	9.37	7.21	3.46	2.79	2.39	1.02	0.89	7.11	2.80	3.77	7.20	7.60	9.37
		Min-2w	5.63	4.68	2.68	2.22	0.59	0.93	0.66	7.11	1.95	1.83	2.86	5.85	0.59
	Yusuhara	Mean	0.51	0.52	0.50	0.46	0.31	0.15	0.30	0.25	0.23	0.49	0.40	0.51	0.38
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.54	0.58	0.54	0.57	0.46	0.16	0.39	0.26	0.28	0.58	0.53	0.53	0.58
		Min-2w	0.47	0.46	0.45	0.36	0.13	0.14	0.20	0.25	0.17	0.40	0.23	0.49	0.13
	Hedo	Mean	6.48	6.02	5.07	6.56	2.39	2.95	4.60	2.86	1.72	7.06	5.78	5.95	4.73
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	7.20	6.94	5.90	7.74	3.21	3.15	6.60	4.35	2.58	7.97	7.28	6.81	7.97
		Min-2w	5.75	5.10	4.25	5.37	1.00	2.75	2.60	1.36	0.85	6.14	4.97	5.09	0.85
	Ogasawara	Mean	3.42	4.27	4.73	4.72	2.72	2.47	1.64	***	***	5.07	2.93	3.14	3.45
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	4.72	5.05	4.75	5.15	4.53	2.98	2.15	***	***	5.69	3.39	3.14	5.69
		Min-2w	2.12	3.48	4.72	4.29	1.78	1.96	1.13	***	***	4.46	2.09	3.14	1.13
	Tokyo	Mean	0.45	0.60	1.16	1.67	1.12	0.79	0.71	1.26	1.26	1.17	0.60	0.41	0.93
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.46	0.67	1.23	1.83	1.28	0.79	0.77	1.40	1.75	1.81	0.67	0.60	1.83
		Min-2w	0.44	0.54	1.09	1.51	0.90	0.78	0.64	1.13	0.77	0.53	0.48	0.23	0.23
	Niigata-maki	Mean	2.5	3.8	1.7	2.28	1.39	0.33	0.52	0.87	0.39	0.91	0.86	1.13	1.37
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.2	5.0	1.8	3.13	1.82	0.53	0.53	1.57	0.49	1.03	1.22	2.18	5.01
		Min-2w	1.9	2.6	1.6	1.44	0.90	0.13	0.51	0.16	0.28	0.80	0.53	0.09	0.09
	Tsushima	Mean	1.1	1.3	1.4	1.76	0.70	0.45	0.80	0.71	1.15	0.93	0.94	0.92	1.00
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.2	1.8	1.5	2.00	1.08	0.70	0.89	0.78	1.45	1.04	0.94	1.00	2.00
		Min-2w	0.9	0.7	1.3	1.52	0.49	0.19	0.71	0.64	0.84	0.82	0.94	0.84	0.19

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

Country	Site		2021												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	0.50	0.53	0.28	0.29	0.19	0.25	0.28	0.38	0.29	0.30	0.21	0.34	0.32
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	0.81	0.84	0.38	0.44	0.27	0.33	0.55	0.60	0.45	0.69	0.36	0.59	0.84
		Min-w	0.16	0.16	0.02	0.14	0.12	0.19	0.13	0.16	0.14	<0.01	0.14	0.23	<0.01
	Tanah Rata	Mean	0.15	0.45	0.30	0.09	0.07	0.07	***	0.10	0.07	0.09	0.04	0.11	0.14
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.27	0.76	0.58	0.24	0.11	0.10	***	0.17	0.16	0.21	0.10	0.32	0.76
		Min-w	0.05	0.21	0.14	0.02	0.02	0.04	***	0.02	0.03	0.01	0.01	<0.01	<0.01
	Danum Valley	Mean	<0.01	0.64	0.28	0.13	0.07	0.07	***	0.07	0.04	0.16	0.02	0.19	0.17
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.01	0.66	0.32	0.13	0.10	0.10	***	0.11	0.04	0.17	0.04	0.38	0.66
		Min-2w	<0.01	0.62	0.21	0.13	0.04	0.04	***	0.03	0.04	0.14	<0.01	<0.01	<0.01
Mongolia	Ulaanbaatar	Mean	0.08	0.33	0.13	0.11	0.05	0.03	0.07	0.04	0.03	0.05	0.14	0.35	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.11	0.61	0.25	0.31	0.10	0.07	0.17	0.05	0.09	0.08	0.24	0.97	0.97
		Min-w	0.03	0.03	0.05	0.03	0.03	<0.01	0.03	<0.01	<0.01	<0.01	0.03	0.03	<0.01
	Terelj	Mean	0.02	0.02	0.01	<0.01	0.01	0.01	0.02	<0.01	0.02	<0.01	0.03	0.16	0.03
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.03	0.03	0.01	0.01	0.03	0.02	0.03	0.01	0.04	<0.01	0.07	0.19	0.19
		Min-2w	0.02	0.02	0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.12	<0.01
Myanmar	Yangon	Mean	0.03	0.46	0.36	0.57	0.02	0.31	1.35	0.17	***	***	***	***	0.42
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	0.05	0.75	0.71	1.13	0.03	0.83	2.41	0.17	***	***	***	***	2.41
		Min-2w	<0.01	0.17	<0.01	<0.01	<0.01	0.01	0.29	0.17	***	***	***	***	<0.01
Philippines	Metro Manila	Mean	0.44	0.86	1.45	1.94	0.88	0.58	2.12	0.95	0.25	0.85	0.63	1.07	0.99
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	0.80	1.09	1.80	2.77	1.34	0.92	5.61	1.65	0.52	1.25	1.02	1.68	5.61
		Min-w	0.05	0.72	1.10	0.95	<0.01	0.26	0.31	0.25	0.02	0.59	0.15	0.46	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	Mean	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.06	0.01	<0.01	0.01	0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	0.11	0.02	0.01	0.02	0.11
		Min-m	<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
	Listvyanka	Mean	0.07	0.08	0.06	0.04	0.09	0.06	0.05	0.04	0.05	0.04	0.02	<0.01	0.05
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	0.13	0.18	0.08	0.04	0.18	0.12	0.09	0.05	0.06	0.05	0.03	0.03	0.18
		Min-w	0.02	0.03	0.06	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.01	<0.01	<0.01
	Irkutsk	Mean	0.13	0.09	0.17	0.16	0.06	0.05	0.45	0.06	0.06	0.02	0.06	0.33	0.14
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	0.36	0.16	0.26	0.21	0.09	0.06	1.18	0.11	0.12	0.03	0.17	0.53	1.18
		Min-w	0.03	0.03	0.09	0.10	0.03	0.04	0.04	0.04	<0.01	0.01	0.02	0.12	<0.01
	Primorskaya	Mean	0.03	0.03	0.03	0.04	0.04	0.06	0.03	0.03	0.03	0.04	0.03	0.03	0.04
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.04	0.03	0.04	0.04	0.05	0.07	0.04	0.03	0.03	0.05	0.04	0.03	0.07
		Min-2w	0.03	0.03	0.03	0.04	0.04	0.05	0.03	0.03	0.03	0.04	0.03	0.02	0.02

Table 4.17.1 Particulate matter component: Na⁺ - Measured by FP (continued)

 Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	1.60	1.59	1.28	2.04	1.85	2.75	1.73	2.23	1.44	2.05	1.18	1.68	1.78
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.20	2.23	1.82	3.29	2.22	4.21	2.05	4.64	2.25	3.07	1.72	2.39	4.64
		Min-w	1.19	0.91	0.90	1.01	1.57	1.78	1.27	1.10	1.01	1.31	0.70	1.25	0.70
	Hoa Binh	Mean	0.38	0.46	0.37	0.42	0.42	0.54	0.36	0.55	0.55	0.56	0.49	0.52	0.47
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.42	0.68	0.41	0.49	0.62	0.60	0.51	0.68	0.64	0.84	0.65	0.55	0.84
		Min-w	0.32	0.37	0.34	0.37	0.28	0.45	0.22	0.47	0.48	0.40	0.42	0.50	0.22
	Can Tho	Mean	0.09	0.20	0.16	0.18	0.22	0.17	0.16	0.09	0.17	0.24	0.32	0.22	0.19
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.16	0.26	0.26	0.32	0.26	0.28	0.24	0.26	0.26	0.34	0.48	0.42	0.48
		Min-w	0.04	0.14	0.06	0.10	0.14	0.06	0.12	<0.01	0.06	0.14	0.14	0.06	<0.01
	Ho Chi Minh	Mean	0.83	0.77	0.86	0.74	0.75	0.76	0.90	0.80	1.10	0.89	0.78	0.87	0.84
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.11	1.13	0.99	0.85	0.91	0.89	1.09	1.25	1.43	1.03	0.89	1.07	1.43
		Min-w	0.48	0.42	0.71	0.52	0.50	0.50	0.62	0.48	0.77	0.60	0.58	0.50	0.42
	Yen Bai	Mean	0.23	0.42	0.62	1.00	0.94	1.19	1.44	0.99	1.57	2.23	1.36	1.42	1.14
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.35	0.64	0.85	1.40	1.62	2.14	2.24	1.90	2.35	2.66	2.21	1.78	2.66
		Min-w	0.16	0.27	0.44	0.63	0.51	0.55	0.80	0.38	1.08	1.73	0.57	0.92	0.16

Table 4.17.2 Particulate matter component: Na⁺ - Measured by FP with PM_{2.5} cyclone

 Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.12	0.19	0.13	0.21	0.21	0.24	0.09	0.07	0.04	0.07	0.09	0.14	0.14
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	0.38	0.53	0.31	0.32	0.41	0.35	0.15	0.15	0.06	0.09	0.16	0.21	0.53
		Min-d	0.01	0.07	0.01	0.12	0.01	0.10	0.06	0.04	0.03	0.04	0.06	0.02	0.01
	Cheju (Kosan)	Mean	0.22	0.51	0.24	0.11	0.21	0.15	0.43	0.18	***	0.21	0.07	0.33	0.25
		%	13	7	13	17	16	13	16	10	***	13	13	16	12
		Max-d	0.51	0.61	0.31	0.23	0.28	0.26	0.81	0.22	***	0.43	0.14	0.70	0.81
		Min-d	0.03	0.41	0.13	0.04	0.12	0.04	0.18	0.15	***	0.11	0.04	0.10	0.03
	Imsil	Mean	0.08	0.16	0.10	0.06	0.06	0.08	0.05	0.04	0.04	0.04	0.05	0.10	0.07
		%	16	18	16	17	16	13	13	19	17	16	17	16	16
		Max-d	0.21	0.29	0.26	0.14	0.12	0.11	0.12	0.06	0.10	0.09	0.09	0.14	0.29
		Min-d	0.03	0.05	0.02	0.03	0.02	0.04	<0.01	0.02	0.01	0.01	0.03	0.04	<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		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.25	0.19	0.38	0.33	0.32	0.42	0.57	0.42	0.37	0.33	***	0.65	0.38
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	0.29	0.33	0.44	0.35	0.50	0.55	0.57	0.51	0.43	0.37	***	0.83	0.83
		Min-2w	0.21	0.04	0.33	0.31	0.23	0.30	0.57	0.32	0.31	0.28	***	0.48	0.04
	Serpong	Mean	0.38	0.22	0.27	0.37	1.09	0.58	0.88	0.76	0.57	0.64	0.27	0.47	0.55
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.49	0.25	0.33	0.37	1.30	0.59	0.89	0.82	0.58	0.68	0.34	0.58	1.30
		Min-2w	0.28	0.19	0.21	0.37	0.88	0.58	0.88	0.72	0.56	0.59	0.20	0.36	0.19
	Bandung	Mean	0.35	0.34	0.38	0.34	0.53	0.85	***	0.49	0.46	0.41	0.39	0.46	0.44
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	0.35	0.50	0.53	0.41	0.72	1.20	***	0.54	0.60	0.46	0.46	0.60	1.20
		Min-2w	0.35	0.21	0.25	0.30	0.31	0.49	***	0.46	0.35	0.36	0.35	0.34	0.21
Japan	Rishiri	Mean	0.10	0.15	0.16	0.16	0.11	0.08	0.08	0.09	0.08	0.12	0.18	0.11	0.12
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	0.12	0.17	0.17	0.19	0.17	0.12	0.09	0.12	0.09	0.12	0.21	0.13	0.21
		Min-2w	0.07	0.14	0.16	0.13	0.05	0.06	0.08	0.06	0.08	0.12	0.14	0.09	0.05
	Ochiishi	Mean	0.13	0.11	0.15	0.34	0.13	0.05	0.04	0.12	0.08	0.29	0.39	0.14	0.17
		%	100	50	100	43	100	100	50	50	100	100	67	100	80
		Max-2w	0.14	0.11	0.20	0.34	0.22	0.06	0.04	0.12	0.10	0.40	0.53	0.20	0.53
		Min-2w	0.13	0.11	0.09	0.34	0.08	0.05	0.04	0.12	0.07	0.18	0.25	0.08	0.04
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	<0.01	0.0	0.1	0.0	<0.01	0.0	0.0	0.0	0.0	0.0	0.0	<0.01	0.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.01	0.1	0.1	0.1	<0.01	0.1	0.0	0.0	0.0	0.0	0.0	<0.01	0.1
		Min-2w	<0.01	0.0	0.1	0.0	<0.01	0.0	0.0	<0.01	0.0	<0.01	0.0	<0.01	<0.01
	Ijira	Mean	0.05	0.08	0.07	0.11	0.08	0.10	0.08	0.09	0.08	0.07	0.06	0.05	0.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.05	0.09	0.10	0.11	0.11	0.12	0.11	0.09	0.09	0.07	0.07	0.05	0.12
		Min-2w	0.04	0.08	0.05	0.10	0.04	0.09	0.06	0.08	0.08	0.07	0.04	0.04	0.04
	Oki	Mean	0.31	0.28	0.21	0.19	0.09	0.08	0.07	0.30	0.12	0.14	0.24	0.28	0.19
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	0.38	0.33	0.28	0.25	0.14	0.09	0.08	0.30	0.13	0.17	0.33	0.30	0.38
		Min-2w	0.25	0.24	0.14	0.14	0.03	0.06	0.06	0.30	0.10	0.11	0.15	0.26	0.03
	Yusuhara	Mean	0.06	0.07	0.08	0.09	0.07	0.05	0.04	0.03	0.04	0.05	0.06	0.06	0.06
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.07	0.08	0.10	0.11	0.08	0.05	0.04	0.03	0.04	0.05	0.08	0.07	0.11
		Min-2w	0.05	0.07	0.06	0.08	0.05	0.04	0.03	0.03	0.04	0.05	0.04	0.06	0.03
	Hedo	Mean	0.25	0.30	0.24	0.33	0.16	0.24	0.20	0.15	0.10	0.28	0.25	0.25	0.23
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.28	0.36	0.27	0.35	0.22	0.25	0.28	0.21	0.13	0.32	0.28	0.26	0.36
		Min-2w	0.22	0.24	0.22	0.30	0.07	0.24	0.13	0.09	0.07	0.25	0.23	0.23	0.07
	Ogasawara	Mean	0.14	0.20	0.22	0.20	0.13	0.11	0.08	***	***	0.19	0.14	0.13	0.15
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	0.19	0.23	0.24	0.22	0.18	0.14	0.09	***	***	0.22	0.15	0.13	0.24
		Min-2w	0.09	0.17	0.20	0.18	0.10	0.09	0.06	***	***	0.16	0.12	0.12	0.06
	Tokyo	Mean	0.11	0.13	0.12	0.17	0.12	0.11	0.10	0.12	0.12	0.12	0.12	0.10	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.12	0.15	0.13	0.18	0.13	0.14	0.11	0.14	0.13	0.14	0.14	0.12	0.18
		Min-2w	0.11	0.12	0.11	0.15	0.11	0.08	0.08	0.09	0.11	0.10	0.09	0.07	0.07
	Niigata-maki	Mean	0.1	0.2	0.1	0.19	0.09	0.05	0.05	0.05	0.05	0.07	0.05	0.06	0.09
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.3	0.2	0.21	0.12	0.08	0.06	0.09	0.08	0.09	0.07	0.11	0.28
		Min-2w	0.1	0.2	0.1	0.16	0.07	0.01	0.05	0.02	0.02	0.05	0.03	<0.01	<0.01
	Tsushima	Mean	0.1	0.2	0.1	0.18	0.11	0.06	0.06	0.06	0.07	0.07	0.12	0.12	0.11
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.2	0.2	0.22	0.15	0.06	0.06	0.07	0.09	0.08	0.12	0.14	0.22
		Min-2w	0.1	0.1	0.1	0.14	0.07	0.05	0.06	0.06	0.05	0.07	0.12	0.09	0.05

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

Country	Site		2021												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	0.28	0.31	0.20	0.39	0.65	0.30	0.27	0.27	0.25	0.33	0.39	0.33	0.33
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	0.33	0.63	0.33	0.45	1.47	0.32	0.48	0.31	0.34	0.53	0.69	0.41	1.47
		Min-w	0.19	0.16	<0.01	0.34	0.25	0.27	0.11	0.21	0.20	<0.01	0.24	0.21	<0.01
	Tanah Rata	Mean	0.08	0.23	0.14	0.11	0.09	0.12	***	0.12	0.07	0.09	0.07	0.06	0.10
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.11	0.40	0.22	0.27	0.14	0.12	***	0.16	0.08	0.17	0.15	0.11	0.40
		Min-w	0.02	0.13	0.05	0.05	0.04	0.10	***	0.08	0.06	0.05	0.03	<0.01	<0.01
	Danum Valley	Mean	<0.01	0.12	0.15	0.23	0.12	0.10	***	0.12	0.12	0.24	0.04	0.07	0.12
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.01	0.13	0.21	0.23	0.13	0.18	***	0.13	0.12	0.31	0.08	0.13	0.31
		Min-2w	<0.01	0.12	0.07	0.23	0.12	0.02	***	0.11	0.12	0.18	<0.01	<0.01	<0.01
Mongolia	Ulaanbaatar	Mean	0.05	0.03	0.02	0.02	0.02	0.02	0.03	0.01	0.03	0.04	0.10	0.05	0.04
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.10	0.05	0.03	0.05	0.03	0.03	0.05	0.01	0.07	0.09	0.19	0.12	0.19
		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
	Terelj	Mean	<0.01	0.01	<0.01	<0.01	0.02	0.02	<0.01	0.01	0.02	<0.01	0.01	0.02	0.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.01	0.01	<0.01	<0.01	0.03	0.03	<0.01	0.02	0.03	<0.01	0.03	0.03	0.03
		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	2.46	1.47	1.20	0.99	0.01	0.24	0.62	2.54	***	***	***	***	1.05
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	4.72	2.36	2.36	1.93	0.02	0.42	0.82	2.54	***	***	***	***	4.72
		Min-2w	0.21	0.58	0.03	0.06	<0.01	<0.01	0.41	2.54	***	***	***	***	<0.01
Philippines	Metro Manila	Mean	0.26	0.28	0.41	0.22	0.05	0.07	0.13	0.36	0.24	0.36	0.22	0.31	0.22
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	0.62	0.32	0.43	0.28	0.19	0.15	0.39	0.40	0.40	0.39	0.36	0.38	0.62
		Min-w	0.02	0.24	0.38	0.18	<0.01	<0.01	0.05	0.32	0.02	0.31	0.09	0.26	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	Mean	<0.01	<0.01	<0.01	<0.01	0.01	0.05	0.01	0.01	0.08	0.13	<0.01	0.07	0.04
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	<0.01	<0.01	<0.01	<0.01	0.02	0.05	0.01	0.15	0.24	0.01	0.14	0.24	0.24
		Min-m	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	0.01	0.01	0.01	0.01	<0.01	<0.01	<0.01
	Listvyanka	Mean	0.02	0.02	<0.01	<0.01	<0.01	0.01	0.02	0.03	<0.01	<0.01	0.05	0.03	0.02
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	0.03	0.03	0.01	0.01	0.02	0.03	0.02	0.04	<0.01	0.01	0.19	0.10	0.19
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	Irkutsk	Mean	0.07	0.05	0.05	0.03	0.07	0.03	0.43	0.20	0.10	0.02	0.07	0.56	0.14
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	0.17	0.09	0.11	0.06	0.17	0.04	0.97	0.26	0.30	0.04	0.15	0.70	0.97
		Min-w	0.01	0.01	0.02	<0.01	<0.01	0.02	0.02	0.16	0.02	<0.01	0.03	0.24	<0.01
	Primorskaya	Mean	<0.01	<0.01	<0.01	0.02	0.03	0.04	0.02	0.05	0.21	0.05	0.02	0.19	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.01	<0.01	<0.01	0.02	0.03	0.04	0.03	0.07	0.35	0.10	0.05	0.24	0.35
		Min-2w	<0.01	<0.01	<0.01	0.02	0.02	0.03	0.02	0.02	0.08	<0.01	<0.01	0.15	<0.01

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

 Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	0.12	0.10	0.09	0.18	0.20	0.31	0.13	0.24	0.41	0.17	0.24	0.27	0.21
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.24	0.15	0.13	0.33	0.41	0.66	0.20	0.40	1.03	0.35	0.49	0.58	1.03
		Min-w	0.04	0.07	0.06	0.05	0.13	0.17	0.08	0.10	0.08	0.09	0.08	0.13	0.04
	Hoa Binh	Mean	0.15	0.15	0.20	0.16	0.14	0.17	0.14	0.17	0.15	0.18	0.17	0.17	0.16
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.22	0.20	0.22	0.20	0.17	0.22	0.18	0.19	0.17	0.19	0.21	0.20	0.22
		Min-w	0.08	0.13	0.16	0.13	0.13	0.11	0.08	0.15	0.12	0.15	0.14	0.16	0.08
	Can Tho	Mean	0.15	0.28	0.18	0.17	0.26	0.26	0.24	0.22	0.24	0.14	0.23	0.23	0.22
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.24	0.34	0.32	0.32	0.30	0.32	0.28	0.26	0.38	0.20	0.28	0.28	0.38
		Min-w	0.06	0.18	0.08	0.08	0.20	0.14	0.18	0.18	0.14	0.10	0.12	0.12	0.06
	Ho Chi Minh	Mean	0.77	0.94	0.71	0.74	0.88	0.78	0.87	0.89	0.79	0.85	0.76	0.79	0.81
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.85	1.17	0.81	0.85	1.03	0.93	1.09	1.21	0.95	1.03	0.95	0.85	1.21
		Min-w	0.62	0.83	0.65	0.65	0.75	0.63	0.65	0.71	0.65	0.65	0.62	0.67	0.62
	Yen Bai	Mean	0.15	0.22	0.20	0.53	0.22	0.33	0.59	0.58	0.61	0.29	0.80	0.61	0.44
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.25	0.35	0.40	0.76	0.39	0.61	1.01	0.95	0.97	0.46	1.15	1.52	1.52
		Min-w	0.10	0.16	0.08	0.21	0.10	0.17	0.17	0.09	0.43	0.10	0.52	0.23	0.08

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

 Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.21	0.39	0.17	0.16	0.15	0.17	0.08	0.06	0.09	0.18	0.25	0.34	0.17
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	0.29	0.71	0.25	0.20	0.21	0.22	0.12	0.09	0.13	0.35	0.58	0.43	0.71
		Min-d	0.15	0.13	0.11	0.12	0.08	0.13	0.06	<0.01	0.04	0.05	0.08	0.19	<0.01
	Cheju (Kosan)	Mean	0.01	0.11	0.03	0.01	0.05	0.02	0.01	<0.01	***	0.06	0.09	0.07	0.03
		%	13	7	13	17	16	13	13	10	***	13	13	16	11
		Max-d	0.05	0.19	0.09	0.03	0.11	0.03	0.02	<0.01	***	0.15	0.15	0.14	0.19
		Min-d	<0.01	0.02	<0.01	<0.01	0.01	0.01	<0.01	<0.01	***	0.01	0.01	0.01	<0.01
	Imsil	Mean	0.11	0.08	0.01	0.03	0.03	0.13	<0.01	<0.01	0.02	0.13	0.15	0.12	0.04
		%	16	18	16	13	16	13	13	19	17	16	17	16	16
		Max-d	0.22	0.32	0.07	0.05	0.05	0.22	0.01	0.01	0.04	0.27	0.36	0.20	0.32
		Min-d	0.06	<0.01	<0.01	<0.01	0.01	0.03	<0.01	<0.01	<0.01	0.03	0.02	0.05	<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		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.15	0.13	0.11	0.13	0.13	0.12	0.16	0.19	0.21	0.11	***	0.82	0.20
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	0.19	0.24	0.12	0.18	0.14	0.13	0.20	0.22	0.26	0.17	***	0.86	0.86
		Min-2w	0.12	0.02	0.09	0.09	0.12	0.12	0.15	0.15	0.15	0.07	***	0.79	0.02
	Serpong	Mean	0.08	0.11	0.08	0.09	0.14	0.09	0.52	0.13	0.14	0.10	0.09	0.12	0.14
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.13	0.12	0.10	0.09	0.16	0.11	0.54	0.16	0.15	0.13	0.12	0.18	0.54
		Min-2w	0.04	0.10	0.06	0.09	0.11	0.08	0.50	0.11	0.13	0.08	0.06	0.07	0.04
	Bandung	Mean	0.08	0.13	0.20	0.11	0.14	0.11	***	0.18	0.17	0.13	0.07	0.12	0.13
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	0.08	0.20	0.35	0.13	0.15	0.15	***	0.20	0.21	0.13	0.09	0.16	0.35
		Min-2w	0.08	0.05	0.10	0.09	0.13	0.07	***	0.15	0.12	0.13	0.05	0.08	0.05
Japan	Rishiri	Mean	0.13	0.21	0.39	0.35	0.24	0.15	0.11	0.15	0.19	0.27	0.46	0.15	0.24
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	0.19	0.23	0.43	0.43	0.39	0.25	0.14	0.21	0.21	0.27	0.56	0.21	0.56
		Min-2w	0.08	0.19	0.36	0.27	0.09	0.09	0.10	0.17	0.17	0.27	0.30	0.09	0.08
	Ochiishi	Mean	0.35	0.28	0.43	1.01	0.40	0.15	0.11	0.33	0.23	0.91	1.17	0.40	0.49
		%	100	50	100	43	100	100	50	50	100	100	67	100	80
		Max-2w	0.36	0.28	0.59	1.01	0.72	0.18	0.11	0.33	0.27	1.28	1.63	0.58	1.63
		Min-2w	0.33	0.28	0.28	1.01	0.20	0.13	0.11	0.33	0.20	0.55	0.70	0.21	0.11
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	<0.01	0.0	0.0	0.0	<0.01	0.0	<0.01	<0.01	0.0	0.0	0.0	<0.01	0.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.01	0.0	0.1	0.0	<0.01	0.0	0.0	0.0	0.0	0.0	0.0	<0.01	0.1
		Min-2w	<0.01	0.0	0.0	0.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0	<0.01	<0.01
	Ijira	Mean	0.02	0.04	0.07	0.09	0.04	0.03	0.02	0.02	0.02	0.05	0.04	0.02	0.04
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.03	0.05	0.08	0.11	0.07	0.03	0.03	0.03	0.03	0.07	0.06	0.02	0.11
		Min-2w	0.02	0.04	0.06	0.08	0.02	0.03	0.02	0.01	0.02	0.03	0.02	0.02	0.01
	Oki	Mean	0.91	0.72	0.39	0.31	0.18	0.12	0.09	0.80	0.28	0.33	0.61	0.81	0.45
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	1.14	0.87	0.48	0.35	0.30	0.12	0.10	0.80	0.33	0.44	0.89	0.88	1.14
		Min-2w	0.67	0.58	0.31	0.27	0.07	0.11	0.08	0.80	0.23	0.23	0.34	0.69	0.07
	Yusuhara	Mean	0.08	0.08	0.09	0.09	0.07	0.03	0.04	0.03	0.03	0.06	0.07	0.07	0.06
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.10	0.09	0.11	0.10	0.09	0.03	0.05	0.03	0.04	0.08	0.10	0.07	0.11
		Min-2w	0.07	0.08	0.07	0.08	0.03	0.02	0.03	0.03	0.02	0.05	0.04	0.07	0.02
	Hedo	Mean	0.81	0.77	0.65	0.84	0.32	0.37	0.59	0.37	0.22	0.89	0.73	0.74	0.60
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.87	0.88	0.74	1.00	0.44	0.39	0.85	0.57	0.33	1.00	0.89	0.83	1.00
		Min-2w	0.74	0.66	0.55	0.68	0.14	0.34	0.34	0.17	0.11	0.78	0.64	0.65	0.11
	Ogasawara	Mean	0.42	0.58	0.56	0.54	0.32	0.28	0.19	***	***	0.54	0.30	0.37	0.40
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	0.58	0.67	0.57	0.59	0.54	0.34	0.26	***	***	0.63	0.36	0.37	0.67
		Min-2w	0.26	0.49	0.55	0.48	0.21	0.22	0.12	***	***	0.44	0.23	0.37	0.12
	Tokyo	Mean	0.07	0.11	0.16	0.22	0.16	0.11	0.10	0.16	0.14	0.13	0.08	0.06	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.07	0.12	0.16	0.25	0.18	0.12	0.12	0.18	0.19	0.20	0.09	0.08	0.25
		Min-2w	0.07	0.10	0.16	0.19	0.13	0.10	0.09	0.14	0.09	0.06	0.06	0.03	0.03
	Niigata-maki	Mean	0.3	0.4	0.2	0.29	0.17	0.04	0.06	0.10	0.04	0.11	0.10	0.14	0.16
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.6	0.2	0.37	0.23	0.07	0.06	0.18	0.06	0.13	0.16	0.27	0.58
		Min-2w	0.2	0.3	0.2	0.21	0.11	0.01	0.06	0.02	0.03	0.09	0.06	<0.01	<0.01
	Tsushima	Mean	0.2	0.2	0.2	0.25	0.13	0.06	0.09	0.08	0.13	0.12	0.16	0.13	0.14
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.2	0.2	0.30	0.21	0.08	0.10	0.09	0.17	0.14	0.18	0.14	0.30
		Min-2w	0.2	0.1	0.2	0.21	0.07	0.04	0.08	0.08	0.10	0.10	0.13	0.13	0.04

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

Country	Site		2021												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	0.04	0.05	0.03	<0.01	0.06	0.03	0.03	0.04	0.03	0.03	0.03	0.05	0.03
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	0.07	0.09	0.04	<0.01	0.15	0.03	0.09	0.06	0.04	0.06	0.05	0.08	0.15
		Min-w	0.02	0.02	<0.01	<0.01	0.03	0.02	0.01	0.02	0.02	<0.01	0.01	0.03	<0.01
	Tanah Rata	Mean	0.01	0.05	0.03	0.01	<0.01	0.01	***	<0.01	<0.01	<0.01	<0.01	0.02	0.02
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.02	0.08	0.05	0.03	0.01	0.02	***	0.02	0.01	0.02	<0.01	0.05	0.08
		Min-w	<0.01	0.03	<0.01	<0.01	<0.01	0.01	***	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Danum Valley	Mean	<0.01	0.06	0.03	0.03	0.04	<0.01	***	<0.01	<0.01	0.01	<0.01	0.02	0.02
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.01	0.06	0.03	0.03	0.08	<0.01	***	<0.01	<0.01	0.02	<0.01	0.04	0.08
		Min-2w	<0.01	0.06	0.02	0.03	<0.01	<0.01	***	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mongolia	Ulaanbaatar	Mean	0.02	0.02	0.02	0.02	0.02	0.02	0.03	<0.01	0.02	0.03	0.06	0.03	0.02
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.03	0.03	0.03	0.05	0.04	0.02	0.06	0.02	0.07	0.07	0.11	0.09	0.11
		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
	Terelj	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	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		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	0.07	0.12	0.09	0.17	<0.01	0.05	0.10	0.01	***	***	***	***	0.08
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	0.12	0.19	0.17	0.33	<0.01	0.12	0.19	0.01	***	***	***	***	0.33
		Min-2w	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	0.02	0.01	***	***	***	***	<0.01
Philippines	Metro Manila	Mean	0.10	0.18	0.28	0.34	0.14	0.20	0.35	0.19	0.08	0.19	0.13	0.20	0.19
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	0.15	0.19	0.31	0.53	0.24	0.28	0.74	0.27	0.13	0.28	0.18	0.27	0.74
		Min-w	<0.01	0.17	0.26	0.08	<0.01	0.16	0.14	0.11	<0.01	0.14	0.04	0.12	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	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-m	<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-m	<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
	Listvyanka	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	81	100	100	100	100	98
		Max-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
		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
	Irkutsk	Mean	0.01	0.02	0.02	0.04	0.02	0.04	0.04	0.03	0.02	<0.01	<0.01	0.03	0.02
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	0.03	0.03	0.03	0.06	0.03	0.04	0.06	0.06	0.04	0.01	<0.01	0.06	0.06
		Min-w	<0.01	<0.01	0.02	0.02	<0.01	0.03	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<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-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
		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

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

Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	0.06	0.07	0.11	0.11	0.11	0.24	0.33	0.30	0.18	0.09	0.16	0.13	0.16
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.09	0.11	0.22	0.14	0.13	0.55	0.64	0.45	0.40	0.11	0.26	0.24	0.64
		Min-w	0.03	0.05	0.05	0.05	0.09	0.08	0.09	0.12	0.08	0.08	0.07	0.03	0.03
	Hoa Binh	Mean	0.07	0.08	0.07	0.13	0.09	0.08	0.07	0.10	0.10	0.12	0.08	0.09	0.09
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.09	0.10	0.09	0.14	0.11	0.10	0.10	0.12	0.12	0.19	0.10	0.11	0.19
		Min-w	0.05	0.05	0.06	0.11	0.07	0.07	0.05	0.08	0.08	0.09	0.07	0.07	0.05
	Can Tho	Mean	0.40	0.36	0.34	0.38	0.32	0.35	0.31	0.36	0.44	0.49	0.40	0.33	0.37
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.63	0.48	0.42	0.62	0.42	0.46	0.40	0.48	0.50	0.65	0.50	0.44	0.65
		Min-w	0.20	0.26	0.24	0.20	0.26	0.28	0.18	0.30	0.38	0.36	0.30	0.20	0.18
	Ho Chi Minh	Mean	0.98	0.72	0.81	0.73	0.71	1.01	1.11	0.88	0.85	0.79	0.92	1.01	0.88
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.17	0.83	0.95	0.87	0.87	1.33	1.31	1.07	1.07	1.07	1.19	1.25	1.33
		Min-w	0.67	0.56	0.54	0.60	0.52	0.60	0.91	0.56	0.67	0.56	0.71	0.87	0.52
	Yen Bai	Mean	0.11	0.22	0.11	0.17	0.26	0.29	0.17	0.16	0.31	0.15	0.34	0.14	0.20
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.15	0.40	0.16	0.22	0.29	0.49	0.21	0.27	0.47	0.18	0.50	0.18	0.50
		Min-w	0.07	0.08	0.08	0.12	0.25	0.11	0.12	0.11	0.22	0.10	0.22	0.10	0.07

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

Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.04	0.04	0.03	0.02	0.02	0.01	0.04	0.01	<0.01	<0.01	0.03	0.03	0.03
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	0.07	0.08	0.04	0.05	0.02	0.02	0.05	0.02	0.01	0.01	0.05	0.05	0.08
		Min-d	0.01	0.02	<0.01	0.01	0.01	0.01	0.03	0.01	<0.01	<0.01	0.01	0.01	<0.01
	Cheju (Kosan)	Mean	0.02	0.06	0.02	<0.01	0.04	0.01	0.03	0.01	***	0.02	0.02	0.03	0.02
		%	6	7	13	17	16	13	16	10	***	13	13	16	11
		Max-d	0.02	0.07	0.02	0.01	0.10	0.02	0.06	0.01	***	0.04	0.06	0.07	0.10
		Min-d	0.01	0.04	0.01	<0.01	0.02	0.01	0.01	0.01	***	0.01	<0.01	0.01	<0.01
	Imsil	Mean	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01
		%	16	18	16	13	16	10	13	19	17	16	17	16	15
		Max-d	0.03	0.04	0.02	0.01	0.02	<0.01	0.01	<0.01	0.01	0.03	0.02	0.02	0.04
		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

Terms and abbreviations are given in Table 4.2.

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

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.49	0.30	0.68	0.76	0.59	0.83	0.87	0.83	0.59	0.56	***	0.90	0.66
		%	100	100	100	100	100	100	100	100	100	100	***	100	92
		Max-2w	0.54	0.48	0.78	0.81	0.70	0.87	0.90	0.99	0.70	0.92	***	0.96	0.99
		Min-2w	0.45	0.11	0.58	0.71	0.49	0.79	0.85	0.66	0.49	0.25	***	0.85	0.11
	Serpong	Mean	0.38	0.28	0.38	0.52	0.66	0.63	0.11	0.76	0.88	0.61	0.57	0.42	0.52
		%	100	100	100	50	100	100	100	100	100	100	100	100	96
		Max-2w	0.49	0.28	0.45	0.52	0.67	0.64	0.18	0.80	0.96	0.74	0.90	0.49	0.96
		Min-2w	0.27	0.28	0.29	0.52	0.66	0.63	0.04	0.68	0.80	0.48	0.23	0.36	0.04
	Bandung	Mean	0.79	1.06	1.54	1.46	1.55	0.94	***	1.67	1.64	1.40	1.09	1.40	1.38
		%	25	100	100	100	100	45	***	79	88	90	100	100	77
		Max-2w	0.79	1.92	2.44	2.13	1.59	1.18	***	1.91	1.97	1.59	1.24	1.56	2.44
		Min-2w	0.79	0.68	1.05	1.21	1.46	0.70	***	1.50	1.20	1.28	0.98	1.24	0.68
Japan	Rishiri	Mean	0.10	0.12	0.27	0.23	0.21	0.09	0.07	0.08	0.08	0.15	0.25	0.10	0.15
		%	100	100	100	100	100	100	100	100	100	50	100	100	96
		Max-2w	0.13	0.13	0.31	0.32	0.34	0.15	0.07	0.12	0.09	0.15	0.30	0.14	0.34
		Min-2w	0.08	0.12	0.23	0.15	0.07	0.05	0.07	0.05	0.07	0.15	0.16	0.06	0.05
	Ochiishi	Mean	0.16	0.12	0.19	0.38	0.19	0.06	0.04	0.13	0.09	0.33	0.42	0.16	0.19
		%	100	50	100	43	100	100	50	50	100	100	67	100	80
		Max-2w	0.17	0.12	0.25	0.38	0.34	0.07	0.04	0.13	0.11	0.46	0.58	0.23	0.58
		Min-2w	0.15	0.12	0.12	0.38	0.08	0.05	0.04	0.13	0.07	0.21	0.27	0.09	0.04
	Sado-seki	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Happo	Mean	0.0	0.2	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.0	0.3	0.2	0.3	0.1	0.3	0.0	0.0	0.1	0.2	0.0	0.0	0.3
		Min-2w	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	<0.01	<0.01
	Ijira	Mean	0.11	0.11	0.17	0.33	0.15	0.10	0.06	0.05	0.07	0.11	0.10	0.07	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.15	0.12	0.25	0.45	0.27	0.11	0.06	0.06	0.09	0.15	0.15	0.07	0.45
		Min-2w	0.06	0.10	0.09	0.21	0.06	0.08	0.05	0.04	0.05	0.07	0.08	0.06	0.04
	Oki	Mean	0.74	0.44	0.57	0.33	0.17	0.08	0.05	0.29	0.11	0.19	0.47	0.42	0.32
		%	100	100	100	100	100	100	100	25	100	100	100	100	94
		Max-2w	1.01	0.45	0.95	0.37	0.32	0.10	0.05	0.29	0.14	0.21	0.74	0.44	1.01
		Min-2w	0.47	0.43	0.18	0.29	0.09	0.06	0.04	0.29	0.09	0.18	0.21	0.41	0.04
	Yusuhara	Mean	0.35	0.25	0.24	0.45	0.30	0.07	0.03	0.02	0.05	0.11	0.18	0.13	0.19
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.47	0.31	0.34	0.63	0.47	0.09	0.05	0.02	0.06	0.18	0.33	0.15	0.63
		Min-2w	0.24	0.19	0.14	0.28	0.14	0.04	0.02	0.02	0.04	0.05	0.08	0.12	0.02
	Hedo	Mean	0.48	0.60	0.39	0.57	0.25	0.15	0.22	0.15	0.13	0.37	0.43	0.45	0.35
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.48	0.62	0.40	0.76	0.46	0.16	0.32	0.23	0.20	0.43	0.49	0.50	0.76
		Min-2w	0.47	0.58	0.39	0.38	0.08	0.15	0.12	0.07	0.05	0.31	0.38	0.40	0.05
	Ogasawara	Mean	0.19	0.38	0.32	0.35	0.16	0.09	0.06	***	***	0.19	0.15	0.21	0.21
		%	100	100	100	100	100	100	100	***	***	100	100	100	85
		Max-2w	0.25	0.38	0.39	0.48	0.26	0.11	0.08	***	***	0.21	0.19	0.22	0.48
		Min-2w	0.12	0.38	0.25	0.21	0.08	0.07	0.04	***	***	0.17	0.10	0.21	0.04
	Tokyo	Mean	0.50	0.53	0.45	0.62	0.45	0.35	0.37	0.34	0.24	0.29	0.36	0.40	0.41
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.52	0.58	0.50	0.72	0.57	0.47	0.40	0.41	0.24	0.36	0.48	0.46	0.72
		Min-2w	0.48	0.48	0.39	0.51	0.37	0.24	0.34	0.28	0.24	0.22	0.26	0.33	0.22
	Niigata-maki	Mean	0.3	0.3	0.3	0.52	0.26	0.09	0.06	0.09	0.04	0.09	0.07	0.07	0.18
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.4	0.4	0.68	0.43	0.17	0.08	0.15	0.07	0.13	0.12	0.14	0.68
		Min-2w	0.2	0.2	0.2	0.35	0.15	0.02	0.05	0.02	0.02	0.04	0.03	<0.01	<0.01
	Tsushima	Mean	0.6	0.3	0.4	0.65	0.53	0.09	0.06	0.05	0.07	0.16	0.43	0.34	0.32
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.8	0.4	0.6	0.83	1.13	0.11	0.08	0.05	0.09	0.22	0.60	0.43	1.13
		Min-2w	0.5	0.2	0.2	0.48	0.09	0.07	0.04	0.04	0.05	0.10	0.26	0.24	0.04

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

Country	Site		2021												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	0.27	0.18	0.18	<0.01	0.27	0.16	0.13	0.25	0.17	0.22	0.16	0.34	0.20
		%	100	100	100	80	100	75	100	100	100	100	100	100	96
		Max-w	0.37	0.37	0.30	<0.01	0.39	0.24	0.31	0.39	0.18	0.33	0.19	0.45	0.45
		Min-w	0.16	0.02	<0.01	<0.01	0.14	0.10	0.06	0.18	0.15	<0.01	0.13	0.24	<0.01
	Tanah Rata	Mean	0.03	0.20	0.07	0.05	0.05	0.10	***	0.06	0.05	0.07	<0.01	0.30	0.09
		%	100	100	100	100	100	70	***	93	100	100	100	100	89
		Max-w	0.05	0.39	0.10	0.11	0.09	0.13	***	0.12	0.05	0.12	0.03	1.23	1.23
		Min-w	<0.01	0.08	0.02	<0.01	0.02	0.04	***	0.02	0.03	0.02	<0.01	<0.01	<0.01
	Danum Valley	Mean	<0.01	0.02	0.01	0.03	<0.01	<0.01	***	<0.01	<0.01	0.01	<0.01	0.02	0.01
		%	100	100	100	100	100	70	***	76	50	100	100	100	82
		Max-2w	<0.01	0.02	0.02	0.03	<0.01	0.01	***	<0.01	<0.01	0.02	<0.01	0.02	0.03
		Min-2w	<0.01	0.01	<0.01	0.03	<0.01	<0.01	***	<0.01	<0.01	<0.01	<0.01	0.02	<0.01
Mongolia	Ulaanbaatar	Mean	0.30	0.44	0.43	0.69	0.55	0.47	1.14	0.34	0.81	1.33	2.30	0.61	0.79
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.49	0.65	0.87	1.85	1.07	0.88	2.35	0.68	2.60	3.41	4.28	1.50	4.28
		Min-w	0.13	0.12	0.16	0.18	0.22	0.29	0.38	0.19	0.17	0.22	0.32	0.18	0.12
	Terelj	Mean	0.12	0.11	0.13	0.08	0.11	0.08	0.12	0.06	0.14	0.06	0.13	0.14	0.11
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.14	0.14	0.16	0.09	0.13	0.09	0.16	0.06	0.17	0.09	0.19	0.15	0.19
		Min-2w	0.11	0.09	0.10	0.07	0.10	0.07	0.09	0.06	0.12	0.04	0.08	0.13	0.04
Myanmar	Yangon	Mean	0.28	0.94	0.38	0.80	<0.01	0.10	0.16	<0.01	***	***	***	***	0.34
		%	100	100	100	100	100	100	100	50	***	***	***	***	64
		Max-2w	0.53	1.25	0.76	1.61	<0.01	0.30	0.32	<0.01	***	***	***	***	1.61
		Min-2w	0.02	0.63	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	***	***	***	***	<0.01
Philippines	Metro Manila	Mean	0.90	1.87	1.70	2.01	1.47	1.51	1.31	1.51	0.93	1.65	0.92	1.42	1.39
		%	100	79	100	100	100	100	100	100	100	100	100	100	98
		Max-w	1.67	2.50	2.00	2.82	2.17	1.79	1.85	1.54	1.36	2.15	1.52	1.64	2.82
		Min-w	0.14	1.41	1.41	0.93	0.35	1.30	0.84	1.47	0.07	1.23	0.37	1.03	0.07
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	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-m	<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-m	<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
	Listvyanka	Mean	0.02	0.01	0.06	0.02	0.06	0.02	0.02	0.03	0.06	0.05	0.01	0.01	0.03
		%	100	100	100	100	100	100	100	81	100	100	100	100	98
		Max-w	0.03	0.02	0.08	0.04	0.17	0.04	0.03	0.05	0.07	0.09	0.02	0.02	0.17
		Min-w	<0.01	0.01	0.03	0.01	<0.01	0.01	0.01	0.02	0.05	0.02	<0.01	<0.01	<0.01
	Irkutsk	Mean	0.11	0.13	0.18	0.31	0.12	0.21	0.24	0.26	0.15	0.04	0.02	0.22	0.16
		%	69	100	100	100	100	100	100	100	100	100	100	100	97
		Max-w	0.21	0.21	0.27	0.48	0.18	0.29	0.34	0.43	0.26	0.09	0.03	0.50	0.50
		Min-w	0.02	0.04	0.12	0.22	0.09	0.16	0.16	0.15	0.02	0.02	<0.01	0.11	<0.01
	Primorskaya	Mean	0.07	0.04	0.05	0.07	0.09	0.10	0.06	0.05	0.03	0.02	0.02	0.04	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.08	0.05	0.05	0.09	0.09	0.12	0.06	0.05	0.04	0.02	0.03	0.05	0.12
		Min-2w	0.07	0.04	0.05	0.06	0.09	0.08	0.05	0.05	0.02	0.02	0.02	0.04	0.02

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

Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	3.31	3.50	3.74	3.32	4.67	3.46	4.29	4.89	2.80	3.03	3.88	3.49	3.68
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.54	3.88	4.17	4.51	5.70	5.02	6.32	7.80	3.65	4.57	5.69	4.82	7.80
		Min-w	3.04	2.46	3.33	2.49	3.57	2.07	2.48	2.77	2.21	1.93	2.44	2.30	1.93
	Hoa Binh	Mean	1.69	2.12	2.03	1.54	1.85	1.87	1.89	2.01	1.86	1.73	1.82	1.80	1.84
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.86	2.27	2.13	1.78	1.92	2.02	2.09	2.13	1.95	1.90	1.97	1.86	2.27
		Min-w	1.41	2.03	1.86	1.41	1.80	1.79	1.58	1.81	1.78	1.46	1.72	1.75	1.41
	Can Tho	Mean	1.50	1.49	1.36	1.10	1.27	1.35	1.53	1.48	1.12	1.62	1.23	1.62	1.39
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.71	1.83	1.79	1.65	1.47	1.90	1.69	1.90	1.53	1.87	1.31	2.38	2.38
		Min-w	1.33	1.23	0.71	0.73	0.91	0.97	1.25	0.99	0.73	1.33	0.99	1.03	0.71
	Ho Chi Minh	Mean	2.51	1.89	2.43	3.00	2.47	2.09	2.06	2.17	2.13	2.55	1.89	2.14	2.28
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.82	3.08	3.55	3.55	3.06	2.78	3.06	2.78	2.54	3.06	2.06	2.90	3.55
		Min-w	1.85	1.33	1.43	2.52	1.43	1.33	1.47	1.43	1.33	2.14	1.71	1.33	1.33
	Yen Bai	Mean	2.03	2.28	2.72	2.93	2.16	4.22	2.85	3.90	3.34	3.54	3.12	3.14	3.02
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.87	2.65	3.15	3.70	2.64	5.30	3.60	5.12	4.70	4.20	3.58	4.80	5.30
		Min-w	1.21	1.75	2.06	1.78	1.58	3.05	2.04	2.71	2.58	2.75	2.34	1.82	1.21

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

Unit : µg/m³

Country	Site		2021												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.07	0.09	0.10	0.08	0.05	0.04	0.03	0.04	0.03	<0.01	0.06	0.05	0.06
		%	16	18	16	17	6	13	16	16	10	16	17	19	14
		Max-d	0.18	0.13	0.15	0.20	0.06	0.05	0.06	0.05	0.05	0.02	0.15	0.11	0.20
		Min-d	0.02	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02	<0.01	<0.01	0.02	0.02
	Cheju (Kosan)	Mean	0.03	0.03	0.01	0.01	0.20	0.02	0.01	0.01	***	0.01	0.08	0.06	0.04
		%	10	7	13	17	16	13	16	10	***	13	13	16	11
		Max-d	0.08	0.04	0.02	0.02	0.74	0.02	0.02	0.02	***	0.02	0.22	0.11	0.74
		Min-d	0.01	0.02	<0.01	<0.01	0.03	0.01	<0.01	<0.01	***	0.01	0.02	0.01	<0.01
	Imsil	Mean	0.03	0.02	0.03	0.02	0.04	0.04	<0.01	<0.01	0.02	<0.01	0.03	0.03	0.02
		%	16	18	16	17	16	13	13	19	17	16	17	16	16
		Max-d	0.10	0.06	0.05	0.04	0.10	0.06	0.02	0.02	0.02	0.01	0.06	0.08	0.10
		Min-d	<0.01	<0.01	0.01	0.01	0.02	0.02	<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 2007 to 2021

unit: ppb																	
Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				1.8	1.5	1.3	1.1	0.8	0.5	0.6	1.3	***	***	***	***
China	Jinyunshan	AT	12.2	13.3	12.5	12.9	9.3	9.8	8.6	7.5	5.3	3.3	3.6	2.6	2.9	2.8	2.7
	Hongwen	AT	10.9	9.1	5.2	4.9	5.8	7.2	5.6	6.3	2.4	3.3	3.6	3.3	2.0	1.8	1.5
		FP	5.7	7.3	7.9	8.4	6.7	***	***	***	***	2.9	2.9				
	Xiang Zhou	AT	6.3	6.6	5.9	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
	Wuzhishan	AT													0.2	0.3	0.3
	Lijiang	AT													0.1	0.1	0.2
Indonesia	Jakarta	FP								6.0	5.4	2.5	1.7	2.7	1.8	3.2	4.2
		PS ^{*1}	11.0	7.4	8.3	6.3	5.0	6	5.3	4.5	5.2	5.6	4.4	6.2	6.5	5.4	7
	Serpong	FP	1.5	1.6	1.1	0.8	1.4	0.9	0.8	0.7	1.5	0.7	0.8	1.0	0.4	0.9	0.8
	Kototabang	PS ^{*1}	3.3	6.3	7.9	11.7	2.2	***	1.8	3.5	6.7	2.0	1.3	1.3	1.1	1.5	2
	Bandung	FP								4.1	1.3	1.9	1.7	4.3	4.2	2.7	4.5
Japan		PS		2.7	4.7	4.2	4.0	4.0	4.0	4.3	3.2	4.8	4.1	3.0	2.8	2.1	2.9
	Rishiri	AT	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	<0.1	0.1	<0.1	0.1	0.1
		FP	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1
	Ochiishi	AT		0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2
		FP		0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	Tappi	AT	0.5	0.6	***	***	0.4	0.4	0.5	0.5	0.3	0.3	0.3	0.3			
		FP	0.6	0.5	0.4	0.5	0.4	0.5	0.4	0.5	0.3	0.3	0.3	0.3			
	Sado-seki	AT	0.6	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	<0.1
		FP	0.6	0.5	0.4	0.4	0.5	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	***
	Happo	AT	(0.8)	0.6	0.4	0.8	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1
		FP	0.6	0.6	0.2	0.2	0.3	0.5	0.5	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4
	Ijira	AT	0.4	0.6	0.2	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	0.5	0.3	0.3	0.4	0.3	0.5	0.8	0.6	0.4	0.2	0.2	0.2	0.2	0.1	0.1
	Okii	AT	0.9	0.8	0.6	0.6	0.6	0.5	0.6	0.5	0.4	0.3	0.4	0.4	0.3	0.2	0.1
		FP	0.8	0.7	0.6	0.5	0.6	0.7	0.6	0.5	0.4	0.5	0.7	0.4	0.4	0.2	0.2
	Banryu	AT	1.1	1.0	0.6	0.6	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.2			
		FP	1.1	0.9	0.7	0.8	0.8	0.8	0.7	0.7	0.5	0.7	0.6	0.7			
	Yusuhara	AT	1.2	1.0	0.9	1.6	0.9	0.9	0.9	1.0	0.6	0.6	0.6	0.6	0.9	0.6	0.3
		FP	1.0	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.5	0.5	0.4	0.4	0.6	0.4	0.3
	Hedo	AT	0.4	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1
		FP	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.3	0.4	0.2	0.2	0.3	0.4	0.4	0.3
	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	<0.1	<0.1	<0.1
		FP	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	0.3	<0.1
	Tokyo	FP	2.2	2.2	2.0	1.8	1.6	1.4	1.6	1.5	1.3	1.3	1.4	1.3	1.2	0.7	0.7
	Niigata-maki	AT													0.2	0.1	<0.1
		FP														0.3	0.3
	Tsushima	FP														0.5	0.4
Lao PDR	Vientiane	FP									0.4	0.4	***	***	***	***	***
Malaysia	Petaling Jaya	FP	2.0	1.9	1.8	1.4	2.0	1.8	1.3	1.6	1.2	1.2	1.1	1.3	***	0.6	0.4
	Tanah Rata	FP	3.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1
	Danum Valley	FP	0.1	<0.1	0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1
Mongolia	Ulaanbaatar	AT								8.9	9.8	10.0	11.5	7.3	6.9	12.2	15.3
		FP	4.3	1.8	4.3	9.1	6.1	***	***	***	***	7.5	4.8	3.4	5.0	5.0	***
	Terelj	FP	1.4	0.5	0.7	0.6	0.7	***	***	***	***	0.6	0.2	0.1	0.3	0.2	***
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
Philippines	Metro Manila	FP	2.7	1.2	***	2.2	***	***	***	***	***	***	***	***	0.4	2.4	2.0
	Los Banos	FP	0.4	0.3	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	<0.1	0.4	<0.1	1.1	***	0.2	0.1	0.1	0.1	0.2	***	***	***	***	***
Republic of Korea	Kanghwa	AT	2.8	2.9	3.2	2.9	4.1	4.4	3.4	2.8	2.2	2.8	1.9	2.3	2.1	1.4	1.4
	Cheju	AT	2.3	2.2	2.7	2.5	2.5	0.9	0.6	0.5	0.5	0.5	0.5	0.8	1.0	0.7	0.7
	Imsil	AT	2.1	2.3	1.4	2.7	4.8	1.3	1.8	2.3	1.7	1.7	2.3	5.0	1.5	1.7	1.5
Russia	Mondy	FP	0.4	0.3	0.1	0.6	0.1	0.6	0.1	0.1	0.1	<0.1	0.2	0.2	0.3	<0.1	<0.1
	Listvyanka	FP	1.1	1.2	4.0	4.5	2.8	5.2	2.6	1.1	2.8	4.1	2.9	2.2	2.2	1.9	4.4
	Irkutsk	FP	2.4	2.2	4.6	7.3	5.6	7.2	4.2	1.6	3.5	5.5	4.6	4.3	2.1	2.3	2.4
	Primorskaya	FP	0.7	0.9	1.0	1.7	1.2	1.2	0.7	0.4	0.7	0.8	0.4	0.1	0.2	0.3	0.2
Thailand	Bangkok	AT	0.8	2.1	1.9	1.6	1.6	1.5	1.9	1.4							
		FP	2.0	1.2	1.2	1.2	1.2	0.9	0.8	1.6	0.6	0.8	0.8	0.9	0.8	0.7	***
	Samutprakarn	AT	5.8	4.8	4.9	4.6	2.6	2.5	3.0	3.7	3.0	2.0	1.5	2.0	1.0	1.5	***
	Pathumthani	FP	1.8	0.5	1.1	1.2	0.6	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	AT	1.3	1.6	1.2	1.6	1.3	0.6	1.0	1.8	1.2	1.7	1.4	1.4	0.7	***	***
		FP	0.2	0.6	0.2	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	0.3	0.3	0.3	0.2	0.2	<0.1	<0.1	0.2	0.2	<0.1	0.1		
	Chang Phueak	AT	0.9	0.8	0.6	0.8	0.6	0.9	1.3	0.9	1.3	0.8	0.8	0.9	0.6	0.4	1.2
	Si Phum	AT							1.4	1.7	1.4	1.1	1.1	1.2	1.2	1.2	1.1
	Sakaerat	FP	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.4	0.4	0.2	0.7	0.6		
	Nai Mueang	AT		2.7	***	1.3	1.4	1.1	1.2	1.0	2.9	3.2	0.7	0.7	0.9	0.6	0.6
Vietnam	Hanoi	FP	1.7	1.3	1.3	1.4	1.9	2.2	2.1	3.2	4.5	1.8	1.0	0.5	0.4	0.7	0.9
	Hoa Binh	FP	1.2	1.0	0.9	0.7	1.2	1.2	1.1	2.8	3.6	1.3	0.6	0.5	0.3	0.8	1.0
	Can Tho	FP								1.2	1.0	0.3	0.2	0.6	0.5	0.6	0.5
	Ho Chi Minh	FP								1.6	1.5	0.5	0.4	0.6	0.6	0.6	0.6
	Yen Bai	FP									4.2	1.5	0.8	0.8	0.5	0.4	0.8

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

Terms and abbreviations are given in Table 4.2.

Table 4.22 Annual HNO₃ concentration from 2007 to 2021

unit: ppb

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				0.3	0.3	0.3	0.5	0.4	0.5	0.4	0.5	***	***	***	***
China	Hongwen	FP	0.9	1.7	1.1	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
	Serpong	FP	0.4	0.2	0.3	0.3	0.8	0.9	0.6	0.9	1.1	0.8	0.8	1.5	1.1	0.9	0.8
	Bandung	FP								0.7	0.5	0.5	0.4	0.8	0.9	0.4	0.5
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
	Tappi	FP	0.2	0.2	<0.1	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	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.1	<0.1	***
	Happo	FP	0.4	0.4	<0.1	<0.1	<0.1	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
	Ijira	FP	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
	Oki	FP	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	<0.1	<0.1
	Banryu	FP	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.2			
	Yusuhara	FP	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2
	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	<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	1.1	1.0	0.8	0.8	0.6	0.6	0.8	0.8	0.7	0.6	0.7	0.6	0.5	0.5	0.4
	Niigata-maki	FP														0.1	0.1
	Tsushima	FP														0.4	0.3
Lao PDR	Vientiane	FP									0.3	0.2	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.7	0.8	1.0	0.7	0.7	0.5	0.7	0.8	0.7	0.4	0.5	0.9	***	0.4	0.5
	Tanah Rata	FP	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	<0.1
	Danum Valley	FP	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	***	<0.1	<0.1
Mongolia	Ulaanbaatar	FP	0.2	0.2	0.2	0.3	0.2	***	***	***	***	0.1	<0.1	<0.1	0.1	<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
Philippines	Metro Manila	FP	0.4	0.4	***	0.2	***	***	***	***	***	***	***	***	***	0.1	0.3
	Los Banos	FP	0.2	<0.1	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	<0.1	0.3	<0.1	0.4	***	0.2	<0.1	0.1	<0.1	<0.1	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	0.7	0.5	0.5	0.4	***	***	0.4	0.5	0.3	0.4	0.1	0.1	<0.1	0.3	0.4
	Cheju	FP with PM _{2.5} cyclone	***	0.7	0.6	0.5	***	***	0.4	0.8	0.5	0.6	0.3	0.4	<0.1	0.4	0.4
	Imsil	FP with PM _{2.5} cyclone	0.4	0.4	0.5	0.3	***	***	0.6	0.6	0.4	0.7	0.6	0.4	<0.1	0.2	0.3
Russia	Mondy	FP	<0.1	<0.1	<0.1	2.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Listvyanka	FP	<0.1	<0.1	<0.1	0.4	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Irkutsk	FP	0.2	0.2	0.2	1.9	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1
	Primorskaya	FP	<0.1	0.1	0.1	0.7	<0.1	0.1	0.3	0.2	0.2	0.3	0.2	<0.1	<0.1	<0.1	<0.1
Thailand	Bangkok	FP	0.5	0.5	0.5	0.6	0.5	0.6	0.4	0.9	0.7	0.4	0.3	0.8	0.5	0.5	***
	Pathumthani	FP	0.8	0.3	0.7	0.9	0.3	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	<0.1	0.2	0.5	<0.1	<0.1	0.3	0.1	0.2	0.3	1.7	0.2	0.4	0.5	***	***
	Mae Hia	FP	0.5	0.4	0.7	1.9	0.1	0.2	0.2	<0.1	<0.1	0.2	0.2	0.1	0.2		
	Sakaerat	FP	0.3	0.2	0.2	0.2	<0.1	0.2	<0.1	0.3	0.3	0.4	0.2	0.3	0.3		
Vietnam	Hanoi	FP	1.0	0.5	0.9	0.8	0.9	1.0	0.7	0.5	0.7	0.9	1.6	0.4	0.4	0.6	0.8
	Hoa Binh	FP	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.7	0.9	0.4	0.3	0.6	0.5
	Can Tho	FP								0.5	0.4	0.2	<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
	Yen Bai	FP									0.7	0.6	1.3	0.5	0.4	0.6	1.1

Terms and abbreviations are given in Table 4.2.

Table 4.23 Annual HCl concentration from 2007 to 2021

unit: ppb																	
Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				0.5	0.4	0.7	1.3	1.1	1.3	1.2	1.6	***	***	***	***
China	Hongwen	FP	1.5	1.2	1.5	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
	Serpong	FP	1.7	0.5	0.4	0.8	0.7	0.8	0.7	0.8	1.0	0.7	0.9	1.3	1.3	1.0	1.1
	Bandung	FP								0.8	0.5	1.1	0.9	0.9	0.9	0.7	0.8
Japan	Rishiri	FP	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.8	0.4	0.3
	Ochiishi	FP		0.4	0.4	0.4	0.6	0.6	0.5	0.4	0.8	0.4	0.4	0.3	0.3	0.3	0.3
	Tappi	FP	0.6	0.6	0.5	1.5	0.7	0.6	0.6	0.7	0.5	0.5	0.5	0.4			
	Sado-seki	FP	0.9	0.8	0.9	0.7	0.8	0.9	0.8	0.9	1.2	0.7	0.8	1.0	0.5	0.5	***
	Happo	FP	0.2	0.2	<0.1	<0.1	<0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
	Ijira	FP	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2
	Oki	FP	1.1	0.9	0.8	0.8	1.0	0.9	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.4
	Banryu	FP	0.9	0.7	0.8	0.7	0.8	0.7	0.8	0.7	0.7	0.6	0.7	0.6			
	Yusuhara	FP	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2
	Hedo	FP	1.0	0.9	0.9	0.5	0.4	0.6	1.0	1.1	1.1	1.0	0.9	0.9	0.9	0.8	0.5
	Ogasawara	FP	0.7	0.6	0.5	0.4	0.4	0.4	0.6	0.6	0.5	0.4	0.4	0.3	0.4	0.7	0.3
	Tokyo	FP	1.0	0.8	0.8	0.7	0.8	0.7	0.8	0.7	0.8	0.7	0.7	0.8	0.8	0.7	0.7
	Niigata-maki	FP														0.5	0.4
	Tsushima	FP														0.6	0.5
Lao PDR	Vientiane	FP									0.3	0.2	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.7	1.1	0.7	0.5	0.8	1.2	1.3	1.1	0.7	2.8	0.3	1.5	***	1.2	1.2
	Tanah Rata	FP	0.1	0.4	0.1	<0.1	0.2	0.4	0.3	0.3	0.4	0.7	0.2	<0.1	***	0.3	0.3
	Danum Valley	FP	0.2	0.3	0.5	0.3	0.2	0.5	1.0	0.4	0.3	0.3	0.1	0.2	***	0.2	0.6
Mongolia	Ulaanbaatar	FP	0.9	0.7	0.7	1.7	1.1	***	***	***	***	11.3	1.7	0.8	0.4	0.7	***
	Terelj	FP	0.5	0.4	0.3	0.5	0.5	***	***	***	***	4.3	0.5	0.3	0.1	0.4	***
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
Philippines	Metro Manila	FP	0.7	0.7	***	0.8	***	***	***	***	***	***	***	***	0.6	0.4	1.0
	Los Banos	FP	0.8	0.4	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	<0.1	0.6	0.2	1.2	***	0.2	0.2	0.2	0.7	<0.1	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	0.2	<0.1	0.1	0.2	***	***	0.3	0.2	0.1	<0.1	<0.1	<0.1	0.7	0.1	0.1
	Cheju	FP with PM _{2.5} cyclone	***	0.2	0.2	0.2	***	***	0.2	0.2	0.2	0.2	0.2	0.2	1.1	0.1	0.2
	Imsil	FP with PM _{2.5} cyclone	0.2	0.1	0.2	0.1	***	***	0.2	0.2	0.2	0.2	0.2	0.2	1.2	<0.1	<0.1
Russia	Mondy	FP	<0.1	<0.1	<0.1	0.5	0.4	0.7	0.7	0.8	1.9	1.6	2.7	2.6	1.0	0.2	0.1
	Listvyanka	FP	<0.1	0.1	0.2	0.6	1.8	9.8	2.1	2.6	7.4	9.0	6.0	5.3	7.0	1.0	0.6
	Irkutsk	FP	0.2	0.2	0.2	0.5	1.4	2.6	1.7	1.4	7.0	3.2	4.7	5.3	1.8	0.3	0.4
	Primorskaya	FP	0.2	0.2	0.2	0.7	1.1	1.0	0.5	0.4	0.4	0.8	0.6	0.2	0.1	0.6	0.2
Thailand	Bangkok	FP	0.7	0.8	0.9	0.7	0.7	0.7	0.6	1.2	0.7	1.5	0.7	1.0	0.9	1.2	***
	Pathumthani	FP	1.2	0.4	0.9	0.7	0.5	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.2	0.3	0.2	<0.1	0.2	0.2	0.2	0.3	0.2	1.4	0.3	0.3	0.5	***	***
	Mae Hia	FP	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.4		
	Sakaerat	FP	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.4	0.2	0.2	0.3		
Vietnam	Hanoi	FP	2.5	1.8	1.5	2.0	2.0	2.1	1.6	3.0	2.0	3.3	2.0	1.1	1.1	1.4	3.2
	Hoa Binh	FP	2.1	1.8	1.2	1.5	1.6	1.7	1.6	3.2	1.8	2.4	1.6	1.2	1.3	2.3	2.1
	Can Tho	FP								1.7	1.4	1.2	0.9	1.8	1.7	1.8	1.6
	Ho Chi Minh	FP								1.6	1.1	1.5	1.3	1.6	3.3	1.5	1.4
	Yen Bai	FP									2.4	2.4	2.3	1.8	1.4	1.9	2.3

Terms and abbreviations are given in Table 4.2.

Table 4.24 Annual NH₃ concentration from 2007 to 2021

unit: ppb																	
Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				14.3	11.5	9.9	9.4	6.9	7.3	6.8	7.5	***	***	***	***
China	Hongwen	FP	7.9	8.1	11.2	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
	Serpong	FP	8.5	6.3	5.9	5.4	11.0	16.1	11.7	11.8	18.3	11.1	5.8	8.3	5.2	9.8	6.1
	Bandung	FP								8.4	9.4	6.6	8.6	8.7	10.5	10.1	10.3
		PS												9.8	11.9	20.7	15.5
Japan	Rishiri	FP	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	1.1	0.5	0.5
	Ochiishi	FP		0.6	1.0	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3
	Tappi	FP	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4			
	Sado-seki	FP	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.6	0.7	1.0	0.7	0.6	***
	Happo	FP	0.3	0.4	0.2	0.3	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.5	0.6
	Ijira	FP	1.2	1.1	1.0	1.1	1.0	1.0	1.3	0.9	1.0	0.8	0.9	1.1	1.0	0.8	0.9
	Oki	FP	0.8	1.0	1.0	0.8	0.7	0.5	0.6	0.6	0.7	0.9	0.6	0.9	0.9	0.8	0.9
	Banryu	FP	1.0	1.0	1.0	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	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.6
	Hedo	FP	1.0	1.2	1.2	1.2	0.9	1.3	1.1	1.1	1.3	1.2	1.3	1.1	1.4	1.2	1.1
	Ogasawara	FP	0.5	0.5	0.5	0.5	0.7	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.7	0.6
	Tokyo	FP	6.1	5.2	5.0	4.9	4.4	3.9	4.6	4.6	4.2	4.2	4.2	3.8	3.8	3.7	3.6
	Niigata-maki	FP														1.1	1.4
	Tsushima	FP														0.9	1.0
Lao PDR	Vientiane	FP									2.6	2.7	***	***	***	***	***
Malaysia	Petaling Jaya	FP	7.5	6.1	7.3	6.7	6.7	6.5	8.6	10.0	9.2	11.2	7.6	10.4	***	7.4	6.2
	Tanah Rata	FP	0.9	1.0	0.8	0.9	1.2	0.9	1.2	2.2	3.0	2.3	1.8	<0.1	***	1.7	1.4
	Danum Valley	FP	0.9	0.9	1.9	1.5	0.9	0.7	3.8	1.2	1.4	1.4	1.1	1.0	***	1.7	2.4
Mongolia	Ulaanbaatar	FP	10.4	10.7	7.4	14.8	8.7	***	***	***	***	***	9.7	7.3	7.0	5.8	6.3
	Terelj	FP	1.3	1.2	1.9	1.4	1.5	***	***	***	***	***	1.7	2.1	1.3	1.2	1.5
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
Philippines	Metro Manila	FP	6.6	9.2	***	7.5	***	***	***	***	***	***	***	***	13.1	9.6	7.8
	Los Banos	FP	2.7	3.1	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.9	6.4	0.4	2.5	***	1.0	1.1	2.2	1.9	1.9	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	9.7	3.4	3.2	4.6	***	***	7.4	3.7	4.3	0.8	0.4	0.5	3.8	3.6	3.8
	Cheju	FP with PM _{2.5} cyclone	***	3.7	4.9	7.0	***	***	3.2	6.9	7.5	4.0	7.0	7.1	7.2	3.1	3.3
	Imsil	FP with PM _{2.5} cyclone	5.0	5.0	6.0	6.5	***	***	3.0	6.3	5.6	4.3	8.4	9.4	10.8	3.4	4.0
Russia	Mondy	FP	0.8	0.7	0.4	0.4	0.4	0.7	0.6	0.4	0.8	1.5	1.0	1.2	1.4	1.1	0.7
	Listvyanka	FP	2.5	2.7	2.4	2.8	0.8	0.6	1.3	2.4	2.8	3.9	2.9	1.7	2.9	3.3	4.3
	Irkutsk	FP	3.8	3.3	2.9	2.2	1.7	1.4	1.5	4.8	2.8	3.0	2.3	3.1	2.8	3.2	2.0
	Primorskaya	FP	3.6	2.9	1.8	2.2	4.2	1.3	1.1	1.3	1.4	2.5	0.8	1.4	6.4	1.4	1.1
Thailand	Bangkok	FP	10.2	8.2	8.7	7.9	8.8	8.3	8.7	14.6	9.2	9.7	6.4	12.2	6.8	7.5	***
	Pathumthani	FP	9.2	3.1	8.1	7.8	5.2	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	3.2	2.3	2.6	1.6	1.5	2.4	3.4	4.8	3.0	7.9	4.2	3.8	3.1	***	***
	Mae Hia	FP	4.7	3.8	5.8	9.0	5.3	4.4	3.5	1.5	0.9	5.0	4.6	4.6	4.8		
	Sakaerat	FP	2.4	2.6	2.3	2.0	1.8	3.3	2.9	3.5	3.9	4.6	3.5	4.6	5.8		
Vietnam	Hanoi	FP	4.1	5.0	4.8	5.7	6.4	4.8	1.4	1.6	2.6	4.3	3.9	2.4	2.1	2.8	3.8
	Hoa Binh	FP	2.3	4.0	3.9	2.1	2.4	2.6	1.7	1.4	1.2	1.3	1.8	1.4	1.4	1.3	1.2
	Can Tho	FP								2.6	2.5	3.3	3.4	4.9	5.4	4.9	4.3
	Ho Chi Minh	FP								3.0	2.8	4.3	5.6	4.6	4.1	4.6	4.1
	Yen Bai	FP									2.9	2.8	3.5	3.2	3.4	2.5	3.1

Terms and abbreviations are given in Table 4.2.

Table 4.25 Annual NO concentration from 2007 to 2021

unit: ppb

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
China	Jinyunshan	AT(DOAS)	1.5	6.7	3.3	2.0	1.6	2.1	1.6	1.7	1.5	3.3	8.7	7.6	6.0	8.1	2.8
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)	<0.1	<0.1	***	***	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	<0.1	<0.1	<0.1
	Ijira	AT(CLD)	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.5	0.3	0.1	0.3	0.5	0.3	0.4
	Oki	AT(CLD)	<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	<0.1	<0.1
	Banryu	AT(CLD)	0.2	0.2	0.2	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	<0.1	<0.1	<0.1
	Hedo	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	<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	<0.1
	Niigata-maki	AT(CLD)													0.1	0.1	0.2
Lao PDR	Vientiane	AT(CLD)								8.4	10.9	***	***	***	***	***	***
Malaysia	Tanah Rata	AT(CLD)	10.1	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(CLD)								21.8	27.8	22.7	19.4	12.7	15.2	15.4	18.3
Philippines	Metro Manila	AT(CLD)									17.6	13.9	***	***	***	***	***
Thailand	Bangkok	AT(CLD)	11.5	13.6	11.6	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)	16.7	15.3	15.2	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)	1.8	0.7	0.2	0.3	1.1	0.5	3.3	7.0	1.0	0.1	0.5	2.9	1.0	0.3	***
	ChangPhueak	AT(CLD)	3.1	2.0	2.1	3.0	2.0	4.3	1.9	2.3	3.5	2.8	2.4	2.0	1.6	1.4	1.2
	Si Phum	AT(CLD)							6.9	7.0	11.8	13.5	9.1	7.7	7.9	10.8	***
	Nai Mueang	AT(CLD)		5.9	***	15.3	16.5	15.6	15.4	11.7	11.3	13.6	13.0	10.3	11.4	8.4	6.3

Terms and abbreviations are given in Table 4.2.

Table 4.26 Annual NO₂ concentration from 2007 to 2021

unit: ppb																	
Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
China	Hongwen	AT(DOAS)	22.9	19.9	18.8	21.1	20.2	20.0	19.5	18.6	14.8	16.1	14.7	13.5	11.2	8.7	10.0
	Xiang Zhou	AT(DOAS)	19.5	21.1	15.4	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
	Wuzhishan	AT(CLD)													0.9	0.9	1.1
	Lijiang	AT(CLD)													0.6	1.2	1.4
Indonesia	Jakarta	PS ^{*1}	4.2	32.8	48.5	31.2	***	16	26.5	25.9	25.7	26.5	28.4	22.8	21.4	16.0	17
	Kototabang	PS ^{*1}	0.7	1.9	3.5	0.5	***	***	2.5	0.7	1.2	1.0	1.2	1.0	0.9	0.9	1
	Bandung	PS		11.3	13.3	31.5	39.0	42.8	41.0	40.6	54.4	74.6	36.0	30.3	35.9	31.2	17.3
Japan	Banryu	AT(CLD)	3.3	3.4	2.8	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)								26.9	30.3	35.9	42.9	34.3	33.5	21.9	23.4
Philippines	Metro Manila	AT(CLD)									15.5	12.9	***	***	***	***	***
Republic of Korea	Kanghwa	AT(CLD)	5.3	6.9	7.1	6.4	5.4	5.0	5.7	5.9	7.4	6.8	5.7	4.9	5.4	4.6	6.0
	Cheju	AT(CLD)	4.3	2.9	3.1	4.1	4.4	3.0	3.4	3.3	3.7	3.1	2.7	3.6	4.6	4.3	3.7
	Imsil	AT(CLD)	4.2	4.1	4.5	5.1	5.0	4.6	5.1	4.0	4.4	4.6	4.0	4.1	4.2	4.0	5.2
Thailand	Bangkok	AT(CLD)	16.4	20.5	23.6	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)	19.5	16.4	19.0	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)	9.7	8.5	8.8	9.5	9.6	11.2	12.3	11.2	10.2	9.3	8.4	5.8	9.1	8.3	11.9
	Si Phum	AT(CLD)							16.1	14.9	18.1	18.9	14.5	19.0	15.3	24.4	***
	Nai Mueang	AT(CLD)		11.0	***	17.9	17.6	18.7	19.4	15.6	15.0	17.7	22.7	19.0	16.2	16.8	14.4

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

Terms and abbreviations are given in Table 4.2.

Table 4.27 Annual NO_x concentration from 2007 to 2021

unit: ppb

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
China	Jinyunshan (NO _x *)	AT(CLD)	8.1	11.8	8.2	11.4	10.0	8.4	9.1	8.9	9.6	13.5	18.5	17.9	14.1	16.0	12.9
Japan	Rishiri (NO _x *)	AT(CLD)	1.0	1.0	0.9	0.8	0.6	0.7	0.6	0.7	0.5	0.6	0.6	0.6	0.5	0.5	0.6
	Ochiishi (NO _x *)	AT(CLD)		1.0	1.1	1.0	1.1	1.0	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0
	Tappi (NO _x *)	AT(CLD)	1.3	1.6	***	***	1.1	1.2	1.4	1.5	1.4	1.4	1.3	1.2			
	Sado-seki (NO _x *)	AT(CLD)	1.2	1.1	0.9	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.4
	Happo (NO _x *)	AT(CLD)	(2.3)	2.1	1.3	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 (NO _x *)	AT(CLD)	3.2	2.2	2.5	2.3	2.0	2.2	1.7	1.7	2.4	1.6	1.4	1.9	1.8	1.0	1.5
	Oki (NO _x *)	AT(CLD)	1.5	1.5	1.3	1.3	1.3	1.0	1.1	1.3	1.1	1.0	1.0	1.1	1.0	0.7	0.5
	Banryu	AT(CLD)	3.5	3.6	3.0	2.8	2.5	2.0	1.9	2.0	1.8	1.9	2.1	1.8			
	Yusuhara (NO _x *)	AT(CLD)	1.3	1.3	1.1	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 (NO _x *)	AT(CLD)	0.5	0.7	0.7	0.7	0.7	0.5	0.9	0.7	0.7	0.6	0.7	0.7	0.6	0.5	0.5
	Ogasawara (NO _x *)	AT(CLD)	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.7	0.2
	Niigata-miki (NO _x *)	AT(CLD)													2.1	1.8	2.0
Lao PDR	Vientiane	AT(CLD)								18.4	22.4	***	***	***	***	***	***
Malaysia	Tanah Rata (NO _x *)	AT(CLD)	12.2	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(CLD)								48.7	58.2	58.6	62.3	47.0	48.7	37.3	41.8
Philippines	Metro Manila	AT(CLD)									33.2	26.9	***	***	***	***	***
Thailand	Bangkok	AT(CLD)	28.1	34.4	35.2	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)	36.2	31.5	34.1	28.7	36.7	34.1	27.7	24.0	20.0	21.8	22.8	24.5	24.6	18.1	***
	Khanchanaburi (NO _x *)	AT(CLD)	3.0	1.2	1.4	3.1	4.1	2.0	4.7	11.6	3.0	2.7	1.4	6.1	3.0	3.0	***
	Chang Phueak	AT(CLD)	12.6	10.4	10.8	12.5	11.6	15.5	14.2	13.5	13.7	12.1	10.7	7.9	10.7	9.5	13.0
	Si Phum	AT(CLD)							23.0	21.9	29.8	32.3	23.5	26.6	23.1	35.2	***
	Nai Mueang	AT(CLD)		16.9	***	33.2	34.0	34.2	34.6	27.3	26.2	31.3	35.7	29.3	27.5	25.0	20.6

Terms and abbreviations are given in Table 4.2.

Table 4.28 Annual O₃ concentration from 2007 to 2021

unit: ppb

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	AT(UVP)													18	19	24
Indonesia	Bandung	AT(UVP) PS									26	10	11	15	8	***	***
														10	11	9	7
Japan	Rishiri	AT(UVP)	46	42	42	40	37	34	37	39	40	39	37	36	32	34	35
	Ochiishi	AT(UVP)		38	37	38	35	39	39	42	40	38	42	40	33	35	34
	Tappi	AT(UVP)	54	60	***	***	38	41	40	39	38	41	45	45			
	Sado-seki	AT(UVP)	48	47	49	53	49	46	46	47	45	45	45	44	44	40	36
	Happo	AT(UVP)	(63)	50	52	48	53	49	49	48	48	47	47	50	51	45	47
	Ijira	AT(UVP)	35	20	21	19	20	24	26	28	26	25	28	28	24	17	25
	Oki	AT(UVP)	45	45	46	45	46	46	48	47	47	46	47	46	45	43	43
	Banryu	AT(UVP)	34	35	36	35	33	33	33	33	33	33	35	32			
	Yusuhara	AT(UVP)	40	40	41	36	33	34	39	40	40	37	41	39	39	39	38
	Hedo	AT(UVP)	38	39	39	38	33	35	38	40	39	36	36	29	37	30	29
	Ogasawara	AT(UVP)	32	28	30	38	29	32	37	33	35	29	36	30	45	41	29
	Niigata-maki	AT(UVP)													38	35	36
	Tsushima	AT(UVP)													47	43	45
Malaysia	Tanah Rata	AT(UVP)	15	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(UVP)								12	13	12	9	11	12	12	11
Philippines	Metro Manila	AT(UVP)									7	10	***	***	***	***	***
Republic of Korea	Kanghwa	AT(UVP)	43	41	43	43	39	44	46	50	47	45	43	41	46	42	43
	Cheju	AT(UVP)	38	42	44	42	35	39	41	45	46	39	47	42	46	42	45
	Imsil	AT(UVP)	30	20	33	30	30	33	31	31	36	36	29	28	36	29	31
Russia	Mondy	AT(UVP)	39	35	45	44	40	38	38	35	40	43	27	***	***	***	***
		PS												42	50	***	***
	Listvyanka	PS								39	39	35	25	36	45	***	***
	Irkutsk	PS										30	14	22	24	20	***
Thailand	Bangkok	AT(UVP)		10	17	17	19	17	21	19	43	21	22	22	26	29	29
	Samutprakarn	AT(UVP)	14	18	18	15	17	19	20	22	23	16	17	20	21	29	26
	Khanchanaburi	AT(UVP)	7	16	14	23	12	16	13	22	20	19	18	25	26	23	***
	ChangPhueak	AT(UVP)	23	22	26	24	25	21	21	20	22	25	22	29	31	26	31
	Si Phum	AT(UVP)							22	19	***	***	***	***	***	***	***
	Nai Mueang	AT(UVP)		22	***	17	***	19	22	22	21	22	26	22	25	26	26

Terms and abbreviations are given in Table 4.2.

Table 4.29 Annual PM₁₀ concentration from 2007 to 2021

unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
China	Jinyunshan	AT(β-ray)	65	50	40	51	45	43	64	57	48	56	50	48	39	35	38
	Hongwen	AT(TEOM)	71	59	60	63	61	59	58	54	43	42	43	41	37	33	35
	Xiang Zhou	AT(TEOM)	50	51	48	48	49										
	Haibin-Park	AT(TEOM)						44	54	46	50	41	42	40	37	31	34
	Wuzhishan	AT(Hybrid)													14	11	12
	Lijiang	AT(Hybrid)													8	7	9
Japan	Rishiri	TEOM/AT(β-ray)	14	16	16	18	15	13	12	26	19	16	17	17	22	18	19
	Ochiishi	AT(β-ray)		30	24	22	23	20	16	26	22	18	16	15	15	13	16
	Tappi	AT(β-ray)	17	22	16	28	18	17	18	20	20	18	16	16			
	Sado-seki	TEOM/AT(β-ray)	22	23	22	21	21	19	20	23	24	20	21	22	24	20	21
	Happo	AT(β-ray)	12	14	12	12	12	11	11	12	10	10	7	9	6	7	9
	Ijira	AT(β-ray)	22	20	18	18	19	16	18	17	17	16	18	17	15	13	13
	Oki	AT(β-ray)	29	26	26	29	25	23	27	31	32	29	28	29	30	29	36
	Banryu	AT(β-ray)	31	27	26	28	24	22	25	25	24	22	24	22			
	Yusuhara	AT(β-ray)	19	18	18	18	16	15	17	15	16	14	14	15	13	13	14
	Hedo	AT(β-ray)	29	27	28	31	28	27	26	27	31	28	29	31	29	29	29
	Ogasawara	AT(β-ray)	13	10	12	12	10	11	12	11	18	19	19	20	20	19	16
	Niigata-maki	AT(β-ray)														21	23
	Tsushima	AT(β-ray)													23	19	22
Lao PDR	Vientiane	AT(β-ray)								72	72	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(β-ray)								211	106	97	102	121	126	92	84
Philippines	Metro Manila	AT(β-ray)									33	29	***	***	***	***	***
Republic of Korea	Kanghwa	AT(β-ray)	52	48	51	51	44	45	48	49	52	51	49	42	43	36	32
	Cheju	AT(β-ray)	54	50	43	47	42	37	45	47	45	42	37	39	39	30	30
	Imsil	AT(β-ray)	43	59	34	40	38	36	39	44	43	42	39	37	49	34	38
Thailand	Bangkok	AT(β-ray)	45	43	39	38	38	37	41	37	32	35	36	36	34	32	32
	Samutprakarn	AT(β-ray)		45	43	38	54	39	44	41	35	38	38	42	40	34	35
	Khanchanaburi	AT(β-ray)	31	37	28	46	23	10	28	90	23	34	17	35	33	121	***
	ChangPhueak	AT(β-ray)	52	38	42	45	33	42	41	45	43	48	43	50	56	52	46
	Si Phum	AT(β-ray)							47	47	49	52	45	41	50	46	38
	Nai Mueang	AT(β-ray)		47	***	44	***	54	59	51	45	55	54	53	49	50	44

Terms and abbreviations are given in Table 4.2.

Table 4.30 Annual PM_{2.5} concentration from 2007 to 2021

unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	AT(β-ray)											13	19	28	20	18
Indonesia	Jakarta	AT(β-ray)										***	39	46	38	34	***
Japan	Rishiri	AT(β-ray)	8	9	8	9	8	8	7	8	8	7	8	7	8	7	6
	Ochiishi	AT(β-ray)		16	12	12	10	9	7	7	9	8	7	6	7	5	6
	Tappi	AT(β-ray)									10	9	8	9			
	Sadoseki	AT(β-ray)								11	10	10	10	9	9	7	4
	Happo	AT(β-ray)									7	6	6	6	5	5	5
	Ijira	AT(β-ray)									11	9	11	8	8	6	6
	Oki	AT(β-ray)	15	14	12	12	14	13	15	13	13	12	11	12	10	9	11
	Banryu	AT(β-ray)									13	12	13	11			
	Yusuhara	AT(β-ray)									11	10	10	10	10	9	9
	Hedo	AT(β-ray)									10	10	11	11	10	10	9
	Ogasawara	AT(β-ray)									7	6	6	6	6	6	6
	Niigata-maki	AT(β-ray)														7	6
	Tsushima	AT(β-ray)													12	10	10
Lao PDR	Vientiane	AT(β-ray)												31	32	31	***
Mongolia	Ulaanbaatar	AT(β-ray)								50	50	53	48	43	39	***	49
Myanmar	Yangon	AT(β-ray)												24	24	22	28
	Mandalay	AT(β-ray)									47	33	37	16	41	77	***
Philippines	Metro Manila	AT(β-ray)									22	20	18	17	16	12	13
	Mt. Sto. Tomas	AT(β-ray)															3
Republic of Korea	Kanghwa	AT(β-ray)										28	25	22	23	19	19
	Cheju	AT(β-ray)										21	16	16	20	15	12
	Imsil	AT(β-ray)													19	16	18
Thailand	Bangkok	AT(β-ray)									18	23	25	21	21	19	18
	Samutprakarn	AT(β-ray)										28	24	23	22	19	20
	Khanchanaburi	AT(β-ray)									24	***	7	27	7	104	***
	ChangPhueak	AT(β-ray)										24	30	29	36	33	29
	Si Phum	AT(β-ray)							35	33	33	32	23	30	31	28	24
	Nai Mueang	AT(β-ray)													24	27	25
Vietnam	Hoa Binh	AT(β-ray)									40	49	37	37	34	30	24

Terms and abbreviations are given in Table 4.2.

Table 4.31 Annual SO₄²⁻ in PM concentration from 2007 to 2021

unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				2.85	2.95	2.63	2.91	2.11	2.20	1.54	2.11	***	***	***	***
China	Hongwen	FP	10.58	13.38	12.72	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
	Serpong	FP	0.50	0.71	0.79	0.50	0.65	4.03	3.54	3.69	5.16	3.41	4.43	6.42	6.05	4.99	5.49
	Bandung	FP								6.93	2.69	2.73	2.28	7.52	8.08	5.03	7.14
Japan	Rishiri	FP	2.44	2.94	2.50	2.74	2.71	2.32	2.72	2.21	2.52	2.05	2.13	2.05	3.82	2.13	1.81
	Ochiishi	FP		2.73	2.61	2.31	2.13	1.95	2.19	2.52	2.05	1.98	2.38	2.03	2.05	1.67	2.14
	Tappi	FP	4.02	4.67	4.29	4.12	3.99	3.76	3.83	5.38	4.30	3.08	3.02	2.56			
	Sado-seki	FP	3.64	4.17	3.58	3.20	3.50	3.53	3.71	3.54	4.03	2.88	2.82	3.73	2.50	2.08	***
	Happo	FP	2.58	2.52	0.59	0.86	1.02	2.36	2.50	2.49	2.16	1.80	1.57	1.56	1.24	1.54	1.06
	Ijira	FP	4.76	4.78	3.88	3.25	3.55	2.52	2.88	3.84	2.84	2.91	2.50	2.45	2.51	1.64	1.60
	Okii	FP	5.21	4.54	4.29	4.43	4.76	4.90	5.56	5.25	4.69	4.84	4.31	4.12	3.68	3.47	2.79
	Banryu	FP	6.41	5.11	5.44	4.37	4.55	5.05	5.56	4.99	4.60	4.24	3.52	3.59			
	Yusuhara	FP	6.44	4.54	5.16	4.46	4.03	4.44	5.28	4.72	3.75	3.29	3.16	2.94	2.88	2.53	2.15
	Hedo	FP	5.95	5.69	5.62	3.53	2.48	4.28	5.43	5.39	5.12	4.57	4.37	4.37	3.84	3.79	2.86
	Ogasawara	FP	3.91	2.72	2.64	2.17	2.46	2.41	3.10	2.58	2.69	1.93	1.94	1.67	1.86	3.01	2.00
	Tokyo	FP	5.36	5.15	4.62	4.28	4.06	3.14	4.38	4.11	3.79	3.16	3.08	3.28	3.11	2.53	2.18
	Niigata-maki	FP														1.93	1.62
	Tsushima	FP														3.19	2.78
Lao PDR	Vientiane	FP									4.75	3.77	***	***	***	***	***
Malaysia	Petaling Jaya	FP	3.00	3.32	3.01	2.94	4.22	3.24	3.17	4.81	4.19	2.96	2.77	4.72	***	2.65	2.40
	Tanah Rata	FP	1.37	1.59	1.39	0.95	1.18	1.52	1.48	2.59	3.29	2.01	1.28	0.15	***	1.42	1.09
	Danum Valley	FP	0.76	1.12	3.64	1.73	0.86	0.38	0.78	1.11	1.80	1.10	0.75	1.05	***	0.77	0.72
Mongolia	Ulaanbaatar	FP	4.20	1.33	2.24	4.70	4.11	***	***	***	***	2.10	2.23	1.25	1.15	0.95	***
	Terelj	FP	1.41	1.42	1.07	0.61	1.06	***	***	***	***	1.70	0.11	0.07	0.15	0.11	***
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
Philippines	Metro Manila	FP	3.15	2.37	***	1.43	***	***	***	***	***	***	***	***	2.33	3.18	3.88
	Los Banos	FP	2.29	1.86	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.22	0.91	0.16	1.40	***	0.15	0.17	0.38	0.27	0.30	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	2.35	3.11	6.04	6.19	***	***	7.43	7.17	6.12	6.11	4.20	3.37	3.37	4.23	3.58
	Cheju	FP with PM _{2.5} cyclone	6.75	5.51	4.68	3.82	***	***	4.37	7.81	5.62	4.75	2.01	3.45	4.35	3.41	2.31
	Imsil	FP with PM _{2.5} cyclone	5.90	4.18	4.66	5.03	***	***	5.61	5.86	4.66	5.07	3.55	3.30	3.77	2.65	2.13
Russia	Mondy	FP	0.22	0.38	0.39	0.14	0.19	0.22	0.22	0.05	0.29	0.45	0.58	0.35	0.21	0.09	0.06
	Listvyanka	FP	1.57	1.02	1.58	0.89	1.00	1.09	0.67	1.00	0.86	0.88	0.85	0.78	0.53	0.31	0.38
	Irkutsk	FP	2.91	2.55	2.36	2.29	2.28	3.07	1.71	2.14	2.18	2.03	1.85	2.28	1.15	1.00	1.01
	Primorskaya	FP	4.89	3.59	3.71	4.04	3.60	3.27	3.66	3.62	3.24	2.23	1.08	0.52	0.38	0.59	0.66
Thailand	Bangkok	FP	2.97	2.65	2.71	3.63	3.31	2.26	2.80	4.38	2.64	4.10	1.47	3.77	3.10	2.12	***
	Pathumthani	FP	4.69	1.41	3.12	3.78	1.64	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	3.24	2.54	1.32	0.29	2.08	2.34	1.40	3.19	1.97	15.58	1.82	3.27	3.71	***	***
	Mae Hia	FP	2.60	1.75	1.97	1.29	1.34	1.12	0.39	0.10	0.08	0.86	0.87	0.83	1.17		
	Sakaerat	FP	4.80	3.78	3.44	2.12	2.74	2.44	2.89	3.31	2.70	2.79	2.35	3.26	2.17		
Vietnam	Hanoi	FP	20.35	9.53	8.77	15.63	14.40	7.82	11.54	8.47	10.83	8.84	7.96	4.50	5.19	6.95	8.30
	Hoa Binh	FP	8.38	4.51	2.49	2.26	3.81	1.59	2.58	4.95	6.38	5.78	3.24	4.43	2.90	3.26	3.49
	Can Tho	FP								1.40	1.22	1.42	5.58	5.40	5.83	5.46	5.26
	Ho Chi Minh	FP								2.08	2.42	2.15	7.68	6.75	7.11	7.24	5.82
	Yen Bai	FP									8.68	6.49	6.61	7.14	5.30	5.67	7.73

Terms and abbreviations are given in Table 4.2.

Table 4.32 Annual NO₃⁻ in PM concentration from 2007 to 2021unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				1.32	1.27	1.20	1.18	1.22	2.03	1.37	1.58	***	***	***	***
China	Hongwen	FP	5.81	8.10	7.98	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
	Serpong	FP	0.17	0.18	0.13	0.21	0.57	1.09	0.53	0.86	1.12	0.82	1.05	1.54	1.22	0.83	0.75
	Bandung	FP								1.92	1.19	1.00	0.73	1.57	1.92	1.66	2.16
Japan	Rishiri	FP	0.60	0.76	0.64	0.77	0.66	0.63	0.60	0.51	0.75	0.63	0.70	0.74	1.49	0.74	0.66
	Ochiishi	FP		0.71	0.67	0.55	0.67	0.43	0.42	0.71	0.57	0.67	0.82	0.82	0.75	0.60	0.78
	Tappi	FP	1.18	1.23	1.29	1.24	1.27	0.98	1.04	1.45	1.29	1.23	1.27	1.18			
	Sado-seki	FP	0.96	1.07	1.05	0.82	1.13	0.90	0.92	1.06	1.23	1.02	1.10	1.42	0.91	0.92	***
	Happo	FP	0.20	0.22	0.10	0.11	0.14	0.31	0.36	0.58	0.34	0.39	0.36	0.42	0.20	0.27	0.34
	Ijira	FP	0.49	0.39	0.40	0.40	0.47	0.25	0.30	0.42	0.39	0.46	0.41	0.47	0.49	0.32	0.54
	Oki	FP	1.34	1.22	1.31	1.50	1.85	1.51	1.82	1.79	1.66	2.10	2.70	1.98	1.87	1.58	1.76
	Banryu	FP	1.57	1.35	1.43	1.53	1.68	1.51	1.65	1.45	1.47	1.67	2.13	1.72			
	Yusuhara	FP	0.55	0.29	0.52	0.66	0.61	0.41	0.66	0.55	0.50	0.54	0.56	0.57	0.56	0.56	0.89
	Hedo	FP	1.48	1.52	1.63	1.09	0.80	1.27	1.62	1.72	1.87	1.59	1.75	1.58	1.60	1.39	1.41
	Ogasawara	FP	0.74	0.57	0.60	0.53	0.53	0.53	0.60	0.48	0.71	0.52	0.55	0.48	0.56	0.53	0.65
	Tokyo	FP	3.86	4.03	3.85	3.80	3.76	2.73	3.13	3.13	3.55	3.19	2.99	3.34	3.10	2.65	2.86
	Niigata-maki	FP														0.78	0.95
	Tsushima	FP														1.57	2.39
Lao PDR	Vientiane	FP									0.47	0.40	***	***	***	***	***
Malaysia	Petaling Jaya	FP	1.18	1.17	1.22	1.25	1.14	1.23	1.65	1.53	1.70	1.46	1.29	1.77	***	1.37	1.21
	Tanah Rata	FP	0.13	0.16	0.15	0.12	0.13	0.18	0.34	0.40	0.54	0.26	0.13	0.01	***	0.16	0.18
	Danum Valley	FP	0.04	0.06	0.21	0.36	0.04	0.08	0.09	0.11	0.11	0.10	0.08	0.06	***	0.08	0.11
Mongolia	Ulaanbaatar	FP	1.66	0.90	0.93	1.25	1.81	***	***	***	***	0.10	0.18	0.18	0.16	0.14	***
	Terelj	FP	0.71	0.65	0.24	0.11	0.29	***	***	***	***	<0.01	0.01	0.01	0.01	0.02	***
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
Philippines	Metro Manila	FP	1.27	0.99	***	0.85	***	***	***	***	***	***	***	***	1.35	1.66	1.64
	Los Banos	FP	0.39	0.27	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.07	1.15	0.12	0.78	***	0.19	0.14	0.26	0.27	0.14	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	1.03	1.92	2.38	3.50	***	***	3.51	2.54	3.40	3.25	2.82	2.74	3.10	2.75	4.15
	Cheju	FP with PM _{2.5} cyclone	0.57	0.34	0.49	0.67	***	***	0.74	1.10	0.79	0.75	1.92	1.41	1.15	0.61	0.49
	Imsil	FP with PM _{2.5} cyclone	3.05	2.86	2.67	3.82	***	***	2.95	2.82	1.93	1.17	2.72	3.17	2.56	2.67	1.65
Russia	Mondy	FP	0.01	0.13	0.02	0.19	0.02	0.03	0.02	<0.01	0.03	0.01	0.04	0.03	0.03	0.01	<0.01
	Listvyanka	FP	0.19	0.20	0.25	0.17	0.25	0.12	0.09	0.18	0.27	0.20	0.07	0.10	0.05	0.01	0.06
	Irkutsk	FP	0.61	0.89	0.83	0.91	0.88	0.92	0.49	0.80	0.66	0.67	0.63	0.75	0.25	0.25	0.25
	Primorskaya	FP	1.04	1.03	1.10	0.79	0.27	0.68	1.17	1.37	1.15	0.77	0.53	0.19	0.39	1.08	0.27
Thailand	Bangkok	FP	1.51	1.44	1.62	1.86	2.00	1.91	1.41	2.77	2.20	1.98	1.28	2.68	2.29	2.26	***
	Pathumthani	FP	2.02	0.77	1.73	1.93	0.92	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.10	0.15	3.55	0.06	0.04	0.10	0.11	0.17	0.20	0.83	0.24	0.20	0.19	***	***
	Mae Hia	FP	0.62	0.36	0.66	10.25	0.24	0.31	0.30	0.11	0.13	0.18	0.18	0.20	0.35		
	Sakaerat	FP	0.48	0.41	0.34	0.18	0.31	0.28	0.41	0.58	0.32	0.30	0.27	0.38	0.50		
Vietnam	Hanoi	FP	6.21	2.89	3.52	7.81	6.82	5.57	6.73	5.86	7.26	6.58	11.14	4.19	4.50	5.91	6.52
	Hoa Binh	FP	1.46	1.24	0.49	0.61	1.14	0.92	1.11	1.88	2.95	3.21	3.28	2.95	2.22	2.85	2.61
	Can Tho	FP								0.67	0.55	0.66	2.19	2.16	2.15	2.15	1.97
	Ho Chi Minh	FP								1.09	1.07	2.06	5.67	5.80	5.84	5.75	5.03
	Yen Bai	FP									3.19	4.36	8.00	5.89	3.91	4.70	5.71

Terms and abbreviations are given in Table 4.2.

Table 4.33 Annual CI¹ in PM concentration from 2007 to 2021unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				0.20	0.24	0.24	0.40	0.26	0.54	0.56	0.32	***	***	***	***
China	Hongwen	FP	2.07	1.85	1.73	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
	Serpong	FP	0.46	0.10	0.09	0.25	0.10	0.16	0.20	0.18	0.28	0.29	0.23	0.25	0.23	0.28	0.34
	Bandung	FP								0.31	0.27	0.20	0.57	0.17	0.21	0.36	0.35
Japan	Rishiri	FP	2.25	2.20	2.42	2.79	2.31	1.94	2.00	2.95	3.57	2.21	2.66	2.93	4.54	2.66	2.67
	Ochiishi	FP		4.44	6.88	4.34	3.28	3.06	4.58	4.12	4.46	3.89	3.81	3.97	3.89	3.14	6.72
	Tappi	FP	6.51	8.26	8.97	6.01	5.93	8.15	5.91	15.78	12.97	5.79	5.70	5.54			
	Sado-seki	FP	3.30	4.61	3.38	3.78	3.06	3.02	3.43	3.00	4.39	3.77	3.52	5.80	4.30	3.74	***
	Happo	FP	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.03	0.03	0.01	0.03	0.03
	Ijira	FP	0.05	0.04	0.06	0.05	0.04	0.02	0.03	0.06	0.05	0.06	0.06	0.10	0.08	0.07	0.08
	Oki	FP	2.36	2.71	3.69	4.54	4.29	4.20	4.98	4.96	4.58	5.25	10.45	5.07	4.09	5.26	5.68
	Banryu	FP	0.97	1.13	1.59	1.38	1.53	0.99	1.52	1.60	1.40	0.78	2.79	1.45			
	Yusuhara	FP	0.04	0.03	0.21	0.10	0.08	0.17	0.06	0.06	0.07	0.07	0.06	0.06	0.08	0.08	0.15
	Hedo	FP	5.79	4.40	6.02	4.62	3.09	6.02	7.27	7.61	5.86	7.53	7.16	7.69	6.57	7.17	7.36
	Ogasawara	FP	3.82	3.04	3.93	3.44	3.79	3.55	3.51	3.50	4.32	3.83	3.71	3.59	4.09	3.75	5.46
	Tokyo	FP	0.62	0.63	0.68	0.66	0.70	0.49	0.59	0.53	0.53	0.57	0.43	0.66	0.62	0.52	0.72
	Niigata-maki	FP														1.12	1.82
	Tsushima	FP														0.82	0.74
Lao PDR	Vientiane	FP									0.06	0.06	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.13	0.09	0.11	0.19	0.11	0.13	0.16	0.23	0.15	0.21	0.13	0.13	***	0.17	0.11
	Tanah Rata	FP	0.03	0.02	0.03	0.05	0.03	0.03	0.07	0.10	0.11	0.09	0.04	<0.01	***	0.06	0.04
	Danum Valley	FP	0.02	0.04	0.15	0.33	0.04	0.02	0.11	0.13	0.11	0.07	0.08	0.02	***	0.13	0.12
Mongolia	Ulaanbaatar	FP	0.87	0.47	1.84	1.06	1.18	***	***	***	***	0.08	0.20	0.14	0.20	0.12	***
	Terelj	FP	0.36	0.24	0.22	0.18	0.23	***	***	***	***	0.02	0.03	0.02	0.02	<0.01	***
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
Philippines	Metro Manila	FP	0.62	0.59	***	0.66	***	***	***	***	***	***	***	***	0.69	1.05	1.00
	Los Banos	FP	1.15	0.82	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.07	0.35	0.05	0.32	***	0.05	0.04	0.10	0.08	0.04	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	0.19	0.19	0.64	0.44	***	***	0.47	0.13	0.13	0.10	0.28	0.11	0.09	0.08	0.15
	Cheju (Kosan)	FP with PM _{2.5} cyclone	0.30	0.32	0.29	0.46	***	***	1.12	0.72	0.37	0.60	0.54	0.62	0.23	0.19	0.08
	Imsil	FP with PM _{2.5} cyclone	0.38	0.50	0.45	0.61	***	***	0.48	0.25	0.38	0.31	0.39	0.41	0.20	0.14	0.08
Russia	Mondy	FP	0.01	<0.01	<0.01	0.33	0.04	0.24	0.14	0.04	0.05	0.01	0.03	0.02	0.07	0.02	<0.01
	Listvyanka	FP	0.12	0.11	0.11	0.11	0.04	0.26	0.06	0.09	0.12	0.06	0.05	0.04	0.03	0.03	0.06
	Irkutsk	FP	0.30	0.32	0.40	0.31	0.43	0.46	0.24	0.26	0.17	0.23	0.19	0.15	0.11	0.13	0.10
	Primorskaya	FP	0.19	0.17	0.14	0.20	0.09	0.29	0.28	0.14	0.15	0.10	0.12	0.03	0.09	0.49	0.41
Thailand	Bangkok	FP	0.29	0.18	0.26	0.28	0.32	0.26	0.16	0.31	0.19	0.34	0.09	0.27	0.28	0.22	***
	Pathumthani	FP	0.39	0.07	0.20	0.14	0.15	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.02	0.06	0.04	0.10	0.05	<0.01	0.05	0.04	0.08	0.26	0.22	0.03	0.10	***	***
	Mae Hia	FP	0.11	0.05	0.09	0.16	0.12	0.13	0.12	0.08	0.06	0.21	0.15	0.13	0.22		
	Sakaerat	FP	0.06	0.06	0.07	0.02	0.06	0.10	0.12	0.16	0.08	0.21	0.04	0.08	0.09		
Vietnam	Hanoi	FP	2.81	0.79	0.58	1.66	1.33	1.11	1.75	1.34	1.94	2.32	4.04	2.33	1.72	3.92	5.27
	Hoa Binh	FP	0.58	0.64	0.11	0.35	0.27	0.43	0.59	1.18	0.79	1.18	1.04	1.88	2.79	2.61	1.97
	Can Tho	FP								0.56	0.46	1.78	1.08	2.14	2.23	2.36	2.01
	Ho Chi Minh	FP								0.74	0.59	1.29	1.40	4.03	4.42	4.45	3.70
	Yen Bai	FP									1.01	1.25	3.58	3.52	2.78	2.92	3.20

Terms and abbreviations are given in Table 4.2.

Table 4.34 Annual NH₄⁺ in PM concentration from 2007 to 2021

unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				0.61	0.50	0.34	0.57	0.52	0.54	0.54	0.38	***	***	***	***
China	Hongwen	FP	3.66	5.55	5.48	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
	Serpong	FP	0.24	0.08	0.11	0.14	0.32	0.78	0.38	0.47	0.67	0.55	0.50	1.07	0.88	1.01	0.87
	Bandung	FP								1.20	1.17	1.42	1.13	1.60	1.38	1.29	1.93
Japan	Rishiri	FP	0.39	0.53	0.45	0.47	0.47	0.41	0.45	0.35	0.46	0.40	0.42	0.43	0.73	0.42	0.33
	Ochiishi	FP		0.40	0.40	0.29	0.37	0.32	0.28	0.38	0.24	0.32	0.38	0.35	0.35	0.25	0.28
	Tappi	FP	0.64	0.77	0.66	0.68	0.64	0.53	0.58	0.69	0.46	0.48	0.49	0.42			
	Sado-seki	FP	0.54	0.68	0.53	0.50	0.56	0.54	0.62	0.61	0.69	0.48	0.44	0.56	0.39	0.27	***
	Happo	FP	0.65	0.66	0.15	0.22	0.26	0.64	0.63	0.80	0.59	0.53	0.47	0.43	0.33	0.36	0.28
	Ijira	FP	1.32	1.36	1.06	0.87	0.95	0.69	0.81	1.11	0.76	0.82	0.68	0.64	0.65	0.44	0.40
	Okii	FP	1.07	0.97	0.86	0.92	0.93	0.94	1.10	1.05	0.90	1.13	0.77	0.83	0.74	0.54	0.49
	Banryu	FP	1.60	1.32	1.30	1.02	1.06	1.24	1.40	1.22	1.11	1.17	0.93	0.90			
	Yusuhara	FP	1.53	1.12	1.25	1.00	0.96	1.06	1.25	1.10	0.91	0.86	0.89	0.72	0.74	0.60	0.52
	Hedo	FP	0.88	0.98	0.86	0.42	0.43	0.71	0.69	0.61	0.66	0.51	0.53	0.46	0.41	0.34	0.25
	Ogasawara	FP	0.46	0.24	0.21	0.17	0.22	0.22	0.31	0.23	0.25	0.19	0.22	0.16	0.17	0.25	0.16
	Tokyo	FP	1.82	1.96	1.83	1.71	1.57	1.10	1.44	1.42	1.40	1.18	1.16	1.11	1.02	0.85	0.72
	Niigata-maki	FP														0.34	0.31
	Tsushima	FP														0.75	0.80
Lao PDR	Vientiane	FP									1.22	1.12	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.76	0.82	0.73	0.80	1.12	0.75	0.94	1.37	1.18	0.92	0.74	1.28	***	0.80	0.70
	Tanah Rata	FP	0.32	0.35	0.29	0.25	0.49	0.46	0.39	0.63	1.11	0.46	0.32	<0.01	***	0.39	0.28
	Danum Valley	FP	0.08	0.12	0.39	0.12	0.13	0.08	0.13	0.12	0.25	0.10	0.09	0.14	***	0.13	0.10
Mongolia	Ulaanbaatar	FP	1.96	0.23	0.95	1.69	1.80	***	***	***	***	0.67	0.58	0.34	0.32	0.12	0.61
	Terelj	FP	0.40	0.37	0.28	0.12	0.43	***	***	***	***	0.06	0.04	<0.01	0.05	0.01	0.14
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
Philippines	Metro Manila	FP	0.43	0.42	***	0.14	***	***	***	***	***	***	***	***	0.59	0.09	0.51
	Los Banos	FP	0.28	0.34	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.09	0.33	0.03	0.10	***	<0.01	0.01	0.10	0.05	<0.01	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	0.85	1.34	2.51	2.93	***	***	3.54	3.58	3.48	3.20	2.50	2.13	1.99	2.06	2.38
	Cheju	FP with PM _{2.5} cyclone	2.15	1.61	1.54	1.32	***	***	1.80	2.83	2.30	1.86	1.19	1.38	1.59	1.16	0.76
	Imsil	FP with PM _{2.5} cyclone	2.37	1.82	2.34	2.54	***	***	2.82	2.87	2.36	2.02	1.96	1.92	1.86	1.56	1.21
Russia	Mondy	FP	0.02	0.09	0.07	0.01	0.02	0.04	<0.01	0.02	0.03	0.09	0.12	0.05	0.03	0.01	<0.01
	Listvyanka	FP	0.33	0.21	0.24	0.15	0.22	0.22	0.10	0.35	0.20	0.21	0.32	0.10	0.13	0.04	0.06
	Irkutsk	FP	0.93	0.80	0.66	0.49	0.62	0.80	0.40	0.55	0.70	0.93	0.57	0.73	0.35	0.28	0.24
	Primorskaya	FP	1.43	0.94	0.99	0.75	0.77	0.70	1.06	0.88	1.04	0.80	0.45	0.13	0.27	0.45	0.32
Thailand	Bangkok	FP	1.29	1.15	0.70	0.69	0.60	0.53	0.79	1.27	0.65	0.75	1.02	0.77	0.63	0.56	***
	Pathumthani	FP	1.37	0.71	1.50	0.84	0.26	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.91	1.10	0.83	0.18	0.46	0.07	0.30	0.67	0.60	2.73	0.58	0.57	0.50	***	***
	Mae Hia	FP	0.74	0.49	0.58	3.70	0.31	0.23	0.09	0.09	0.11	0.38	0.25	0.18	0.24		
	Sakaerat	FP	1.37	1.13	0.87	0.73	0.96	0.84	0.90	1.01	0.88	0.80	0.77	1.62	1.36		
Vietnam	Hanoi	FP	3.99	2.20	1.68	3.28	4.50	2.83	3.32	2.46	2.06	2.32	3.41	1.37	0.71	1.19	2.66
	Hoa Binh	FP	2.24	0.84	0.90	0.64	1.55	0.66	0.90	1.76	1.99	1.90	1.03	1.42	0.96	0.73	0.85
	Can Tho	FP								0.63	1.08	0.77	1.39	1.21	1.12	1.09	0.98
	Ho Chi Minh	FP								1.00	1.35	1.44	1.23	1.37	1.33	1.33	0.95
	Yen Bai	FP									2.00	2.62	3.17	2.58	1.35	1.15	1.96

Terms and abbreviations are given in Table 4.2.

Table 4.35 Annual Na⁺ in PM concentration from 2007 to 2021unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				0.53	0.63	0.57	0.67	0.59	0.81	0.64	0.63	***	***	***	***
China	Hongwen	FP	1.39	1.40	1.55	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
	Serpong	FP	0.11	0.06	0.10	0.09	0.16	0.45	0.37	0.40	0.69	0.36	0.32	0.70	0.54	0.52	0.61
	Bandung	FP								0.57	0.64	0.41	0.49	0.67	0.49	0.48	0.47
Japan	Rishiri	FP	1.78	1.82	1.91	2.14	1.84	1.58	1.64	2.13	2.44	1.65	1.88	2.08	3.43	1.90	1.87
	Ochiishi	FP		3.09	4.37	2.87	2.45	2.15	3.00	2.72	2.86	2.56	2.64	2.64	2.60	2.11	4.15
	Tappi	FP	4.30	5.31	6.01	4.24	3.97	5.12	4.05	9.88	7.92	3.81	3.77	3.58			
	Sado-seki	FP	2.53	3.32	2.56	2.67	2.43	2.38	2.56	2.34	3.17	2.68	2.57	3.91	2.81	2.57	***
	Happo	FP	0.08	0.10	0.03	0.03	0.05	0.09	0.09	0.09	0.09	0.09	0.08	0.10	0.06	0.09	0.11
	Ijira	FP	0.29	0.25	0.25	0.22	0.25	0.16	0.16	0.21	0.23	0.24	0.25	0.28	0.30	0.23	0.26
	Okii	FP	2.21	2.26	2.75	3.35	3.28	3.25	3.80	3.74	3.40	3.89	6.68	3.66	3.09	3.67	3.77
	Banryu	FP	1.33	1.32	1.64	1.41	1.59	1.29	1.62	1.60	1.46	1.07	2.23	1.46			
	Yusuhara	FP	0.43	0.26	0.54	0.41	0.42	0.39	0.45	0.34	0.30	0.30	0.28	0.32	0.30	0.32	0.38
	Hedo	FP	4.54	3.77	4.63	3.38	2.28	4.34	5.27	4.79	4.43	5.21	5.03	5.29	4.58	4.84	4.73
	Ogasawara	FP	2.95	2.38	2.80	2.38	2.61	2.45	2.65	2.54	3.06	2.54	2.50	2.40	2.74	2.75	3.45
	Tokyo	FP	0.99	0.80	0.94	0.91	0.89	0.71	0.87	0.77	0.87	0.86	0.76	0.98	0.94	0.76	0.93
	Niigata-maki	FP														1.07	1.37
	Tsushima	FP														1.02	1.00
Lao PDR	Vientiane	FP									0.28	0.25	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.32	0.34	0.24	0.26	0.32	0.27	0.42	0.47	0.53	0.36	0.30	0.44	***	0.47	0.32
	Tanah Rata	FP	0.14	0.13	0.10	0.10	0.12	0.12	0.16	0.21	0.24	0.20	0.08	<0.01	***	0.19	0.14
	Danum Valley	FP	0.13	0.16	0.59	0.72	0.17	0.05	0.16	0.32	0.35	0.25	0.18	0.19	***	0.32	0.17
Mongolia	Ulaanbaatar	FP	0.32	0.09	0.08	0.21	0.20	***	***	***	***	0.20	0.31	0.18	0.22	0.17	0.12
	Terelj	FP	0.12	0.08	0.11	0.02	0.09	***	***	***	***	0.03	0.03	0.02	0.03	0.01	0.03
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
Philippines	Metro Manila	FP	0.79	0.97	***	0.54	***	***	***	***	***	***	***	***	0.66	0.77	0.99
	Los Banos	FP	0.98	0.67	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.05	0.38	0.16	0.52	***	0.07	0.10	0.31	0.58	0.24	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	0.26	0.34	0.52	0.40	***	***	0.51	0.30	0.26	0.25	0.23	0.20	0.26	0.24	0.14
	Cheju	FP with PM _{2.5} cyclone	0.39	0.41	0.51	0.45	***	***	0.64	0.57	0.28	0.39	0.38	0.39	0.30	0.31	0.25
	Imsil	FP with PM _{2.5} cyclone	0.42	0.46	0.54	0.40	***	***	0.24	0.20	0.21	0.24	0.26	0.26	0.21	0.15	0.07
Russia	Mondy	FP	<0.01	0.02	0.03	0.36	<0.01	0.08	0.06	0.01	0.06	0.02	0.16	0.03	0.02	0.03	0.01
	Listvyanka	FP	0.07	0.12	0.16	0.08	0.04	0.24	0.05	0.06	0.06	0.13	0.24	0.05	0.02	0.06	0.05
	Irkutsk	FP	0.12	0.23	0.50	0.26	0.28	0.28	0.14	0.16	0.13	0.14	0.45	0.16	0.11	0.15	0.14
	Primorskaya	FP	0.25	0.26	0.25	0.26	0.11	0.22	0.27	0.79	0.18	0.14	0.10	0.05	0.03	0.12	0.04
Thailand	Bangkok	FP	0.38	0.33	0.57	0.54	0.54	0.43	0.47	1.03	0.53	0.71	0.15	0.49	0.51	0.54	***
	Pathumthani	FP	0.40	0.27	0.38	0.30	0.22	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.12	0.17	0.09	0.06	0.09	0.07	0.13	0.25	0.19	1.49	0.20	0.09	0.16	***	***
	Mae Hia	FP	0.23	0.15	0.48	0.17	0.10	0.16	0.11	0.07	0.08	0.29	0.25	0.21	0.33		
	Sakaerat	FP	0.28	0.24	0.21	0.16	0.17	0.18	0.13	0.27	0.43	0.33	0.18	0.37	0.52		
Vietnam	Hanoi	FP	1.64	0.56	0.58	1.03	0.67	0.70	0.75	0.58	1.23	1.58	1.44	0.66	0.48	0.80	1.78
	Hoa Binh	FP	0.25	0.24	0.13	0.28	0.23	0.31	0.44	0.26	0.78	1.21	0.54	0.49	0.84	0.65	0.47
	Can Tho	FP								0.24	0.31	0.24	0.48	0.24	0.13	0.22	0.19
	Ho Chi Minh	FP								0.26	0.37	0.38	1.08	1.05	1.36	1.18	0.84
	Yen Bai	FP									0.83	1.18	0.88	0.78	0.90	0.78	1.14

Terms and abbreviations are given in Table 4.2.

Table 4.36 Annual K⁺ in PM concentration from 2007 to 2021unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				0.63	0.59	0.46	0.73	0.67	0.75	0.50	0.56	***	***	***	***
China	Hongwen	FP	0.57	0.62	0.68	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
	Serpong	FP	0.05	0.07	0.08	0.14	0.37	0.45	0.37	0.40	0.45	0.39	0.28	0.71	0.61	0.48	0.55
	Bandung	FP								0.55	0.74	0.48	0.47	0.64	0.73	0.39	0.44
Japan	Rishiri	FP	0.13	0.16	0.14	0.15	0.14	0.10	0.10	0.15	0.16	0.12	0.13	0.15	0.31	0.15	0.12
	Ochiishi	FP		0.16	0.18	0.13	0.12	0.10	0.12	0.13	0.15	0.14	0.11	0.12	0.12	0.08	0.17
	Tappi	FP	0.25	0.26	0.31	0.28	0.23	0.24	0.19	0.38	0.31	0.19	0.19	0.18			
	Sado-seki	FP	0.16	0.19	0.18	0.17	0.17	0.14	0.15	0.16	0.18	0.14	0.14	0.19	0.13	0.12	***
	Happo	FP	0.05	0.05	0.02	0.01	0.02	0.04	0.04	0.05	0.03	0.03	0.03	0.03	0.02	0.02	0.02
	Ijira	FP	0.15	0.14	0.13	0.09	0.11	0.06	0.07	0.11	0.09	0.09	0.10	0.11	0.09	0.06	0.08
	Oki	FP	0.21	0.18	0.20	0.22	0.24	0.22	0.24	0.24	0.20	0.54	0.29	0.20	0.19	0.18	0.19
	Banryu	FP	0.21	0.19	0.21	0.16	0.19	0.16	0.18	0.17	0.15	0.27	0.17	0.12			
	Yusuhara	FP	0.18	0.11	0.16	0.12	0.15	0.09	0.12	0.13	0.09	0.08	0.07	0.06	0.08	0.05	0.06
	Hedo	FP	0.31	0.27	0.29	0.21	0.12	0.25	0.26	0.28	0.24	0.26	0.25	0.25	0.24	0.24	0.23
	Ogasawara	FP	0.16	0.16	0.16	0.13	0.13	0.12	0.13	0.12	0.18	0.11	0.12	0.10	0.12	0.13	0.15
	Tokyo	FP	0.20	0.19	0.21	0.18	0.17	0.12	0.16	0.16	0.16	0.13	0.13	0.14	0.14	0.12	0.12
	Niigata-maki	FP														0.08	0.09
	Tsushima	FP														0.10	0.11
Lao PDR	Vientiane	FP									0.36	0.36	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.25	0.23	0.23	0.27	0.34	0.27	0.37	0.45	0.41	0.24	0.28	0.42	***	0.35	0.33
	Tanah Rata	FP	0.08	0.09	0.08	0.08	0.12	0.11	0.13	0.18	0.22	0.12	0.08	<0.01	***	0.13	0.10
	Danum Valley	FP	0.09	0.12	0.43	0.29	0.16	0.06	0.14	0.20	0.21	0.17	0.15	0.16	***	0.14	0.12
Mongolia	Ulaanbaatar	FP	0.25	0.12	0.16	0.22	0.29	***	***	***	***	0.08	0.15	0.06	0.05	0.06	0.04
	Terelj	FP	0.14	0.09	0.16	0.04	0.08	***	***	***	***	0.03	0.03	0.02	0.01	0.01	0.01
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
Philippines	Metro Manila	FP	0.41	0.43	***	0.22	***	***	***	***	***	***	***	***	0.63	1.25	0.22
	Los Banos	FP	0.28	0.17	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.06	0.39	0.14	0.15	***	0.01	0.01	0.07	0.06	0.10	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	0.30	0.25	0.49	0.20	***	***	0.29	0.29	0.21	0.20	0.17	0.09	0.17	0.14	0.17
	Cheju	FP with PM _{2.5} cyclone	0.40	0.33	0.21	0.12	***	***	0.15	0.25	0.11	0.15	0.10	0.07	0.09	0.06	0.03
	Imsil	FP with PM _{2.5} cyclone	0.32	0.37	0.35	0.25	***	***	0.16	0.16	0.13	0.15	0.15	0.13	0.14	0.08	0.04
Russia	Mondy	FP	0.01	0.02	0.02	0.04	0.02	0.08	0.08	0.01	0.03	0.03	0.08	0.04	0.05	0.04	0.04
	Listvyanka	FP	0.06	0.09	0.11	0.07	0.06	0.28	0.06	0.05	0.05	0.07	0.28	0.05	0.04	0.06	0.02
	Irkutsk	FP	0.11	0.21	0.16	0.13	0.25	0.32	0.15	0.16	0.09	0.15	0.53	0.16	0.11	0.28	0.14
	Primorskaya	FP	0.44	0.37	0.37	0.44	0.27	0.30	0.40	0.20	0.23	0.19	0.14	0.06	0.05	0.09	0.05
Thailand	Bangkok	FP	0.43	0.36	0.43	0.39	0.41	0.37	0.47	0.85	0.49	0.87	0.21	0.47	0.41	0.43	***
	Pathumthani	FP	1.82	0.26	0.54	0.47	0.24	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.16	0.19	0.27	0.06	0.13	0.06	0.19	0.43	0.27	1.78	6.90	0.35	0.44	***	***
	Mae Hia	FP	0.58	0.37	0.47	0.42	0.27	0.21	0.17	0.05	0.07	0.26	0.19	0.23	0.21		
	Sakaerat	FP	0.37	0.34	0.31	0.18	0.64	0.51	0.16	0.33	0.30	0.25	0.22	0.64	0.54		
Vietnam	Hanoi	FP	2.04	1.00	0.79	1.15	0.85	1.36	2.34	0.64	0.98	1.09	0.96	0.55	0.40	0.43	0.21
	Hoa Binh	FP	1.41	0.94	0.70	0.65	0.32	0.56	1.30	0.83	0.70	0.90	0.31	0.35	0.14	0.15	0.16
	Can Tho	FP								0.89	0.19	0.30	0.29	0.24	0.23	0.23	0.22
	Ho Chi Minh	FP								0.53	0.34	0.58	0.66	0.97	1.04	1.10	0.81
	Yen Bai	FP									1.11	0.94	0.91	0.85	0.27	0.31	0.44

Terms and abbreviations are given in Table 4.2.

Table 4.37 Annual Mg²⁺ in PM concentration from 2007 to 2021

unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				0.12	0.14	0.11	0.14	0.13	0.17	0.12	0.16	***	***	***	***
China	Hongwen	FP	0.28	0.31	0.33	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
	Serpong	FP	0.05	0.03	0.02	0.02	0.05	0.09	0.08	0.09	0.07	0.06	0.05	0.11	0.15	0.09	0.14
	Bandung	FP								0.14	0.21	0.17	0.15	0.17	0.19	0.12	0.13
Japan	Rishiri	FP	0.22	0.24	0.24	0.26	0.22	0.19	0.19	0.25	0.29	0.19	0.23	0.26	0.43	0.23	0.24
	Ochiishi	FP		0.44	0.56	0.34	0.30	0.25	0.35	0.33	0.34	0.28	0.30	0.31	0.30	0.24	0.49
	Tappi	FP	0.52	0.56	0.68	0.48	0.46	0.60	0.49	1.11	0.90	0.43	0.44	0.42			
	Sado-seki	FP	0.31	0.39	0.31	0.32	0.30	0.29	0.31	0.29	0.38	0.32	0.32	0.48	0.33	0.30	***
	Happo	FP	0.03	0.03	<0.01	<0.01	0.01	0.02	0.03	0.03	0.02	0.02	0.01	0.02	0.01	0.02	0.02
	Ijira	FP	0.05	0.04	0.04	0.04	0.04	0.02	0.02	0.04	0.03	0.03	0.03	0.04	0.04	0.03	0.04
	Oki	FP	0.29	0.28	0.34	0.44	0.36	0.39	0.46	0.44	0.40	0.47	0.79	0.44	0.38	0.44	0.45
	Banryu	FP	0.22	0.17	0.20	0.20	0.21	0.17	0.22	0.22	0.20	0.14	0.28	0.19			
	Yusuhara	FP	0.09	0.05	0.08	0.08	0.07	0.06	0.08	0.06	0.05	0.05	0.04	0.05	0.05	0.05	0.06
	Hedo	FP	0.58	0.47	0.58	0.44	0.29	0.53	0.63	0.67	0.55	0.65	0.65	0.69	0.63	0.63	0.60
	Ogasawara	FP	0.37	0.33	0.36	0.30	0.32	0.31	0.33	0.31	0.36	0.31	0.31	0.29	0.33	0.34	0.40
	Tokyo	FP	0.15	0.12	0.13	0.12	0.13	0.11	0.14	0.13	0.13	0.12	0.12	0.13	0.14	0.11	0.12
	Niigata-maki	FP														0.13	0.16
	Tsushima	FP														0.13	0.14
Lao PDR	Vientiane	FP									0.05	0.05	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.09	0.05	0.03	0.05	0.04	0.03	0.07	0.08	0.08	0.04	0.04	0.06	***	0.06	0.03
	Tanah Rata	FP	0.04	0.02	0.01	0.02	0.02	0.02	0.03	0.04	0.04	0.02	<0.01	<0.01	***	0.02	0.02
	Danum Valley	FP	0.04	0.05	0.07	0.10	0.02	<0.01	0.01	0.04	0.05	0.03	0.02	0.03	***	0.03	0.02
Mongolia	Ulaanbaatar	FP	0.19	0.11	0.04	0.18	0.38	***	***	***	***	0.04	0.05	0.04	0.02	<0.01	0.02
	Terelj	FP	0.02	0.02	0.04	0.04	0.05	***	***	***	***	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
Philippines	Metro Manila	FP	0.14	0.17	***	0.10	***	***	***	***	***	***	***	***	***	0.10	0.13
	Los Banos	FP	0.14	0.11	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	<0.01	0.07	<0.01	0.06	***	0.03	0.04	0.03	0.04	0.04	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	<0.01	0.01	0.03	0.04	***	***	0.08	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03
	Cheju	FP with PM _{2.5} cyclone	0.09	0.02	<0.01	0.04	***	***	0.04	0.04	0.03	0.07	0.03	0.03	<0.01	0.01	0.02
	Imsil	FP with PM _{2.5} cyclone	0.03	0.01	0.02	0.05	***	***	0.03	0.03	0.03	0.08	0.03	0.02	<0.01	<0.01	<0.01
Russia	Mondy	FP	<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	<0.01	<0.01
	Listvyanka	FP	0.03	0.02	0.03	0.02	0.02	0.01	<0.01	<0.01	<0.01	0.04	0.02	0.01	<0.01	<0.01	<0.01
	Irkutsk	FP	0.09	0.13	0.08	0.08	0.09	0.06	0.04	0.05	0.04	0.06	0.04	0.26	0.02	0.02	0.02
	Primorskaya	FP	0.07	0.08	0.07	0.08	0.07	0.06	0.08	0.20	0.05	0.07	0.01	<0.01	<0.01	0.02	<0.01
Thailand	Bangkok	FP	0.09	0.08	0.09	0.14	0.09	0.07	0.11	0.20	0.13	0.12	0.07	0.13	0.10	0.07	***
	Pathumthani	FP	0.08	0.06	0.07	0.05	0.04	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.04	0.10	0.03	<0.01	0.03	0.03	0.03	0.06	0.05	0.41	0.03	0.05	0.12	***	***
	Mae Hia	FP	0.07	0.04	0.04	0.04	0.02	0.03	0.03	0.01	0.02	0.04	0.04	0.08	0.05		
	Sakaerat	FP	0.06	0.05	0.04	0.02	0.01	0.01	<0.01	0.02	0.03	0.22	0.05	0.29	0.36		
Vietnam	Hanoi	FP	0.44	0.18	0.32	0.48	0.35	0.41	0.46	0.41	0.57	0.50	0.38	0.26	0.17	0.24	0.16
	Hoa Binh	FP	0.15	0.09	0.11	0.11	0.08	0.14	0.28	0.19	0.21	0.25	0.14	0.22	0.07	0.08	0.09
	Can Tho	FP								0.15	0.20	0.22	0.40	0.37	0.42	0.42	0.37
	Ho Chi Minh	FP								0.23	0.46	0.72	0.44	0.68	0.58	0.68	0.88
	Yen Bai	FP									0.19	2.26	0.13	0.22	0.18	0.18	0.20

Terms and abbreviations are given in Table 4.2.

Table 4.38 Annual Ca²⁺ in PM concentration from 2007 to 2021unit: µg/m³

Country	Site	Method	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cambodia	Phnom Penh	FP				0.87	0.82	0.76	0.87	0.71	1.32	1.07	1.17	***	***	***	***
China	Hongwen	FP	2.84	2.79	2.73	9.44	1.59	***	***	***	***	1.56	1.80				
Indonesia	Jakarta	FP								3.18	1.14	0.83	0.59	1.13	1.12	0.61	0.66
	Serpong	FP	0.26	0.13	0.07	0.09	0.18	0.59	0.51	0.54	0.68	0.43	0.41	0.94	0.86	0.44	0.52
	Bandung	FP								1.32	1.61	1.28	1.09	1.51	1.53	0.89	1.38
Japan	Rishiri	FP	0.14	0.17	0.16	0.18	0.13	0.13	0.14	0.13	0.18	0.12	0.15	0.16	0.27	0.13	0.15
	Ochiishi	FP		0.15	0.24	0.14	0.14	0.10	0.17	0.24	0.14	0.12	0.15	0.15	0.13	0.10	0.19
	Tappi	FP	0.30	0.30	0.39	0.36	0.29	0.27	0.26	0.45	0.41	0.24	0.24	0.21			
	Sado-seki	FP	0.25	0.29	0.25	0.24	0.25	0.19	0.25	0.25	0.31	0.23	0.22	0.30	0.21	0.19	***
	Happo	FP	0.14	0.12	0.07	0.05	0.04	0.11	0.19	0.18	0.13	0.10	0.07	0.12	0.05	0.10	0.08
	Ijira	FP	0.17	0.13	0.14	0.15	0.17	0.08	0.09	0.13	0.11	0.12	0.11	0.13	0.12	0.07	0.12
	Okii	FP	0.28	0.22	0.30	0.47	0.38	0.25	0.30	0.30	0.28	0.35	0.45	0.32	0.27	0.27	0.32
	Banryu	FP	0.30	0.22	0.29	0.44	0.26	0.20	0.25	0.21	0.21	0.23	0.26	0.23			
	Yusuhara	FP	0.28	0.14	0.36	0.33	0.21	0.15	0.26	0.19	0.12	0.12	0.12	0.16	0.11	0.12	0.19
	Hedo	FP	0.43	0.34	0.43	0.48	0.18	0.32	0.42	0.41	0.40	0.38	0.38	0.43	0.38	0.38	0.35
	Ogasawara	FP	0.22	0.16	0.20	0.23	0.17	0.15	0.16	0.14	0.29	0.14	0.15	0.14	0.16	0.18	0.21
	Tokyo	FP	0.56	0.52	0.51	0.59	0.49	0.36	0.52	0.49	0.45	0.40	0.43	0.46	0.46	0.39	0.41
	Niigata-maki	FP														0.12	0.18
	Tsushima	FP														0.19	0.32
Lao PDR	Vientiane	FP									0.22	0.22	***	***	***	***	***
Malaysia	Petaling Jaya	FP	0.68	0.47	0.34	0.46	0.37	0.38	0.47	0.81	0.81	0.44	0.35	0.55	***	0.36	0.20
	Tanah Rata	FP	0.10	0.08	0.07	0.07	0.07	0.09	0.28	0.42	0.18	0.12	0.05	<0.01	***	0.06	0.09
	Danum Valley	FP	0.03	0.02	0.04	0.07	0.02	0.02	0.04	0.07	0.04	0.03	0.02	0.04	***	0.02	0.01
Mongolia	Ulaanbaatar	FP	3.69	3.38	1.43	1.45	3.35	***	***	***	***	0.55	0.74	0.83	0.54	0.50	0.79
	Terelj	FP	0.43	0.42	0.32	0.16	0.32	***	***	***	***	0.40	0.06	0.08	0.06	0.05	0.11
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
Philippines	Metro Manila	FP	1.18	0.87	***	0.66	***	***	***	***	***	***	***	***	0.71	1.08	1.39
	Los Banos	FP	0.23	0.27	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.07	0.77	0.22	0.50	***	0.35	0.29	0.39	0.48	0.18	***	***	***	***	***
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone	0.05	0.07	0.17	0.07	***	***	0.14	0.11	0.02	0.03	0.05	0.03	0.02	0.04	0.06
	Cheju	FP with PM _{2.5} cyclone	0.09	0.11	0.08	0.07	***	***	0.09	0.10	0.08	0.12	0.05	0.08	0.07	0.03	0.04
	Imsil	FP with PM _{2.5} cyclone	0.28	0.11	0.08	0.09	***	***	0.08	0.07	0.09	0.14	0.08	0.08	0.06	0.02	0.02
Russia	Mondy	FP	0.03	0.05	0.05	0.04	0.04	0.05	<0.01	<0.01	0.03	0.08	0.06	0.05	0.01	0.01	<0.01
	Listvyanka	FP	0.22	0.15	0.19	0.12	0.10	0.14	0.06	0.08	0.15	0.21	0.07	0.10	0.05	0.04	0.03
	Irkutsk	FP	0.62	0.82	0.49	0.59	0.35	0.49	0.36	0.42	0.44	0.38	0.23	0.27	0.17	0.13	0.16
	Primorskaya	FP	0.40	0.45	0.37	0.41	0.28	0.41	0.35	0.35	0.44	0.34	0.09	0.05	0.06	0.17	0.05
Thailand	Bangkok	FP	1.07	0.80	0.88	0.94	1.03	0.74	1.29	2.09	0.97	1.01	0.49	1.29	1.09	0.73	***
	Pathumthani	FP	0.93	0.36	0.90	0.98	0.50	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.12	0.22	0.12	0.04	0.12	0.28	0.12	0.23	0.14	1.65	0.07	0.16	0.39	***	***
	Mae Hia	FP	0.57	0.44	0.72	0.53	0.22	0.47	0.46	0.12	0.15	0.42	0.27	0.18	0.30		
	Sakaerat	FP	0.23	0.28	0.22	0.09	0.16	0.14	0.11	0.16	0.22	0.31	0.22	1.36	0.93		
Vietnam	Hanoi	FP	7.59	2.83	2.87	7.75	8.67	4.07	6.23	4.11	5.99	4.76	3.01	1.92	2.99	4.38	3.68
	Hoa Binh	FP	2.19	1.27	1.27	1.24	1.62	1.50	3.12	1.62	1.84	2.04	0.94	1.36	1.50	2.15	1.84
	Can Tho	FP								1.52	1.53	1.74	1.36	1.41	2.00	1.70	1.39
	Ho Chi Minh	FP								1.18	1.05	1.78	2.88	2.63	2.71	2.85	2.28
	Yen Bai	FP									4.08	0.17	2.42	2.63	2.26	3.12	3.02

Terms and abbreviations are given in Table 4.2.

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

2021	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	0.22	0.08	0.05	0.01	0.09	0.06	1.46	0.12	1.66	0.09	0.19	0.09
Feb	0.12	0.04	0.09	0.01	0.07	0.06	3.02	0.11	2.97	0.14	0.34	0.12
Mar	0.10	0.08	0.23	0.08	0.10	0.09	3.29	0.14	3.19	0.11	0.41	0.17
Apr	0.08	0.04	0.27	0.08	0.06	0.08	2.85	0.10	2.94	0.09	0.33	0.13
May	0.08	0.06	0.41	0.08	0.06	0.09	2.01	0.08	2.11	0.07	0.24	0.12
June	0.09	0.08	0.54	0.14	0.08	0.06	0.57	0.08	0.84	0.03	0.10	0.04
July	0.01	0.15	0.62	0.12	0.10	0.05	0.22	0.10	0.42	0.02	0.05	0.02
Aug	0.03	0.14	0.66	0.09	0.13	0.06	0.66	0.14	1.08	0.05	0.12	0.04
Sept	0.02	0.03	0.27	0.09	0.04	0.04	0.86	0.05	0.98	0.03	0.13	0.03
Oct	0.04	0.02	0.11	0.03	0.02	0.03	1.19	0.04	1.21	0.05	0.16	0.05
Nov	0.06	0.03	0.15	0.03	0.06	0.07	6.16	0.10	5.78	0.17	0.72	0.24
Dec	0.09	0.04	0.08	0.03	0.05	0.07	3.59	0.10	3.58	0.14	0.46	0.16
Annual	0.94	0.78	3.48	0.79	0.86	0.76	25.88	1.15	26.76	1.00	3.24	1.19

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

2021	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	0.55	0.13	0.07	0.01	0.09	0.06	2.55	0.13	2.40	0.06	0.27	0.07
Feb	0.24	0.17	0.11	0.01	0.03	0.04	0.61	0.07	0.59	0.02	0.06	0.02
Mar	0.14	0.23	0.40	0.08	0.06	0.06	2.18	0.09	2.02	0.05	0.22	0.06
Apr	0.21	0.07	0.29	0.15	0.05	0.11	5.32	0.11	4.81	0.11	0.55	0.13
May	0.13	0.15	0.83	0.16	0.04	0.09	2.24	0.06	2.05	0.05	0.23	0.07
June	0.16	0.27	0.59	0.30	0.07	0.08	0.59	0.08	0.74	0.02	0.08	0.02
July	0.15	0.09	0.31	0.24	0.03	0.02	0.12	0.02	0.21	0.00	0.02	0.00
Aug	0.21	0.08	0.33	0.18	0.06	0.05	0.62	0.06	0.78	0.02	0.09	0.02
Sept	0.17	0.14	0.41	0.17	0.05	0.07	1.35	0.05	1.40	0.03	0.15	0.03
Oct	0.15	0.09	0.30	0.05	0.04	0.08	6.81	0.06	6.38	0.14	0.71	0.16
Nov	0.13	0.06	0.32	0.04	0.04	0.06	7.94	0.07	7.19	0.16	0.79	0.17
Dec	0.15	0.08	0.11	0.03	0.04	0.05	1.85	0.08	1.70	0.04	0.18	0.04
Annual	2.38	1.56	4.07	1.42	0.61	0.78	32.17	0.89	30.27	0.71	3.36	0.81

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

2021	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	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***

1 NO₂ = NOx-NO

Table 4.42 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Happo					Country: Japan							
2021	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	0.08	0.53	0.09	0.01	0.09	0.04	0.09	0.11	0.21	***	***	0.24
Feb	0.34	0.52	0.16	0.01	0.41	0.48	0.48	0.56	1.94	0.24	0.28	1.52
Mar	0.14	0.68	0.67	0.04	0.30	0.39	0.58	0.36	3.21	0.31	0.34	0.70
Apr	0.20	0.50	0.69	0.07	0.22	0.38	0.33	0.35	1.42	0.20	0.20	0.96
May	0.18	0.94	1.03	0.07	0.08	0.04	0.02	0.08	0.24	0.04	0.05	0.20
June	0.23	0.96	1.27	0.12	0.17	0.04	0.01	0.25	0.12	0.05	0.04	0.19
July	0.18	0.84	0.95	0.07	0.18	0.02	0.01	0.28	0.13	0.05	0.03	0.06
Aug	0.10	0.54	1.92	0.02	0.09	0.02	0.02	0.12	0.21	0.03	0.04	0.08
Sept	0.15	0.36	0.66	***	0.10	0.03	0.03	0.15	0.22	0.03	0.03	0.06
Oct	0.12	0.21	0.52	***	0.09	0.04	0.05	0.12	0.31	0.03	0.04	0.10
Nov	0.13	0.30	0.35	***	0.08	0.08	0.07	0.11	0.42	0.03	0.04	0.08
Dec	0.06	0.43	0.14	***	0.08	0.08	0.15	0.09	0.52	0.03	0.05	0.15
Annual	1.89	6.81	8.44	0.41	1.90	1.64	1.83	2.58	8.95	1.04	1.15	4.33

Table 4.43 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Ijira					Country: Japan							
2021	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	0.02	0.02	0.12	0.01	0.02	0.01	0.03	0.03	0.07	0.01	0.01	0.03
Feb	0.06	0.09	0.17	0.01	0.05	0.04	0.06	0.08	0.25	0.04	0.03	0.05
Mar	0.16	0.14	0.25	0.10	0.06	0.07	0.13	0.09	0.47	0.05	0.07	0.12
Apr	0.06	0.21	0.29	0.15	0.07	0.09	0.09	0.09	0.53	0.06	0.09	0.19
May	0.07	0.13	0.44	***	0.03	0.02	0.02	0.04	0.17	0.04	0.03	0.07
June	0.02	0.23	0.58	0.10	0.05	0.01	0.01	0.07	0.13	0.04	0.02	0.04
July	***	0.18	0.65	0.05	0.04	0.01	0.00	0.05	0.11	0.03	0.01	0.02
Aug	***	0.12	0.59	0.01	0.03	0.01	0.03	0.03	0.19	0.04	0.02	0.03
Sept	***	0.06	0.30	0.10	0.02	0.01	0.00	0.02	0.07	0.02	0.01	0.01
Oct	***	0.04	0.11	0.04	0.01	0.01	0.04	0.02	0.10	0.02	0.01	0.02
Nov	***	0.06	0.17	0.02	0.03	0.02	0.05	0.04	0.17	0.02	0.03	0.04
Dec	***	0.02	0.13	0.04	0.01	0.01	0.05	0.02	0.10	0.01	0.01	0.02
Annual	0.39	1.31	3.79	0.64	0.41	0.31	0.50	0.58	2.35	0.38	0.35	0.64

Table 4.44 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Oki					Country: Japan							
2021	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	0.47	0.27	0.30	0.01	0.72	1.51	142.51	1.05	129.00	3.13	14.80	7.24
Feb	0.31	0.41	0.38	0.02	0.66	1.40	62.56	1.10	61.28	1.69	7.01	2.52
Mar	0.11	0.31	0.63	0.08	0.56	1.21	25.97	0.91	27.36	1.02	3.30	2.54
Apr	0.13	0.52	0.54	0.06	0.29	0.64	12.29	0.34	13.77	0.62	1.61	1.04
May	0.08	1.57	0.86	0.07	0.30	0.53	8.25	0.38	10.90	0.39	1.24	0.65
June	0.13	0.79	1.09	0.08	0.39	0.33	3.72	0.49	6.02	0.27	0.70	0.39
July	0.04	0.46	0.95	0.09	0.42	0.35	3.55	0.50	7.61	0.34	0.82	0.24
Aug	0.02	0.28	0.32	0.02	0.05	0.08	29.62	0.07	26.62	0.67	2.84	0.63
Sept	0.01	0.14	0.47	0.06	0.17	0.30	8.98	0.22	10.36	0.31	1.14	0.30
Oct	0.03	0.16	0.38	0.02	0.18	0.27	12.55	0.22	12.87	0.36	1.44	0.48
Nov	0.27	0.30	0.47	0.04	0.38	1.04	39.93	0.51	41.40	1.10	4.74	2.07
Dec	0.08	0.23	0.36	0.04	0.36	1.15	79.02	0.55	75.42	1.79	8.35	2.65
Annual	1.67	5.45	6.76	0.60	4.49	8.83	428.96	6.36	422.62	11.68	47.98	20.76

1 NO₂ = NOx - NO

Table 4.45 Monthly and annual dry deposition amounts of gaseous and particulate substances**Site: Yusuhara****Country: Japan**

2021	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	0.34	0.38	0.17	0.03	0.28	0.37	1.11	0.44	2.11	0.15	0.33	0.81
Feb	0.29	0.43	0.41	0.04	0.25	0.37	0.56	0.41	1.88	0.15	0.29	0.50
Mar	0.21	0.44	0.53	0.16	0.26	0.25	0.20	0.37	1.44	0.14	0.24	0.42
Apr	0.10	0.47	0.74	0.14	0.16	0.18	0.31	0.14	1.25	0.13	0.22	0.61
May	0.33	0.53	0.73	0.13	0.19	0.11	0.07	0.19	0.95	0.12	0.19	0.55
June	0.10	0.40	0.69	0.18	0.12	0.02	0.01	0.13	0.34	0.06	0.07	0.13
July	0.50	0.35	0.64	0.10	0.13	0.00	0.00	0.13	0.51	0.04	0.06	0.04
Aug	0.11	0.26	0.50	0.06	0.10	0.02	0.05	0.10	0.69	0.04	0.07	0.03
Sept	0.22	0.11	0.43	0.08	0.11	0.03	0.06	0.15	0.46	0.04	0.06	0.06
Oct	0.34	0.30	0.33	0.03	0.14	0.09	0.17	0.16	0.95	0.07	0.12	0.12
Nov	0.50	0.27	0.32	***	0.20	0.27	0.60	0.32	1.54	0.12	0.25	0.39
Dec	0.75	0.37	0.17	***	0.26	0.43	1.07	0.53	2.26	0.15	0.29	0.33
Annual	3.80	4.32	5.66	0.94	2.21	2.13	4.21	3.09	14.38	1.23	2.18	4.01

Table 4.46 Monthly and annual dry deposition amounts of gaseous and particulate substances**Site: Hedo****Country: Japan**

2021	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	0.27	0.22	0.63	0.01	0.55	0.73	56.72	0.47	55.01	1.27	6.43	2.15
Feb	0.17	0.24	0.72	0.01	0.33	0.52	17.08	0.25	16.81	0.49	2.04	0.96
Mar	0.22	0.22	0.80	0.08	0.36	0.44	12.17	0.29	13.02	0.37	1.57	0.57
Apr	0.22	0.24	0.75	0.08	0.37	0.58	21.40	0.25	20.76	0.60	2.53	1.09
May	0.21	0.09	0.90	0.07	0.11	0.19	5.10	0.08	5.16	0.20	0.66	0.31
June	0.09	0.09	1.27	0.09	0.17	0.23	6.78	0.16	7.07	0.33	0.85	0.23
July	0.11	0.04	0.99	0.06	0.08	0.16	16.64	0.06	15.03	0.40	1.83	0.42
Aug	0.15	0.04	0.90	0.08	0.12	0.13	7.73	0.09	7.46	0.22	0.92	0.23
Sept	0.14	0.14	0.70	0.08	0.18	0.24	5.66	0.15	6.03	0.17	0.72	0.22
Oct	0.08	0.14	0.38	0.04	0.33	0.40	22.71	0.21	21.79	0.53	2.60	0.69
Nov	0.29	0.31	0.46	0.05	0.33	0.68	27.40	0.27	27.41	0.68	3.26	1.22
Dec	0.24	0.28	0.38	0.05	0.26	0.64	33.60	0.22	31.90	0.75	3.73	1.23
Annual	2.20	2.05	8.87	0.68	3.20	4.94	232.99	2.48	227.46	6.01	27.13	9.31

Table 4.47 Monthly and annual dry deposition amounts of gaseous and particulate substances**Site: Ogasawara****Country: Japan**

2021	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	0.02	0.03	0.18	0.00	0.08	0.09	8.32	0.06	8.18	0.20	0.95	0.26
Feb	0.04	0.07	0.14	0.02	0.14	0.15	9.95	0.11	9.98	0.28	1.29	0.52
Mar	0.03	0.08	0.34	0.04	0.15	0.19	10.81	0.11	10.84	0.29	1.21	0.40
Apr	0.02	0.03	0.43	0.02	0.10	0.18	12.72	0.10	12.19	0.30	1.32	0.52
May	0.08	0.02	0.43	0.01	0.06	0.08	4.15	0.05	4.17	0.12	0.47	0.15
June	0.05	0.01	0.46	0.03	0.05	0.05	8.47	0.03	8.06	0.22	0.88	0.18
July	0.01	0.00	0.33	0.01	0.02	0.02	3.96	0.02	3.59	0.10	0.41	0.08
Aug	0.04	0.00	0.02	0.00	0.00	0.00	0.28	0.00	0.25	0.01	0.03	0.01
Sept	0.03	0.00	0.03	0.03	0.02	0.01	3.81	0.01	3.49	0.08	0.36	0.07
Oct	0.10	0.00	0.17	0.01	0.09	0.07	14.94	0.05	13.67	0.32	1.34	0.28
Nov	0.36	0.01	0.23	0.02	0.06	0.06	4.50	0.04	4.57	0.13	0.45	0.14
Dec	0.04	0.03	0.14	0.03	0.07	0.08	6.27	0.07	6.25	0.15	0.67	0.22
Annual	0.81	0.28	2.88	0.22	0.83	0.98	88.19	0.64	85.24	2.19	9.37	2.82

1 NO₂ = NOx - NO

Table 4.48 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Niigata-maki

Country: Japan

2021	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	0.22	0.18	0.29	0.03	0.05	0.06	0.34	0.09	0.34	0.01	0.04	0.02
Feb	0.22	0.25	0.40	0.02	0.07	0.09	0.55	0.12	0.54	0.02	0.06	0.02
Mar	0.12	0.18	0.55	0.30	0.09	0.13	0.25	0.14	0.30	0.01	0.04	0.03
Apr	0.13	0.25	0.63	0.30	0.08	0.14	0.41	0.09	0.46	0.02	0.05	0.05
May	0.03	0.31	0.81	0.25	0.06	0.09	0.17	0.06	0.25	0.01	0.03	0.03
June	0.05	0.66	1.31	0.43	0.11	0.05	0.03	0.11	0.13	0.01	0.01	0.01
July	0.02	0.39	1.20	0.34	0.08	0.04	0.01	0.08	0.11	0.01	0.01	0.01
Aug	0.04	0.23	0.98	0.34	0.03	0.03	0.14	0.03	0.17	0.01	0.02	0.01
Sept	0.07	0.15	1.15	0.30	0.03	0.03	0.06	0.04	0.09	0.01	0.01	0.01
Oct	0.07	0.14	0.50	0.09	0.03	0.04	0.11	0.03	0.14	0.01	0.02	0.01
Nov	0.10	0.10	0.44	0.10	0.02	0.03	0.14	0.03	0.15	0.00	0.02	0.01
Dec	0.19	0.31	0.54	0.15	0.02	0.02	0.17	0.03	0.16	0.00	0.02	0.01
Annual	1.25	3.15	8.79	2.66	0.67	0.76	2.38	0.85	2.84	0.12	0.32	0.21

Table 4.49 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Tsushima

Country: Japan

2021	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	***	0.27	0.20	***	0.09	0.16	0.10	0.18	0.14	0.01	0.02	0.05
Feb	***	0.35	0.25	***	0.09	0.20	0.11	0.23	0.17	0.01	0.02	0.03
Mar	***	0.27	0.39	***	0.13	0.28	0.17	0.33	0.27	0.02	0.04	0.05
Apr	***	0.40	0.42	***	0.11	0.23	0.22	0.13	0.33	0.02	0.05	0.08
May	***	0.59	0.46	***	0.08	0.07	0.01	0.08	0.08	0.01	0.01	0.02
June	***	0.75	0.68	***	0.13	0.04	0.01	0.18	0.07	0.01	0.01	0.01
July	***	0.39	0.44	***	0.10	0.07	0.03	0.10	0.15	0.01	0.02	0.01
Aug	***	0.26	0.38	***	0.07	0.04	0.04	0.07	0.12	0.01	0.01	0.00
Sept	***	0.19	0.32	***	0.08	0.07	0.10	0.08	0.21	0.01	0.02	0.01
Oct	***	0.33	0.15	***	0.09	0.10	0.05	0.12	0.15	0.01	0.02	0.02
Nov	***	0.57	0.28	***	0.10	0.21	0.05	0.19	0.14	0.01	0.02	0.04
Dec	***	0.42	0.18	***	0.07	0.19	0.06	0.19	0.11	0.01	0.02	0.03
Annual	***	4.80	4.14	***	1.13	1.64	0.93	1.89	1.93	0.12	0.26	0.33

1 NO₂ = NOx - NO

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 principally carried out for the initial objectives (namely, establishment of baseline data and early detection of possible impact) in the participating countries in accordance with the *Technical Documents for Soil and Vegetation Monitoring in East Asia (2000)*. General items are described in the Table 5.1 but actual implementation of item sets was dependent 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, whose soils have different sensitivities to acid deposition, are recommended to be selected in an area. Several plots (at least two) of areas from 5 m x 5 m to 10 m x 10 m should be chosen randomly at each forest area (each soil type). Five subplots with 1 m x 1 m square of each are set up for soil sampling at the center and along the diagonal lines of the plot (Figure 5.1).

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

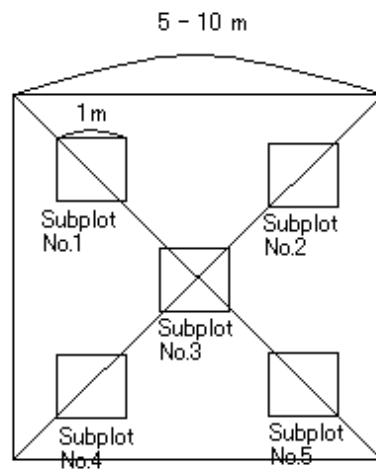


Figure 5.1 Plot for soil sampling

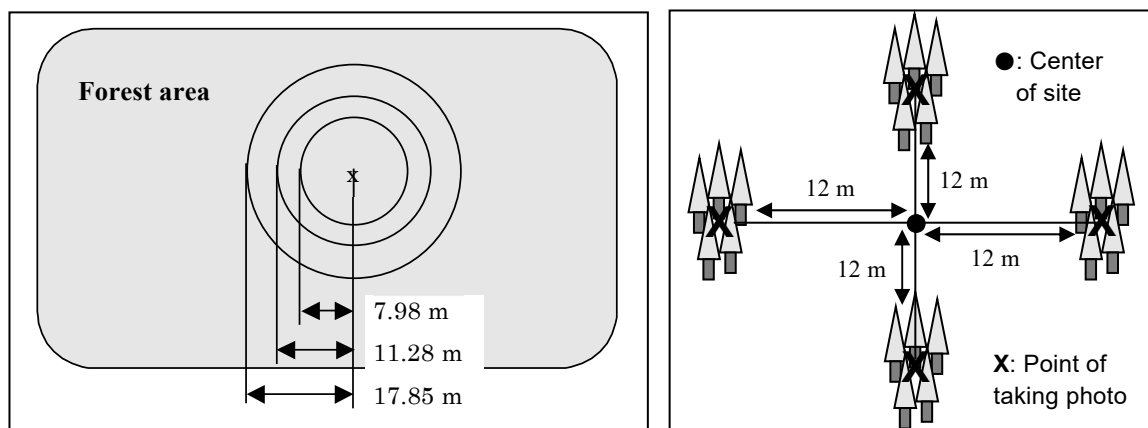


Figure 5.2 Plots for description of trees (Left) and selection of observation trees (Right)

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 6 areas in 2 countries this year. The list of monitoring sites and reported items in 2021 is shown in Table 5.4.1. Observation of the tree decline was conducted at 8 sites. Soil monitoring was carried out at 3 sites in China and Japan. The number of soil and vegetation plots in each monitoring site is shown in Table 5.4.2 with the number of surveys until 2021.

Table 5.4.1 Outline of the Monitoring Sites in 2021

Country	Nearest 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	S, F ₁ , F ₂
Japan	Happo	Sekido-san JPS005	Cambisols	F ₁
		Horyu-zan JPS105	Alisols	F ₁
	Ijira	Ijira JPS006	Cambisols	S, F ₁ , F ₂
		Yamato JPS106	Andosols	S, F ₁ , F ₂

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

Table 5.4.2 Site locations and number of plots and surveys conducted until 2021

Country	Area (Nearest acid deposition monitoring site)	Soil and vegetation monitoring site	EANET site code	Number of plots		Start year	Latest survey	Number of surveys until 2021			
				Forest plot	Soil plot			Tree decline	Forest survey	Understory survey	Soil survey
China	Jinyunshan (Chongqing)	Jinyunshan	CNS004	2	2	2000	2021	16	6	6	7
	Jiwozi (Xi'an)	Dabagou	CNS007	1	2	2001	2021	16	6	6	7
	Xiaoping (Xiamen)	Xiaoping	CNS009	1	1	2000	2021	15	5	4	5
	Zhuxiandong (Zhuhai)	Zhuxiandong	CNS011	3	3	2001	2021	8	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	2021	19	5	5	5
		Horyu-zan	JPS105	1	2	2001	2021	19	5	5	5
	Ijira	Ijira	JPS006	1	2	2000	2021	19	5	5	5
		Yamato	JPS106	1	2	2003	2021	19	4	4	4
	Banryu*	Banryu-2	JPS008	1	2	2000	2018	17	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
	(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	2017	1	1	0	2
	Terej	Terej Mountain	MNS002	0	2	2014	2017				2
Philippines	Los Banos	Mt. Makiling	PHS002	1	2	2000	2008	2	3	3	3
		UP Quezon, Land Grant	PHS102	1	2	2000	2008	3	2	3	4
	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	Imstil	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	Vajiralongkorn Dam	THS004	1	2	2000	2012	2	4	3	6
	(old name: Kao Lam Dam)	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 letters indicate that soil and/or vegetation monitoring was conducted in 2021.

Banryu was closed in 2018, and Happo was added alternatively (Japan).

Gray cells indicate sites with soil monitoring only.

5.2 Results of Monitoring

Results of basic survey for soil and forest were reported in the following tables:

➤ **Table 5.5: Soil chemical analysis**

Table 5.5.1 Zhuxiandong (Area: Zhuxiandong, China) CNS011

Table 5.5.2 Ijira (Area: Ijira, Japan) JPS006

Table 5.5.3 Yamato (Area: Ijira, Japan) JPS106

➤ **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 Horyu-zan (Area: Happo, Japan) JPS105

Table 5.6.10 Ijira (Area: Ijira, Japan) JPS006

Table 5.6.11 Yamato (Area: Ijira, Japan) JPS106

➤ **Table 5.7: Description of trees**

Table 5.7.1 Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Table 5.7.2 Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Table 5.7.3 Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Table 5.7.4 Ijira (Area: Ijira, Japan) JPS006

Table 5.7.5 Yamato (Area: Ijira, Japan) JPS106

➤ **Table 5.8: Understory vegetation survey**

Table 5.8.1 Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Table 5.8.2 Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Table 5.8.3 Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Table 5.8.4 Ijira (Area: Ijira, Japan) JPS006

Table 5.8.5 Yamato (Area: Ijira, Japan) JPS106

Table 5.5.1 Soil chemical analysis: Zhuxiandong (Area: Zhuhai, China) CNS011

Soil sampling date: 7 November 2021

Name of analysis laboratory: College of Natural Resources and Environment, South China Agric. Univ.

Location	Soil type	Plot No.	Subplot No.	Layer analyzed (cm)	Repeat analysis	Water content (%)	pH		Exchangeable base cations (B)				Ex-acidity (A)		Ex-acid-cations (A)		ECEC (A) + (B)	Total C	Total N	Available P	Sulfate -S (mg kg ⁻¹)
							H ₂ O	KCl	Ca	Mg	K	Na	(A)	Al	H	(%)					
Zhuxiandong CNS011 Latosolic red soil							0.9	4.1	3.6	0.58	0.17	0.09	0.14	1.7	1.2	0.55	2.7	-	-	-	-
							0.8	4.0	3.6	0.43	0.12	0.12	0.17	2.0	1.2	0.77	2.8	-	-	-	-
							1.4	4.3	3.8	0.73	0.30	0.20	0.27	2.2	1.2	0.94	3.7	-	-	-	-
							1.5	4.4	3.8	0.94	0.31	0.22	0.31	2.1	1.1	1.02	3.9	-	-	-	-
							1.0	4.3	3.7	0.59	0.19	0.12	0.16	2.3	1.7	0.65	3.4	-	-	-	-
							1.0	4.9	4.0	0.58	0.22	0.16	0.21	2.9	2.1	0.84	4.1	-	-	-	-
							2.0	4.8	4.0	0.50	0.21	0.19	0.25	3.5	2.6	0.90	4.7	-	-	-	-
							1.0	4.6	3.7	0.71	0.26	0.14	0.19	3.6	2.9	0.67	4.9	-	-	-	-
							0.9	4.7	3.9	0.34	0.14	0.11	0.16	2.8	1.9	0.90	3.6	-	-	-	-
							1.2	4.4	3.7	0.58	0.17	0.14	0.18	3.8	3.2	0.57	4.8	-	-	-	-
							1.0	4.7	4.0	0.52	0.17	0.10	0.15	2.2	1.8	0.45	3.1	-	-	-	-
							1.3	4.4	3.8	0.55	0.19	0.19	0.26	3.4	2.8	0.59	4.6	-	-	-	-
							1.9	4.5	3.8	1.32	0.38	0.19	0.27	2.8	1.8	0.97	5.0	-	-	-	-
							2.6	4.7	3.9	0.60	0.27	0.18	0.24	2.5	2.0	0.52	3.8	-	-	-	-
							1.7	4.8	3.9	0.84	0.34	0.23	0.32	2.5	1.7	0.75	4.2	-	-	-	-

*1. Average of six repeat analysis.

Table 5.5.2 Soil chemical analysis: Ijira (Area: Ijira, Japan) JPS006

Soil sampling date: 13 September 2021

Name of analysis laboratory: Gifu Prefectural Research Institute for Health and Environmental Sciences

Location	Soil type	Plot No.	Subplot No.	Layer analyzed (cm)	Repeat analysis	Water content (%)	pH		Exchangeable base cations (B)				Ex-acidity (A)		Ex-acid cations (A)		ECEC (A) + (B)	Total C (%)	Total N (%)	Available P (mg kg ⁻¹)		Sulfate -S	Bulk density (Mg m ⁻³)
							H ₂ O	KCl	Ca	Mg	K	Na	(A)	Al	H								
Ijira JPS006 Cambisols	1		1				3.4	4.5	3.6	0.31	0.21	0.23	0.016	8.1	7.0	1.0	8.8	-	-	-	-	-	0.32
							3.9	4.4	3.5	0.33	0.23	0.24	0.020	8.4	7.2	1.2	9.3	-	-	-	-	-	0.30
							3.8	4.4	3.5	0.32	0.26	0.28	0.027	9.8	8.3	1.5	11	-	-	-	-	-	0.31
							4.0	4.3	3.4	0.43	0.30	0.27	0.029	11	9.2	1.4	12	-	-	-	-	-	0.35
							5.2	4.3	3.4	0.24	0.27	0.31	0.028	10	9.0	1.3	11	-	-	-	-	-	0.30
			2				3.0	4.7	3.8	0.058	0.060	0.15	0.013	5.1	4.5	0.56	5.3	-	-	-	-	-	0.32
							3.1	4.7	3.8	0.069	0.080	0.18	0.015	5.4	4.7	0.62	5.7	-	-	-	-	-	0.39
							2.9	4.6	3.7	0.10	0.097	0.17	0.021	6.9	5.4	1.4	7.3	-	-	-	-	-	0.40
							3.3	4.6	3.7	0.080	0.12	0.18	0.022	6.6	5.7	0.93	7.0	-	-	-	-	-	0.46
							3.0	4.6	3.8	0.063	0.098	0.18	0.019	5.5	4.5	0.97	5.8	-	-	-	-	-	0.36
	2		1				8.2	4.4	3.4	0.75	0.39	0.34	0.031	11	9.3	1.6	12	-	-	-	-	-	0.38
							6.6	4.6	3.6	0.51	0.36	0.31	0.026	8.8	7.7	1.2	10	-	-	-	-	-	0.35
							6.2	4.6	3.7	0.24	0.24	0.29	0.022	7.8	6.9	0.86	8.6	-	-	-	-	-	0.42
							6.8	4.5	3.6	0.38	0.29	0.35	0.028	9.1	7.9	1.2	10	-	-	-	-	-	0.32
							5.0	4.6	3.6	0.37	0.24	0.32	0.019	8.2	7.1	1.0	9.1	-	-	-	-	-	0.38
			2				6.8	4.5	3.5	0.13	0.21	0.30	0.032	11	9.1	1.5	11	-	-	-	-	-	0.32
							5.2	4.8	3.8	0.11	0.14	0.21	0.014	6.0	5.2	0.80	6.5	-	-	-	-	-	0.38
							5.4	4.8	3.8	0.082	0.11	0.21	0.017	5.5	4.8	0.63	5.9	-	-	-	-	-	0.37
							5.2	4.7	3.8	0.11	0.13	0.22	0.020	6.1	5.3	0.74	6.6	-	-	-	-	-	0.38
							4.5	4.6	3.8	0.068	0.072	0.21	0.013	5.7	5.0	0.71	6.1	-	-	-	-	-	0.34
	1		1				3.3	4.6	3.6	0.32	0.21	0.26	0.020	8.4	7.6	0.81	9.2	-	-	-	-	-	-
							3.7	4.5	3.6	0.40	0.25	0.29	0.023	8.5	7.6	0.83	9.4	-	-	-	-	-	-
							3.7	4.4	3.5	0.27	0.20	0.24	0.027	9.7	8.7	0.96	10	-	-	-	-	-	-
							3.9	4.3	3.4	0.44	0.25	0.29	0.033	10	9.3	1.2	11	-	-	-	-	-	-
							4.5	4.3	3.5	0.21	0.21	0.29	0.034	10	9.4	1.0	11	-	-	-	-	-	-
			2				2.9	4.7	3.8	0.056	0.055	0.15	0.013	5.0	4.5	0.50	5.3	-	-	-	-	-	-
							2.9	4.7	3.8	0.066	0.074	0.17	0.015	5.3	4.8	0.49	5.6	-	-	-	-	-	-
							2.8	4.6	3.7	0.094	0.094	0.17	0.021	6.9	6.1	0.78	7.2	-	-	-	-	-	-
							3.2	4.6	3.7	0.085	0.11	0.18	0.026	6.6	5.8	0.74	7.0	-	-	-	-	-	-
							2.8	4.6	3.8	0.065	0.088	0.17	0.022	5.5	4.8	0.67	5.8	-	-	-	-	-	-
	2		1				8.3	4.4	3.4	0.75	0.35	0.31	0.028	11	9.2	1.4	12	-	-	-	-	-	-
							6.8	4.7	3.6	0.51	0.31	0.29	0.022	8.7	7.6	1.0	9.8	-	-	-	-	-	-
							6.3	4.6	3.7	0.25	0.20	0.27	0.022	7.3	6.2	1.1	8.0	-	-	-	-	-	-
							6.4	4.5	3.6	0.41	0.27	0.34	0.029	8.9	7.7	1.1	9.9	-	-	-	-	-	-
							5.4	4.6	3.6	0.38	0.20	0.29	0.019	8.5	7.5	1.1	9.4	-	-	-	-	-	-
			2				6.4	4.4	3.5	0.12	0.18	0.28	0.030	11	9.7	1.2	11	-	-	-	-	-	-
							5.2	4.8	3.8	0.10	0.11	0.19	0.014	5.7	5.0	0.76	6.1	-	-	-	-	-	-
							5.4	4.8	3.9	0.068	0.092	0.19	0.019	5.6	4.9	0.70	6.0	-	-	-	-	-	-
							4.9	4.7	3.8	0.091	0.098	0.21	0.022	5.7	5.0	0.72	6.1	-	-	-	-	-	-
							4.4	4.7	3.8	0.062	0.065	0.20	0.015	5.8	5.0	0.75	6.1	-	-	-	-	-	-

Table 5.5.3 Soil chemical analysis; Yamato (Area: Iijira, Japan) JPS106

Soil sampling date: 7 September 2021

Name of analysis laboratory: Gifu Prefectural Research Institute for Health and Environmental Sciences

Location	Soil type	Plot No.	Subplot No.	Layer analyzed (cm)	Repeat analysis	Water content (%)	pH		Exchangeable base cations (B)					Ex-acidity (A)		Ex-acid cations (A)		ECEC (A)+(B)	Total C (%)	Total N (%)	Available P		Sulfate -S (mg kg ⁻¹)	Bulk density (Mg m ⁻³)	
							H ₂ O	KCl	Ca	Mg	K	Na	(A)	Al	H	C	N				P	-S			
Yamato JPS106	Andosols	1	1	0-10	Repeat analysis	19	4.9	3.9	0.58	0.31	0.38	0.046	9.1	8.0	1.0	10	-	-	-	-	-	-	-	0.27	
						32	5.0	3.9	0.38	0.29	0.41	0.055	11	10	1.3	12	-	-	-	-	-	-	-	0.17	
						19	4.7	3.9	0.46	0.34	0.45	0.054	9.9	8.9	1.0	11	-	-	-	-	-	-	-	0.22	
						16	4.9	4.0	1.3	0.36	0.37	0.041	7.0	6.3	0.74	9.1	-	-	-	-	-	-	-	0.24	
						19	4.5	3.7	0.30	0.36	0.53	0.067	16	14	2.0	17	-	-	-	-	-	-	-	0.16	
			2	10-20		19	5.1	4.1	0.16	0.13	0.20	0.039	5.6	4.8	0.80	6.2	-	-	-	-	-	-	-	0.39	
						34	5.4	4.1	0.075	0.095	0.16	0.042	5.6	5.0	0.64	6.0	-	-	-	-	-	-	-	0.25	
						25	5.3	4.3	0.082	0.11	0.19	0.030	3.4	2.9	0.45	3.8	-	-	-	-	-	-	-	0.29	
						35	5.4	4.2	0.35	0.13	0.19	0.032	4.0	3.4	0.59	4.7	-	-	-	-	-	-	-	0.20	
						18	5.0	4.1	0.088	0.15	0.23	0.053	6.4	5.6	0.75	6.9	-	-	-	-	-	-	-	0.35	
		2	1	0-10		16	4.8	3.9	0.65	0.31	0.45	0.059	10	9.0	1.1	12	-	-	-	-	-	-	-	0.32	
						18	5.2	4.3	0.12	0.10	0.19	0.036	3.5	2.9	0.64	4.0	-	-	-	-	-	-	-	0.21	
						13	4.6	3.7	0.35	0.22	0.39	0.055	13	11	1.9	14	-	-	-	-	-	-	-	0.27	
						12	4.9	4.0	0.49	0.17	0.27	0.027	7.0	5.9	1.0	7.9	-	-	-	-	-	-	-	0.42	
						15	4.4	3.5	0.60	0.40	0.56	0.068	15	12	2.3	16	-	-	-	-	-	-	-	0.26	
		1	1	10-20		14	5.1	4.2	0.11	0.14	0.25	0.039	5.0	4.2	0.80	5.6	-	-	-	-	-	-	-	0.24	
						20	5.0	4.0	0.42	0.20	0.34	0.046	7.1	5.9	1.2	8.1	-	-	-	-	-	-	-	0.25	
						19	5.1	4.2	0.089	0.091	0.19	0.033	5.0	4.2	0.76	5.4	-	-	-	-	-	-	-	0.40	
						47	4.6	4.2	0.097	0.045	0.13	0.020	4.5	3.9	0.53	4.8	-	-	-	-	-	-	-	0.47	
						14	5.1	4.1	0.098	0.14	0.25	0.039	5.6	5.0	0.62	6.1	-	-	-	-	-	-	-	0.26	
2	0-10		13	4.9	4.0	0.48	0.24	0.33	0.047	8.9	7.8	1.1	10	-	-	-	-	-	-	-	-	-			
			23	5.1	3.9	0.32	0.23	0.39	0.058	11	9.4	1.1	12	-	-	-	-	-	-	-	-	-			
			13	4.8	3.9	0.42	0.28	0.41	0.056	9.7	8.6	1.1	11	-	-	-	-	-	-	-	-	-			
			11	5.0	4.0	1.1	0.31	0.35	0.043	6.9	6.0	0.85	8.7	-	-	-	-	-	-	-	-	-			
			14	4.5	3.7	0.62	0.39	0.57	0.072	14	13	1.5	16	-	-	-	-	-	-	-	-	-			
2	1	10-20		14	5.2	4.2	0.11	0.097	0.18	0.038	5.6	4.7	0.92	6.0	-	-	-	-	-	-	-	-			
				28	5.4	4.2	0.054	0.079	0.16	0.046	6.2	5.3	0.93	6.5	-	-	-	-	-	-	-	-	-		
				20	5.3	4.4	0.067	0.093	0.18	0.032	3.1	2.8	0.29	3.5	-	-	-	-	-	-	-	-	-		
				29	5.5	4.3	0.34	0.11	0.18	0.034	4.4	3.7	0.74	5.1	-	-	-	-	-	-	-	-	-		
				14	5.1	4.1	0.088	0.13	0.21	0.056	6.5	5.7	0.76	7.0	-	-	-	-	-	-	-	-	-		
	2	0-10	25	4.8	3.9	0.71	0.32	0.47	0.068	11	9.7	1.1	12	-	-	-	-	-	-	-	-	-			
			22	5.3	4.3	0.13	0.099	0.19	0.040	3.5	3.0	0.47	3.9	-	-	-	-	-	-	-	-	-			
			19	4.6	3.8	0.33	0.22	0.40	0.061	13	12	1.6	14	-	-	-	-	-	-	-	-	-			
			15	5.0	4.0	0.49	0.16	0.28	0.029	7.0	6.3	0.65	7.9	-	-	-	-	-	-	-	-	-			
			21	4.4	3.6	0.28	0.31	0.54	0.074	15	13	2.0	16	-	-	-	-	-	-	-	-	-			
2	1	10-20		19	5.2	4.2	0.11	0.14	0.25	0.041	5.3	4.5	0.79	5.8	-	-	-	-	-	-	-	-			
				26	5.0	4.0	0.47	0.21	0.36	0.053	7.8	6.5	1.3	8.9	-	-	-	-	-	-	-	-	-		
				22	5.1	4.2	0.093	0.091	0.19	0.037	5.2	4.6	0.59	5.6	-	-	-	-	-	-	-	-	-		
				54	4.6	4.2	0.11	0.049	0.14	0.022	5.0	4.4	0.57	5.3	-	-	-	-	-	-	-	-	-		
				18	5.1	4.2	0.099	0.14	0.24	0.039	5.3	4.9	0.33	5.8	-	-	-	-	-	-	-	-	-		

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

Plot name: Jinyunshan-1

Date: 28 October 2021

Surveyor: Huanghanwen

Surveyor: Huangnailiwen											
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											Null
Tree height (m)	20.2	11.7	8.7	15.4	14.8	10.2	12.1	14.2	14.0		
DBH (cm)	19.3	16.5	13.4	15.2	15.4	10.7	12.9	14.3	10.9		
Vitality of tree											Dead in 2016
Form of tree	1										
Branch growth											
Dieback of stem											
Defoliation of crown											
Deformation of leaves	1										
Size of leaves											
Discoloration of leaves											
Injury of leaves											
Damage class ^{*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 5.6.2 Observation of tree decline: Jinyunshan-2 (Area: Jinyunshan, China) CNS004

Plot name: Jinyunshan-2

Date: 28 October 2021

Surveyor: Huanghanwen

Surveyor: Huangnairwen								
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 lanceifolia</i>	<i>Elaeagnus japonicus</i>	<i>Macclurus pingii</i>
Relative height								Null
Tree height (m)	12.7	11.7	17.7	18.7	21.7	16.3	19.7	
DBH (cm)	14.0	18.0	20.6	26.3	21.8	17.8	40.7	
Vitality of tree								Dead in 2016
Form of tree	1							
Branch growth								
Dieback of stem								
Defoliation of crown								
Deformation of leaves								
Size of leaves								
Discoloration of leaves								
Injury of leaves	1							
Damage class ^{*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 5.6.3 Observation of tree decline: Dabagou (Area: Jiwozi, China) CNS007

Plot name: Dabagou

Date: 11 November 2021

Surveyor: Wu Yu

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 amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>	<i>Pinus amandii</i>
Relative height																				
Tree height (m)	17.2	14.4	12.2	14.9	12.0	12.0	9.9	9.1	10.9	14.9	14.6	12.6	10.9	15.5	11.3	13.3	11.9	13.8	11.5	8.8
DBH (cm)	25.9	25.8	17.0	21.7	24.8	17.8	12.8	19.1	15.9	19.3	28.7	24.2	15.1	24.2	16.6	24.5	16.4	24.4	16.1	9.2
Vitality of tree	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Form of tree	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Branch growth	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dieback of stem	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Defoliation of crown	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves																				
Injury of leaves																				
Damage class ^{*1}	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Estimated cause of decline: Overcrowding of trees.																				

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

Date: 11 October 2021

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)	16.9	17.5	18.6	17.7	16.7	17.6	18.6	18.1	17.9	18.6	18.1	17.8	18.8	17.3	17.4	17.5	17.3	19.6
DBH (cm)	17.5	21.0	19.9	20.2	21.7	24.9	21.6	20.5	18.4	22.8	20.7	20.5	18.9	21.8	20.7	20.5	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
Date: 7 November 2021
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>Malilus paniculatus</i>	<i>Alstonia scholaris</i>	<i>Aporosa dioica</i>	<i>Pinus elliptica</i>	<i>Cratogeomys cochinchinensis</i>	<i>Acacia confusa</i>	<i>Pinus elliptica</i>	<i>Malilus paniculatus</i>	<i>Pinus elliptica</i>	<i>Triadica cochinchinensis</i>	<i>Malilus paniculatus</i>	<i>Malilus paniculatus</i>	<i>Cratogeomys cochinchinensis</i>	<i>Pinus elliptica</i>	<i>Pinus elliptica</i>	<i>Cratogeomys cochinchinensis</i>	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>
Relative height																				
Tree height (m)	8.9	6.5	5.4	4.1	4.8	10.8	3.5	7.1	15.7	6.0	7.0	4.6	3.3	8.8	5.5	12.0	13.0	4.8	4.2	2.6
DBH (cm)	28.9	23.8	6.2	5.4	7.7	24.8	4.3	21.1	11.0	10.9	13.8	8.4	3.4	4.3	7.8	22.0	32.0	6.9	2.8	2.8
Vitality of tree			1	1					1				1	1						
Form of tree	1									1										
Branch growth																		1		
Dieback of stem						1														
Defoliation of crown				1																
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves	1					1			1				1	1						
Injury of leaves			1							1				1						
Damage class ^{*1}	1		1	1		1			1	1			1	2						

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
Date: 7 November 2021
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>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Machilus velutina</i>	<i>Machilus velutina</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Bridelia tomentosa</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Malilus paniculatus</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Microcos paniculata</i>	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	<i>Acacia confusa</i>	<i>Acacia confusa</i>	<i>Microcos paniculata</i>	<i>Acacia confusa</i>	<i>Microcos paniculata</i>
Relative height																				
Tree height (m)	8.5	8.3	3.5	6.0	7.0	8.0	6.0	4.0	6.5	5.0	7.8	6.5	7.2	3.5	4.0	5.0	5.5	5.3	6.3	4.5
DBH (cm)	32.9	21.1	8.1	8.8	20.0	23.3	11.5	11.1	20.6	5.6	19.3	24.6	24.3	6.3	7.9	13.0	13.4	7.4	13.1	5.3
Vitality of tree																				
Form of tree	1	1			1			1	1				1			1	1		1	
Branch growth																				
Dieback of stem								1												
Defoliation of crown						1														
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves													1							
Injury of leaves					1													1	1	
Damage class ^{*1}					1								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

Date: 7 November 2021

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>Litsea glutinosa</i>	<i>Eurya nitida</i>	<i>Machilus velutina</i>	<i>Archidendron lucidum</i>	<i>Archidendron lucidum</i>	<i>Acacia confusa</i>	<i>Triadica cochinchinensis</i>	<i>Toxicodendron succedaneum</i>	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	<i>Eurya nitida</i>	<i>Machilus velutina</i>	<i>Machilus velutina</i>	<i>Litsea glutinosa</i>	<i>Eurya nitida</i>	<i>Machilus velutina</i>	<i>Zanthoxylum arizemae</i>	<i>Cratogeomys cochinchinensis</i>	<i>Acacia confusa</i>	<i>Machilus velutina</i>	<i>Machilus velutina</i>
Relative height																				
Tree height (m)	3.2	3.1	1.7	4.2	2.6	5.5	5.7	2.2	2.3	3.0	6.0	3.8	4.2	2.8	3.5	3.6	2.5	5.5	5.4	3.8
DBH (cm)	4.3	4.5	1.2	15.4	4.5	11.1	13.6	1.7	2.4	2.1	12.1	6.1	4.6	2.2	4.2	4.8	3.5	14.3	5.9	5.6
Vitality of tree										1			1			1				
Form of tree		1			1															
Branch growth										1			1							
Dieback of stem							1													
Defoliation of crown																				
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves		1			1		1			1										
Injury of leaves							1			1			1			1				
Damage class ^{*1}		1			1		2			1			2			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 5.6.8 Observation of tree decline: Sekido-san (Area: Happo, Japan) JPS005

Plot name: Sekido-san
Date: 2 September 2021
Surveyor: Yo Sengi

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	S	S	S	S	S	S	E	E	E	E	E
Plant Name	<i>Fagus crenata</i>	<i>Benilia grossa</i>	<i>Acer pictum</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Carpinus ischonostiki</i>	<i>Fagus crenata</i>	<i>Benilia 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: 17, Form of tree is declined due to broken lower branch.

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

+ :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 5.6.9 Observation of tree decline: Horyu-zan (Area: Happo, Japan) JPS105

Plot name: Horyu-zan
Date: 2 September 2021
Surveyor: Yo Sengi

Individual No.	1	2	3	4	5	6	7	8	9	10	95	12	13	14	15	16	17	18	19	20
Direction (E, W, S, or N)	N	N	N	N	N	W	W	W	W	S	S	S	S	S	S	E	E	E	E	E
Plant Name	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Pinus densiflora</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>	<i>Carpinus laxiflora</i>	<i>Fagus crenata</i>	<i>Fagus crenata</i>
Relative height			+	—		+	—							—		—		—		+
Tree height (m)	19.1	18.1	22.2	15.3	18.4	19.7	12.7	16.5	17.4	18.3	17.1	16.8	18.6	15.3	15.6	11.2	17.3	13.6	18.0	20.3
DBH (cm)	24.8	22.9	42.4	19.3	25.1	41.3	14.7	20.2	22.6	25.4	25.8	19.0	25.7	15.3	22.2	12.7	19.9	16.5	24.6	32.2
Vitality of tree																		1		
Form of tree																				
Branch growth							1							1		1		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: 7, 16, 18, Tree height is lowered by suppression of surrounding trees.

+ :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: Ijira (Area: Ijira, Japan) JPS006

Plot name: Ijira-lake

Date: 20 October 2021

Surveyor: Yoshizumi Hisada

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
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 head; No. 13, bent stem and dichotomy; 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 5.6.11 Observation of tree decline: Yamato (Area: Ijira, Japan) JPS106

Plot name: Yamato

Date: 7 October 2021

Surveyor: Yoshizumi Hisada

Surveyor: Toshizumi Matsuda																				
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, bent stem; No. 8, 12-3 and 17, bent stem and head; No. 11-2, bent head and dichotomy; No. 18-2, bent head and insect damage; No. 13, bent head; 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.

Table 5.7.1 Description of trees: Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-1

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 1: radius 7.98 m 1/2**(Height > 1.3 m)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Mallotus paniculatus</i>	3.3	3.4	
2	<i>Ficus variolosa</i>	3.4	2.3	
3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.2	2.0	
4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.6	1.6	
5	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	2.4	
6	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	2.6	
7	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.0	2.7	
8	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.5	3.3	
9-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.1	2.6	Bushy stands
9-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.8	2.6	Bushy stands
10-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.6	2.5	Bushy stands
10-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.4	2.5	Bushy stands
11-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.6	2.3	Bushy stands
11-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.6	2.3	Bushy stands
12-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	2.4	Bushy stands
12-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.3	2.4	Bushy stands
12-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.1	2.4	Bushy stands
13-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.1	2.4	Bushy stands
13-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.8	2.4	Bushy stands
13-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.5	2.4	Bushy stands
14-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.4	2.6	Bushy stands
14-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.3	2.6	Bushy stands
14-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.4	2.6	Bushy stands
15	<i>Rhaphiolepis indica</i>	2.1	2.2	
16	<i>Benkara depauperata</i>	1.3	2.2	
17	<i>Desmos chinensis</i>	1.8	1.7	
18	<i>Cratoxylum cochinchinense</i>	2.5	2.3	
19	<i>Psychotria asiatica</i>	2.5	2.3	
20	<i>Psychotria asiatica</i>	3.1	2.4	
21	<i>Ilex asprella</i>	2.3	2.6	
22-1	<i>Ilex asprella</i>	1.3	2.5	Bushy stands
22-2	<i>Ilex asprella</i>	1.1	2.5	Bushy stands
23-1	<i>Ilex asprella</i>	1.3	2.4	Bushy stands
23-2	<i>Ilex asprella</i>	1.6	2.4	Bushy stands
24-1	<i>Ilex asprella</i>	1.3	3.1	Bushy stands
24-2	<i>Ilex asprella</i>	2.4	3.1	Bushy stands
24-3	<i>Ilex asprella</i>	2.1	3.1	Bushy stands
24-4	<i>Ilex asprella</i>	1.8	3.1	Bushy stands
25-1	<i>Ilex asprella</i>	1.6	3.3	Bushy stands
25-2	<i>Ilex asprella</i>	2.3	3.3	Bushy stands
25-3	<i>Ilex asprella</i>	3.1	3.3	Bushy stands
26-1	<i>Ilex asprella</i>	1.8	2.0	Bushy stands
26-2	<i>Ilex asprella</i>	1.1	2.0	Bushy stands
26-3	<i>Ilex asprella</i>	2.6	2.0	Bushy stands
27-1	<i>Ilex asprella</i>	2.1	2.4	Bushy stands
27-2	<i>Ilex asprella</i>	1.1	2.4	Bushy stands
27-3	<i>Ilex asprella</i>	2.3	2.4	Bushy stands
27-4	<i>Ilex asprella</i>	2.8	2.4	Bushy stands
28-1	<i>Ilex asprella</i>	2.3	1.9	Bushy stands
28-2	<i>Ilex asprella</i>	2.1	1.9	Bushy stands
29-1	<i>Ilex asprella</i>	2.6	2.3	Bushy stands
29-2	<i>Ilex asprella</i>	2.3	2.3	Bushy stands
29-3	<i>Ilex asprella</i>	2.4	2.3	Bushy stands
29-4	<i>Ilex asprella</i>	3.1	2.3	Bushy stands

Table 5.7.1 Description of trees: Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-1

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 1: radius 7.98 m 2/2**(Height > 1.3 m)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
29-5	<i>Ilex asprella</i>	2.9	2.3	Bushy stands
30-1	<i>Ilex asprella</i>	3.1	3.4	Bushy stands
30-2	<i>Ilex asprella</i>	3.8	3.4	Bushy stands
30-3	<i>Ilex asprella</i>	2.3	3.4	Bushy stands
31-1	<i>Ilex asprella</i>	3.3	2.6	Bushy stands
31-2	<i>Ilex asprella</i>	2.2	2.6	Bushy stands
31-3	<i>Ilex asprella</i>	2.4	2.6	Bushy stands
32	<i>Toxicodendron succedaneum</i>	2.3	1.6	
33	<i>Toxicodendron succedaneum</i>	2.6	2.5	
34	<i>Toxicodendron succedaneum</i>	2.8	2.2	
35	<i>Triadica cochinchinensis</i>	1.3	2.1	
36	<i>Pinus elliottii</i>	22.0	12.0	
37	<i>Toxicodendron succedaneum</i>	32.0	13.0	
38	<i>Wendlandia uvariifolia</i>	1.6	1.8	
39	<i>Schefflera heptaphylla</i>	1.6	1.9	
40	<i>Aporosa dioica</i>	1.8	1.7	
41	<i>Phyllanthus emblica</i>	2.9	2.3	

Table 5.7.1 Description of trees: Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-1

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 2: radius 11.28 m 1/2**(DBH > 4 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Mallotus paniculatus</i>	4.4	4.3	
2	<i>Mallotus paniculatus</i>	5.4	6.2	
3	<i>Mallotus paniculatus</i>	10.9	6.0	
4-1	<i>Mallotus paniculatus</i>	5.7	4.3	Bushy stands
4-2	<i>Mallotus paniculatus</i>	8.8	4.3	Bushy stands
5-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	6.6	4.5	Bushy stands
5-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.4	4.5	Bushy stands
5-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	8.1	4.5	Bushy stands
6-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.2	3.8	Bushy stands
7-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.5	3.6	Bushy stands
8	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.1	3.5	
9	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.3	3.7	
10	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.3	4.2	
11-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.5	4.6	Bushy stands
11-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.0	4.6	Bushy stands
12-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.1	3.8	Bushy stands
13-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.9	4.2	Bushy stands
13-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.1	4.2	Bushy stands
14-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.1	3.6	Bushy stands
14-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	6.8	3.6	Bushy stands
15-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.4	4.5	Bushy stands
15-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	6.5	4.5	Bushy stands
15-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.6	4.5	Bushy stands
16-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	9.9	5.2	Bushy stands
16-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	9.2	5.2	Bushy stands
16-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.0	5.2	Bushy stands
17	<i>Litsea glutinosa</i>	7.9	3.5	
18	<i>Glochidion lanceolatum</i>	5.3	4.6	
19	<i>Syzygium rehderianum</i>	5.1	3.5	
20	<i>Cratoxylum cochinchinense</i>	4.3	3.5	
21	<i>Cratoxylum cochinchinense</i>	5.6	3.8	
22	<i>Cratoxylum cochinchinense</i>	6.8	6.5	
23	<i>Cratoxylum cochinchinense</i>	6.9	4.8	
24	<i>Cratoxylum cochinchinense</i>	7.0	4.5	
25	<i>Cratoxylum cochinchinense</i>	7.8	5.0	
26	<i>Cratoxylum cochinchinense</i>	7.8	5.5	
27	<i>Cratoxylum cochinchinense</i>	8.9	6.2	
28	<i>Cratoxylum cochinchinense</i>	12.1	6.8	
29-1	<i>Psychotria asiatica</i>	4.4	3.0	Bushy stands
30	<i>Cordia dichotoma</i>	12.1	6.2	
31	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	13.1	5.2	
32	<i>Triadica cochinchinensis</i>	8.4	4.6	
33	<i>Triadica cochinchinensis</i>	12.3	6.6	
34	<i>Pinus elliottii</i>	13.8	7.0	
35	<i>Pinus elliottii</i>	15.0	8.6	
36	<i>Pinus elliottii</i>	15.7	11.0	
37	<i>Pinus elliottii</i>	17.1	10.0	
38	<i>Pinus elliottii</i>	18.3	13.0	
39	<i>Pinus elliottii</i>	18.9	9.2	
40	<i>Pinus elliottii</i>	23.4	12.0	
41	<i>Pinus elliottii</i>	23.9	8.9	
42	<i>Pinus elliottii</i>	24.2	10.0	
43	<i>Pinus elliottii</i>	24.3	11.0	
44	<i>Pinus elliottii</i>	24.8	10.8	

Table 5.7.1 Description of trees: Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-1

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 2: radius 11.28 m 2/2**(DBH > 4 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
45	<i>Pinus elliottii</i>	20.9	9.2	
46	<i>Wendlandia uvariifolia</i>	10.1	7.0	
47	<i>Acacia confusa</i>	6.9	3.5	
48	<i>Acacia confusa</i>	11.9	5.2	
49	<i>Acacia confusa</i>	13.4	4.2	
50	<i>Acacia confusa</i>	21.1	7.1	
51	<i>Schefflera heptaphylla</i>	4.2	1.7	
52-1	<i>Schefflera heptaphylla</i>	5.4	4.1	Bushy stands
53-1	<i>Schefflera heptaphylla</i>	5.5	4.5	Bushy stands
53-2	<i>Schefflera heptaphylla</i>	7.1	4.5	Bushy stands
54	<i>Aporosa dioica</i>	7.7	4.8	

Table 5.7.1 Description of trees: Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-1

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 3: radius 17.85 m**(DBH > 18 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Pinus elliottii</i>	21.9	8.9	
2	<i>Pinus elliottii</i>	28.1	9.1	
3	<i>Pinus elliottii</i>	20.2	8.9	
4	<i>Pinus elliottii</i>	23.7	11.8	
5	<i>Pinus elliottii</i>	27.5	10.5	
6	<i>Pinus elliottii</i>	19.0	9.1	
7	<i>Pinus elliottii</i>	18.9	9.2	
8	<i>Pinus elliottii</i>	23.9	8.9	
9	<i>Pinus elliottii</i>	24.8	10.8	
10	<i>Pinus elliottii</i>	18.3	13.0	
11	<i>Pinus elliottii</i>	23.4	12.0	
12	<i>Pinus elliottii</i>	24.2	10.0	
13	<i>Pinus elliottii</i>	24.3	11.0	
14	<i>Pinus elliottii</i>	20.5	10.8	
15	<i>Pinus elliottii</i>	23.7	9.5	
16	<i>Pinus elliottii</i>	20.9	9.2	
17	<i>Acacia confusa</i>	18.3	8.2	
18	<i>Acacia confusa</i>	28.9	6.5	
19	<i>Acacia confusa</i>	23.8	8.9	
20	<i>Acacia confusa</i>	21.1	7.1	

Table 5.7.2 Description of trees: Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-2

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 1: radius 7.98 m**(Height > 1.3 m)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Mallotus paniculatus</i>	2.3	2.3	
2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.3	1.9	
3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.4	2.3	
4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.7	2.3	
5	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.0	2.8	
6	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.1	2.8	
7	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.3	2.8	
8-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.3	2.4	Bushy stands
8-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.8	2.4	Bushy stands
8-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.7	2.4	Bushy stands
9-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	3.2	Bushy stands
9-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.8	3.2	Bushy stands
10-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.8	3.2	Bushy stands
10-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.5	3.2	Bushy stands
11-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.8	3.2	Bushy stands
11-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.5	3.2	Bushy stands
12-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.8	3.2	Bushy stands
12-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.6	3.2	Bushy stands
13-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.9	2.5	Bushy stands
13-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.9	2.5	Bushy stands
13-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	2.5	Bushy stands
14-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.0	2.8	Bushy stands
14-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.3	2.8	Bushy stands
15	<i>Benkara depauperata</i>	2.3	2.8	
16	<i>Lonicera confusa</i>	2.6	3.6	
17	<i>Ilex asprella</i>	1.4	1.6	
18	<i>Syzygium levinei</i>	1.6	2.1	
19	<i>Psychotria asiatica</i>	2.1	2.1	
20	<i>Psychotria asiatica</i>	3.3	1.9	
21-1	<i>Psychotria asiatica</i>	1.9	2.1	Bushy stands
21-2	<i>Psychotria asiatica</i>	1.4	2.1	Bushy stands
22-1	<i>Ilex asprella</i>	1.8	2.4	Bushy stands
22-2	<i>Ilex asprella</i>	2.1	2.4	Bushy stands
23	<i>Cordia dichotoma</i>	1.5	2.3	
24	<i>Cordia dichotoma</i>	2.1	1.8	
25	<i>Cordia dichotoma</i>	2.2	4.1	
26	<i>Cordia dichotoma</i>	3.8	3.5	
27	<i>Syzygium levinei</i>	2.9	3.4	
28	<i>Ficus fistulosa</i>	2.1	3.5	
29-1	<i>Acacia confusa</i>	17.3	3.2	Bushy stands
29-2	<i>Acacia confusa</i>	13.3	3.2	Bushy stands
30	<i>Aporosa dioica</i>	1.9	2.2	

Table 5.7.2 Description of trees: Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-2

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

**Survey area 2: radius 11.28 m 1/2
(DBH > 4 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Mallotus paniculatus</i>	5.6	5.0	
2	<i>Microcos paniculata</i>	8.2	6.5	
3	<i>Microcos paniculata</i>	12.2	6.5	
4	<i>Microcos paniculata</i>	13.3	5.5	
5	<i>Microcos paniculata</i>	13.4	5.5	
6	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.2	3.5	
7	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.6	3.8	
8	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.1	4.2	
9-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.6	3.8	Bushy stands
9-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.1	3.8	Bushy stands
10-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.6	3.0	Bushy stands
10-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.4	3.0	Bushy stands
11-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.8	2.5	Bushy stands
12-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.0	4.3	Bushy stands
13-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.3	3.3	Bushy stands
13-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.8	3.3	Bushy stands
13-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.9	3.3	Bushy stands
13-4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.3	3.3	Bushy stands
13-5	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.1	3.3	Bushy stands
14-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.0	3.5	Bushy stands
15-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	6.4	4.0	Bushy stands
15-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	7.9	4.0	Bushy stands
16-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	6.6	5.0	Bushy stands
16-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.4	5.0	Bushy stands
16-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.4	5.0	Bushy stands
16-4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	6.3	5.0	Bushy stands
16-5	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	5.8	5.0	Bushy stands
17	<i>Cratogeomys cochinchinense</i>	4.4	4.3	
18	<i>Sterculia lanceolata</i>	6.5	5.0	
19-1	<i>Desmos chinensis</i>	6.4	4.2	Bushy stands
20	<i>Archidendron lucidum</i>	4.7	3.0	
21	<i>Archidendron lucidum</i>	10.0	4.5	
22	<i>Archidendron lucidum</i>	12.0	4.0	
23	<i>Cordia dichotoma</i>	4.5	5.2	
24	<i>Cordia dichotoma</i>	6.2	4.3	
25	<i>Cordia dichotoma</i>	7.4	5.2	
26	<i>Cordia dichotoma</i>	8.6	5.0	
27	<i>Cordia dichotoma</i>	14.7	6.2	
28-1	<i>Cordia dichotoma</i>	5.0	3.8	Bushy stands
29	<i>Cordia dichotoma</i>	5.4	4.5	
30	<i>Cordia dichotoma</i>	6.3	3.5	
31	<i>Cordia dichotoma</i>	7.4	5.3	
32	<i>Cordia dichotoma</i>	9.0	3.5	
33-1	<i>Cordia dichotoma</i>	5.6	4.5	Bushy stands
33-2	<i>Cordia dichotoma</i>	6.4	4.5	Bushy stands
34-1	<i>Cordia dichotoma</i>	6.9	4.5	Bushy stands
34-2	<i>Cordia dichotoma</i>	8.5	4.5	Bushy stands
35	<i>Machilus velutina</i>	5.3	3.0	
36	<i>Machilus velutina</i>	6.5	2.1	
37	<i>Machilus velutina</i>	8.1	3.5	
38-1	<i>Machilus velutina</i>	6.9	6.0	Bushy stands
38-2	<i>Machilus velutina</i>	8.8	6.0	Bushy stands
39	<i>Syzygium levinei</i>	4.8	4.5	
40	<i>Syzygium levinei</i>	11.5	6.0	

Table 5.7.2 Description of trees: Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-2

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 2: radius 11.28 m 2/2**(DBH > 4 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
41	<i>Syzygium levinei</i>	12.1	5.0	
42	<i>Syzygium levinei</i>	18.3	8.2	
43	<i>Acacia confusa</i>	8.2	5.0	
44	<i>Acacia confusa</i>	11.1	4.0	
45	<i>Acacia confusa</i>	12.0	5.2	
46	<i>Acacia confusa</i>	13.0	5.0	
47	<i>Acacia confusa</i>	13.2	4.8	
48	<i>Acacia confusa</i>	13.4	5.5	
49	<i>Acacia confusa</i>	14.9	5.5	
50	<i>Acacia confusa</i>	15.8	4.5	
51	<i>Acacia confusa</i>	16.1	4.3	
52	<i>Acacia confusa</i>	18.2	7.5	
53	<i>Acacia confusa</i>	19.1	5.8	
54	<i>Acacia confusa</i>	19.8	5.9	
55	<i>Acacia confusa</i>	20.0	7.0	
56	<i>Acacia confusa</i>	20.6	6.5	
57	<i>Acacia confusa</i>	20.7	7.0	
58	<i>Acacia confusa</i>	22.3	7.0	
59	<i>Acacia confusa</i>	23.3	8.0	
60	<i>Bridelia tomentosa</i>	11.5	6.0	
61	<i>Hypserpa nitida</i>	6.4	13.0	
62	<i>Aporosa dioica</i>	8.5	3.5	

Table 5.7.2 Description of trees: Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-2

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 3: radius 17.85 m**(DBH > 18 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Syzygium levinei</i>	18.3	8.2	
2	<i>Acacia confusa</i>	32.9	8.2	
3-1	<i>Acacia confusa</i>	21.1	8.2	Bushy stands
4	<i>Acacia confusa</i>	18.2	7.8	
5	<i>Acacia confusa</i>	23.3	6.5	
7	<i>Acacia confusa</i>	19.3	7.8	
8	<i>Acacia confusa</i>	24.6	6.5	
9	<i>Acacia confusa</i>	24.3	7.2	
10-1	<i>Acacia confusa</i>	22.3	4.5	Bushy stands
11-1	<i>Acacia confusa</i>	27.2	6.5	Bushy stands
12-1	<i>Acacia confusa</i>	20.3	6.2	Bushy stands
13	<i>Acacia confusa</i>	20.0	8.0	
14	<i>Acacia confusa</i>	20.6	7.0	
15	<i>Acacia confusa</i>	20.7	6.5	
16	<i>Acacia confusa</i>	23.3	7.0	
17	<i>Acacia confusa</i>	19.8	5.9	
18	<i>Acacia confusa</i>	19.1	5.8	
19	<i>Acacia confusa</i>	18.2	7.5	
20	<i>Acacia confusa</i>	22.3	7.0	

Table 5.7.3 Description of trees: Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-3

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 1: radius 7.98 m 1/2**(Height > 1.3 m)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.8	2.0	
2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	2.3	
3-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.8	2.3	Bushy stands
3-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.5	2.3	Bushy stands
3-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.1	2.3	Bushy stands
3-4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.3	2.3	Bushy stands
3-5	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.9	2.3	Bushy stands
4-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.8	2.2	Bushy stands
4-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	1.9	2.2	Bushy stands
5-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.1	2.2	Bushy stands
5-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.4	2.2	Bushy stands
5-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.3	2.2	Bushy stands
6-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.3	2.4	Bushy stands
6-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.7	2.4	Bushy stands
6-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.0	2.4	Bushy stands
6-4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.6	2.4	Bushy stands
7-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.5	3.5	Bushy stands
7-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.6	3.5	Bushy stands
7-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.8	3.5	Bushy stands
7-4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.6	3.5	Bushy stands
8-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	2.3	Bushy stands
8-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.5	2.3	Bushy stands
9-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.9	3.3	Bushy stands
9-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.6	3.3	Bushy stands
9-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.5	3.3	Bushy stands
9-4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	3.3	Bushy stands
9-5	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.8	3.3	Bushy stands
9-6	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	3.6	3.3	Bushy stands
9-7	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.5	3.3	Bushy stands
9-8	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	2.7	3.3	Bushy stands
10	<i>Cratogeomys cochinchinense</i>	3.5	2.5	
11	<i>Melastoma sanguineum</i>	1.8	1.9	
12	<i>Ilex asprella</i>	1.8	1.9	
13-1	<i>Ilex asprella</i>	1.8	2.2	Bushy stands
13-2	<i>Ilex asprella</i>	1.7	2.2	Bushy stands
13-3	<i>Ilex asprella</i>	1.4	2.2	Bushy stands
14-1	<i>Ilex asprella</i>	2.1	3.4	Bushy stands
14-2	<i>Ilex asprella</i>	1.6	3.4	Bushy stands
14-3	<i>Ilex asprella</i>	1.8	3.4	Bushy stands
14-4	<i>Ilex asprella</i>	1.3	3.4	Bushy stands
14-5	<i>Ilex asprella</i>	1.7	3.4	Bushy stands
14-6	<i>Ilex asprella</i>	1.5	3.4	Bushy stands
15	<i>Machilus velutina</i>	1.0	1.7	
16	<i>Machilus velutina</i>	1.2	2.2	
17	<i>Machilus velutina</i>	3.4	3.3	
18-1	<i>Machilus velutina</i>	12.5	6.0	Bushy stands
18-2	<i>Machilus velutina</i>	9.0	6.0	Bushy stands
19-1	<i>Machilus velutina</i>	2.8	3.5	Bushy stands
19-2	<i>Machilus velutina</i>	1.9	3.5	Bushy stands
20-1	<i>Machilus velutina</i>	3.2	3.3	Bushy stands
20-2	<i>Machilus velutina</i>	2.3	3.3	Bushy stands
20-3	<i>Machilus velutina</i>	3.8	3.3	Bushy stands
21-1	<i>Machilus velutina</i>	3.9	4.0	Bushy stands
21-2	<i>Machilus velutina</i>	3.4	4.0	Bushy stands

Table 5.7.3 Description of trees: Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-3

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 1: radius 7.98 m 2/2**(Height > 1.3 m)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
21-3	<i>Machilus velutina</i>	2.8	4.0	Bushy stands
22	<i>Eurya nitida</i>	2.0	1.7	
23	<i>Eurya nitida</i>	3.6	2.5	
24-1	<i>Eurya nitida</i>	1.0	2.2	Bushy stands
24-2	<i>Eurya nitida</i>	1.3	2.2	Bushy stands
25-1	<i>Eurya nitida</i>	2.6	3.0	Bushy stands
25-2	<i>Eurya nitida</i>	3.1	3.0	Bushy stands
25-3	<i>Eurya nitida</i>	2.2	3.0	Bushy stands
26-1	<i>Eurya nitida</i>	2.8	2.6	Bushy stands
26-2	<i>Eurya nitida</i>	2.6	2.6	Bushy stands
27-1	<i>Eurya nitida</i>	3.1	2.3	Bushy stands
27-2	<i>Eurya nitida</i>	3.8	2.3	Bushy stands
27-3	<i>Eurya nitida</i>	3.0	2.3	Bushy stands
28-1	<i>Eurya nitida</i>	3.4	2.5	Bushy stands
28-2	<i>Eurya nitida</i>	2.4	2.5	Bushy stands
29-1	<i>Eurya nitida</i>	3.9	3.1	Bushy stands
29-2	<i>Eurya nitida</i>	2.8	3.1	Bushy stands
29-3	<i>Eurya nitida</i>	2.4	3.1	Bushy stands
29-4	<i>Eurya nitida</i>	3.5	3.1	Bushy stands
30	<i>Toxicodendron succedaneum</i>	1.7	2.2	
31	<i>Toxicodendron succedaneum</i>	2.1	4.3	
32-1	<i>Aporosa dioica</i>	12.2	7.2	Bushy stands
32-2	<i>Aporosa dioica</i>	10.5	7.2	Bushy stands

Table 5.7.3 Description of trees: Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-3

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 2: radius 11.28 m 1/2**(DBH > 4 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.1	4.3	Bushy stands
1-2	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.2	4.3	Bushy stands
1-3	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.1	4.3	Bushy stands
1-4	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.2	4.3	Bushy stands
2-1	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	4.4	3.8	Bushy stands
3-1	<i>Litsea glutinosa</i>	4.8	3.2	Bushy stands
3-2	<i>Litsea glutinosa</i>	4.3	3.2	Bushy stands
4	<i>Litsea glutinosa</i>	4.6	4.2	
5	<i>Zanthoxylum avicennae</i>	4.8	3.6	
6	<i>Archidendron lucidum</i>	4.5	2.6	
7	<i>Archidendron lucidum</i>	10.9	6.9	
8	<i>Machilus velutina</i>	4.0	3.1	
9	<i>Machilus velutina</i>	4.5	3.8	
10	<i>Machilus velutina</i>	5.6	4.8	
11	<i>Machilus velutina</i>	5.9	5.4	
12	<i>Machilus velutina</i>	6.1	3.8	
13	<i>Machilus velutina</i>	7.1	4.5	
14	<i>Machilus velutina</i>	15.4	5.3	
15-1	<i>Machilus velutina</i>	5.0	3.5	Bushy stands
15-2	<i>Machilus velutina</i>	5.3	3.5	Bushy stands
15-3	<i>Machilus velutina</i>	5.0	3.5	Bushy stands
16-1	<i>Machilus velutina</i>	5.3	3.1	Bushy stands
17-1	<i>Machilus velutina</i>	5.4	5.8	Bushy stands
17-2	<i>Machilus velutina</i>	4.1	5.8	Bushy stands
18-1	<i>Machilus velutina</i>	5.6	3.8	Bushy stands
19-1	<i>Machilus velutina</i>	5.6	3.5	Bushy stands
20-1	<i>Machilus velutina</i>	5.7	2.6	Bushy stands
21-1	<i>Machilus velutina</i>	6.2	4.1	Bushy stands
22-1	<i>Machilus velutina</i>	6.6	4.2	Bushy stands
22-2	<i>Machilus velutina</i>	6.8	4.2	Bushy stands
22-3	<i>Machilus velutina</i>	7.2	4.2	Bushy stands
23-1	<i>Machilus velutina</i>	7.4	5.2	Bushy stands
23-2	<i>Machilus velutina</i>	7.4	5.2	Bushy stands
23-3	<i>Machilus velutina</i>	6.5	5.2	Bushy stands
23-4	<i>Machilus velutina</i>	7.1	5.2	Bushy stands
23-5	<i>Machilus velutina</i>	4.4	5.2	Bushy stands
24	<i>Syzygium levinei</i>	6.0	4.5	
25	<i>Triadica cochinchinensis</i>	13.6	5.5	
26	<i>Triadica cochinchinensis</i>	15.4	4.2	
27	<i>Triadica cochinchinensis</i>	17.4	4.5	
28	<i>Triadica cochinchinensis</i>	18.4	4.9	
29	<i>Triadica cochinchinensis</i>	20.4	6.0	
30	<i>Acacia confusa</i>	8.0	4.3	
31	<i>Acacia confusa</i>	11.1	7.8	
32	<i>Acacia confusa</i>	11.1	5.0	
33	<i>Acacia confusa</i>	11.2	5.0	
34	<i>Acacia confusa</i>	14.3	5.5	
35	<i>Acacia confusa</i>	26.8	8.7	
36	<i>Eurya nitida</i>	4.2	2.5	
37	<i>Eurya nitida</i>	5.4	2.6	
38-1	<i>Eurya nitida</i>	4.0	2.8	Bushy stands
39-1	<i>Eurya nitida</i>	4.0	2.8	Bushy stands
40-1	<i>Eurya nitida</i>	4.2	2.7	Bushy stands
41-1	<i>Eurya nitida</i>	4.3	3.5	Bushy stands

Table 5.7.3 Description of trees: Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-3

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 2: radius 11.28 m 2/2

(DBH > 4 cm)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
42-1	<i>Eurya nitida</i>	5.6	3.8	Bushy stands
42-2	<i>Eurya nitida</i>	4.3	3.8	Bushy stands
42-3	<i>Eurya nitida</i>	4.1	3.8	Bushy stands
43-1	<i>Aporosa dioica</i>	5.9	4.3	Bushy stands
43-2	<i>Aporosa dioica</i>	6.3	4.3	Bushy stands

Table 5.7.3 Description of trees: Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-3

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Survey area 3: radius 17.85 m

(DBH > 18 cm)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Triadica cochinchinensis</i>	18.4	4.9	
2	<i>Triadica cochinchinensis</i>	20.4	6.0	
3	<i>Acacia confusa</i>	26.8	8.7	

Table 5.7.4 Description of trees: Ijira (Area: Ijira, Japan) JPS006

Plot name: Ijira-lake

Date: 20 October 2021

Surveyor: Yoshizumi Hisada

Survey area 1: radius 7.98 m**(Height > 1.3 m)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Chamaecyparis obtusa</i>	16.4	15.9	
4	<i>Chamaecyparis obtusa</i>	27.9	19.8	
6	<i>Chamaecyparis obtusa</i>	19.4	16.9	
7	<i>Chamaecyparis obtusa</i>	16.1	12.9	
9	<i>Chamaecyparis obtusa</i>	25.8	19.0	
10	<i>Chamaecyparis obtusa</i>	20.6	18.4	
11	<i>Chamaecyparis obtusa</i>	19.4	18.0	
13	<i>Chamaecyparis obtusa</i>	20.3	15.0	
15	<i>Chamaecyparis obtusa</i>	20.4	17.5	
16	<i>Chamaecyparis obtusa</i>	20.5	18.5	
17	<i>Chamaecyparis obtusa</i>	19.0	16.8	
18	<i>Chamaecyparis obtusa</i>	23.3	18.1	
20	<i>Chamaecyparis obtusa</i>	19.0	16.3	
21	<i>Chamaecyparis obtusa</i>	25.1	18.1	
23	<i>Chamaecyparis obtusa</i>	18.2	15.1	
24	<i>Chamaecyparis obtusa</i>	16.3	14.2	
25	<i>Chamaecyparis obtusa</i>	17.3	15.3	
27	<i>Chamaecyparis obtusa</i>	19.9	17.2	
30	<i>Chamaecyparis obtusa</i>	14.9	14.0	
31	<i>Chamaecyparis obtusa</i>	19.8	16.2	
34	<i>Chamaecyparis obtusa</i>	24.1	18.8	
37	<i>Chamaecyparis obtusa</i>	18.9	17.7	
39	<i>Chamaecyparis obtusa</i>	22.8	17.1	
40	<i>Chamaecyparis obtusa</i>	24.4	17.3	
42	<i>Chamaecyparis obtusa</i>	34.2	21.3	
43	<i>Chamaecyparis obtusa</i>	15.3	15.5	
44	<i>Chamaecyparis obtusa</i>	19.0	14.9	
46	<i>Chamaecyparis obtusa</i>	17.4	14.2	
47	<i>Chamaecyparis obtusa</i>	18.8	14.7	
50	<i>Chamaecyparis obtusa</i>	19.5	17.4	

Table 5.7.4 Description of trees: Ijira (Area: Ijira, Japan) JPS006

Plot name: Ijira-lake

Date: 20 October 2021

Surveyor: Yoshizumi Hisada

**Survey area 2: radius 11.28 m
(DBH > 4 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
52	<i>Chamaecyparis obtusa</i>	28.5	18.6	
53	<i>Chamaecyparis obtusa</i>	18.5	17.7	
57	<i>Chamaecyparis obtusa</i>	20.3	15.0	
59	<i>Chamaecyparis obtusa</i>	18.8	15.9	
60	<i>Chamaecyparis obtusa</i>	14.9	15.6	
62	<i>Chamaecyparis obtusa</i>	20.5	16.6	
64	<i>Chamaecyparis obtusa</i>	18.2	16.6	
65	<i>Chamaecyparis obtusa</i>	19.3	16.2	
69	<i>Chamaecyparis obtusa</i>	22.4	13.9	
70	<i>Chamaecyparis obtusa</i>	17.5	15.6	
71	<i>Chamaecyparis obtusa</i>	32.0	19.5	
73	<i>Chamaecyparis obtusa</i>	27.9	18.5	
75	<i>Chamaecyparis obtusa</i>	21.8	18.8	
76	<i>Chamaecyparis obtusa</i>	23.4	18.2	
77	<i>Chamaecyparis obtusa</i>	26.7	20.2	
79	<i>Chamaecyparis obtusa</i>	15.1	15.7	
80	<i>Chamaecyparis obtusa</i>	19.6	16.2	
81	<i>Chamaecyparis obtusa</i>	15.2	15.7	
82	<i>Chamaecyparis obtusa</i>	20.2	15.0	
83	<i>Chamaecyparis obtusa</i>	23.4	18.8	
84	<i>Chamaecyparis obtusa</i>	21.1	16.6	
85	<i>Chamaecyparis obtusa</i>	24.2	20.1	
86	<i>Chamaecyparis obtusa</i>	12.6	15.7	
87	<i>Chamaecyparis obtusa</i>	19.1	15.6	
88	<i>Chamaecyparis obtusa</i>	18.4	16.7	
89	<i>Chamaecyparis obtusa</i>	20.7	16.3	
92	<i>Chamaecyparis obtusa</i>	18.4	15.2	
94	<i>Chamaecyparis obtusa</i>	21.2	17.9	
97	<i>Chamaecyparis obtusa</i>	18.0	13.9	
98	<i>Chamaecyparis obtusa</i>	25.0	17.3	

Table 5.7.4 Description of trees: Ijira (Area: Ijira, Japan) JPS006

Plot name: Ijira-lake

Date: 20 October 2021

Surveyor: Yoshizumi Hisada

**Survey area 3: radius 17.85 m 1/2
(DBH > 18 cm)**

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
99	<i>Chamaecyparis obtusa</i>	32.0	16.8	
100	<i>Chamaecyparis obtusa</i>	28.9	16.8	
101	<i>Cryptomeria japonica</i>	52.2	23.6	
102	<i>Chamaecyparis obtusa</i>	29.7	20.3	
103	<i>Chamaecyparis obtusa</i>	23.0	16.1	
104	<i>Chamaecyparis obtusa</i>	27.9	18.8	
105	<i>Chamaecyparis obtusa</i>	24.9	17.4	
106	<i>Chamaecyparis obtusa</i>	19.9	15.5	
107	<i>Chamaecyparis obtusa</i>	29.2	19.1	
108	<i>Chamaecyparis obtusa</i>	20.3	17.3	
109	<i>Chamaecyparis obtusa</i>	20.1	16.4	
110	<i>Chamaecyparis obtusa</i>	25.0	17.6	
111	<i>Chamaecyparis obtusa</i>	24.6	15.7	
112	<i>Chamaecyparis obtusa</i>	26.1	14.8	
113	<i>Chamaecyparis obtusa</i>	22.5	19.4	
114	<i>Chamaecyparis obtusa</i>	19.8	17.1	
115	<i>Chamaecyparis obtusa</i>	26.0	18.3	
116	<i>Chamaecyparis obtusa</i>	27.2	18.5	
117	<i>Chamaecyparis obtusa</i>	25.0	19.1	
118	<i>Chamaecyparis obtusa</i>	23.6	18.0	
119	<i>Cryptomeria japonica</i>	28.6	20.3	
120	<i>Chamaecyparis obtusa</i>	26.3	19.6	
121	<i>Chamaecyparis obtusa</i>	24.3	18.5	
122	<i>Chamaecyparis obtusa</i>	18.6	16.4	
123	<i>Chamaecyparis obtusa</i>	23.5	18.6	
124	<i>Chamaecyparis obtusa</i>	23.9	16.2	
125	<i>Chamaecyparis obtusa</i>	19.8	16.7	
126	<i>Chamaecyparis obtusa</i>	22.8	18.7	
127	<i>Chamaecyparis obtusa</i>	20.3	17.8	
128	<i>Chamaecyparis obtusa</i>	21.2	18.3	
129	<i>Chamaecyparis obtusa</i>	20.4	17.9	
130	<i>Chamaecyparis obtusa</i>	22.7	18.0	
131	<i>Chamaecyparis obtusa</i>	25.6	18.4	
132	<i>Chamaecyparis obtusa</i>	20.9	18.3	
133	<i>Chamaecyparis obtusa</i>	22.8	17.1	
134	<i>Chamaecyparis obtusa</i>	21.0	15.1	
135	<i>Chamaecyparis obtusa</i>	22.1	17.3	
136	<i>Chamaecyparis obtusa</i>	22.8	18.6	
137	<i>Chamaecyparis obtusa</i>	19.7	15.5	
138	<i>Chamaecyparis obtusa</i>	19.1	16.9	
139	<i>Chamaecyparis obtusa</i>	20.2	18.5	
140	<i>Chamaecyparis obtusa</i>	21.7	18.9	
141	<i>Chamaecyparis obtusa</i>	22.4	19.3	
142	<i>Chamaecyparis obtusa</i>	19.1	17.4	
143	<i>Chamaecyparis obtusa</i>	20.3	17.9	
144	<i>Chamaecyparis obtusa</i>	18.9	17.0	
145	<i>Chamaecyparis obtusa</i>	21.4	19.2	
146	<i>Chamaecyparis obtusa</i>	19.6	16.2	
147	<i>Chamaecyparis obtusa</i>	18.4	13.8	
148	<i>Chamaecyparis obtusa</i>	21.5	18.5	2021 new registration
149	<i>Chamaecyparis obtusa</i>	22.1	17.0	2021 new registration

Table 5.7.4 Description of trees: Ijira (Area: Ijira, Japan) JPS006

Plot name: Ijira-lake

Date: 20 October 2021

Surveyor: Yoshizumi Hisada

Survey area 3: radius 17.85 m 2/2

(DBH > 18 cm)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
150	<i>Chamaecyparis obtusa</i>	19.5	16.2	2021 new registration
151	<i>Chamaecyparis obtusa</i>	18.3	16.9	2021 new registration
152	<i>Chamaecyparis obtusa</i>	21.3	16.1	2021 new registration
153	<i>Chamaecyparis obtusa</i>	18.4	17.4	2021 new registration
154	<i>Chamaecyparis obtusa</i>	19.5	17.1	2021 new registration

Table 5.7.5 Description of trees: Yamato (Area: Ijira, Japan) JPS106

Plot name: Yamato

Date: 7 October 2021

Surveyor: Yoshizumi Hisada

Survey area 1: radius 7.98 m

(Height > 1.3 m)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Chamaecyparis obtusa</i>	44.6	28.9	
3	<i>Chamaecyparis obtusa</i>	31.6	28.3	
6	<i>Chamaecyparis obtusa</i>	50.5	32.3	
7	<i>Chamaecyparis obtusa</i>	Dead		

Table 5.7.5 Description of trees: Yamato (Area: Ijira, Japan) JPS106

Plot name: Yamato

Date: 7 October 2021

Surveyor: Yoshizumi Hisada

Survey area 2: radius 11.28 m

(DBH > 4 cm)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
9	<i>Chamaecyparis obtusa</i>	45.6	32.0	
10	<i>Chamaecyparis obtusa</i>	45.3	30.3	
13	<i>Chamaecyparis obtusa</i>	48.3	32.2	

Table 5.7.5 Description of trees: Yamato (Area: Ijira, Japan) JPS106

Plot name: Yamato

Date: 7 October 2021

Surveyor: Yoshizumi Hisada

Survey area 3: radius 17.85 m

(DBH > 18 cm)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
19	<i>Chamaecyparis obtusa</i>	42.8	30.7	
21	<i>Chamaecyparis obtusa</i>	40.5	29.9	
22	<i>Chamaecyparis obtusa</i>	41.1	33.5	
23	<i>Chamaecyparis obtusa</i>	Dead		
24	<i>Chamaecyparis obtusa</i>	Dead		
29	<i>Chamaecyparis obtusa</i>	35.6	29.0	
30	<i>Chamaecyparis obtusa</i>	Dead		
31	<i>Chamaecyparis obtusa</i>	35.3	27.3	
32	<i>Chamaecyparis obtusa</i>	48.7	32.0	
34	<i>Chamaecyparis obtusa</i>	35.1	29.6	
35	<i>Chamaecyparis obtusa</i>	36.5	29.5	
36	<i>Chamaecyparis obtusa</i>	33.7	26.6	
37	<i>Chamaecyparis obtusa</i>	45.1	30.0	
38	<i>Chamaecyparis obtusa</i>	36.9	29.0	
40	<i>Chamaecyparis obtusa</i>	Dead		
45	<i>Chamaecyparis obtusa</i>	38.8	33.0	
46	<i>Chamaecyparis obtusa</i>	Dead		
48	<i>Chamaecyparis obtusa</i>	42.4	31.6	

Table 5.8.1 Understory vegetation survey: Zhuxiandong-1 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-1

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Number of Species: 10

Scientific name	Abundance
<i>Dicranopteris pedata</i>	+
<i>Mussaenda pubescens</i>	+
<i>Miscanthus floridulus</i>	+
<i>Indocalamus tessellatus</i>	+
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	+
<i>Psychotria serpens</i>	+
<i>Gynochthodes parvifolia</i>	+
<i>Adiantum flabellulatum</i>	+
<i>Smilax china</i>	+
<i>Strophanthus divaricatus</i>	+

Table 5.8.2 Understory vegetation survey: Zhuxiandong-2 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-2

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Number of Species: 6

Scientific name	Abundance
<i>Lophatherum gracile</i>	+
<i>Lygodium japonicum</i>	+
<i>Psychotria asiatica</i>	+
<i>Pteris semipinnata</i>	+
<i>Rhaphiolepis indica</i>	+
<i>Lindsaea orbiculata</i>	+

Table 5.8.3 Understory vegetation survey: Zhuxiandong-3 (Area: Zhuxiandong, China) CNS011

Plot name: Zhuxiandong-3

Date: 7 November 2021

Surveyor: Zheng Mingxuan, Feng Mingchun, Zhao Yuwei, Liang Xiaohan, Wang Xinyi

Number of Species: 9

Scientific name	Abundance
<i>Dicranopteris dichotoma</i>	+
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	+
<i>Eurya nitida</i>	+
<i>Rubus reflexus</i>	+
<i>Machilus velutina</i>	+
<i>Hypserpa nitida</i>	+
<i>Clerodendrum fortunatum</i>	+
<i>Adiantum flabellulatum</i>	+
<i>Gynochthodes parvifolia</i>	+

Table 5.8.4 Understory vegetation survey: Ijira (Area: Ijira, Japan) JPS006

Plot name: Ijira-lake

Date: 20 October 2021

Surveyor: Yoshizumi Hisada

Number of Species: 23

Scientific name	Abundance
<i>Camellia sinensis</i>	1
<i>Cleyera japonica</i>	1
<i>Camellia japonica</i>	1
<i>Pieris japonica</i>	1
<i>Struthiopteris niponica</i>	1
<i>Dryopteris erythrosora</i>	1
<i>Eurya japonica</i> var. <i>japonica</i>	+
<i>Illicium anisatum</i>	+
<i>Castanopsis cuspidata</i>	+
<i>Ilex macropoda</i>	+
<i>Quercus glauca</i>	+
<i>Quercus myrsinaefolia</i>	+
<i>Castanea crenata</i>	+
<i>Quercus serrata</i>	+
<i>Chamaecyparis obtusa</i>	+
<i>Clethra barbinervis</i>	+
<i>Osmanthus heterophyllus</i>	+
<i>Cinnamomum yabunikkei</i>	+
<i>Laurocerasus spinulosa</i>	+
<i>Smilax china</i>	+
<i>Plagiogyria japonica</i>	+
<i>Lophatherum gracile</i>	+
<i>Heloniopsis orientalis</i>	+

Table 5.8.5 Understory vegetation survey: Yamato (Area: Ijira, Japan) JPS106

Plot name: Yamato

Date: 7 October 2021

Surveyor: Yoshizumi Hisada

Number of Species: 28

Scientific name	Abundance
<i>Lindera triloba</i>	4
<i>Rubus crataegifolius</i>	2
<i>Clethra barbinervis</i>	1
<i>Styrax japonicus</i>	1
<i>Rubus palmatus</i> var. <i>palmatus</i>	1
<i>Smilax china</i>	1
<i>Miscanthus sinensis</i>	1
<i>Lysimachia clethroides</i>	1
<i>Dryopteris erythrosora</i>	1
<i>Chengiopanax sciadophylloides</i>	+
<i>Cryptomeria japonica</i>	+
<i>Chamaecyparis obtusa</i>	+
<i>Callicarpa japonica</i>	+
<i>Ilex crenata</i> var. <i>crenata</i>	+
<i>Magnolia obovata</i>	+
<i>Lindera erythrocarpa</i>	+
<i>Aralia elata</i>	+
<i>Idesia polycarpa</i>	+
<i>Rhus javanica</i>	+
<i>Lindera umbellata</i>	+
<i>Zanthoxylum schinifolium</i>	+
<i>Weigela decora</i>	+
<i>Thelypteris pozoi</i> ssp. <i>Mollissima</i>	+
<i>Struthiopteris niponica</i>	+
<i>Oplismenus undulatifolius</i>	+
<i>Schizophragma hydrangeoides</i>	+
<i>Carex morrowii</i>	+
<i>Hypolepis punctata</i>	+

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/ivers 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

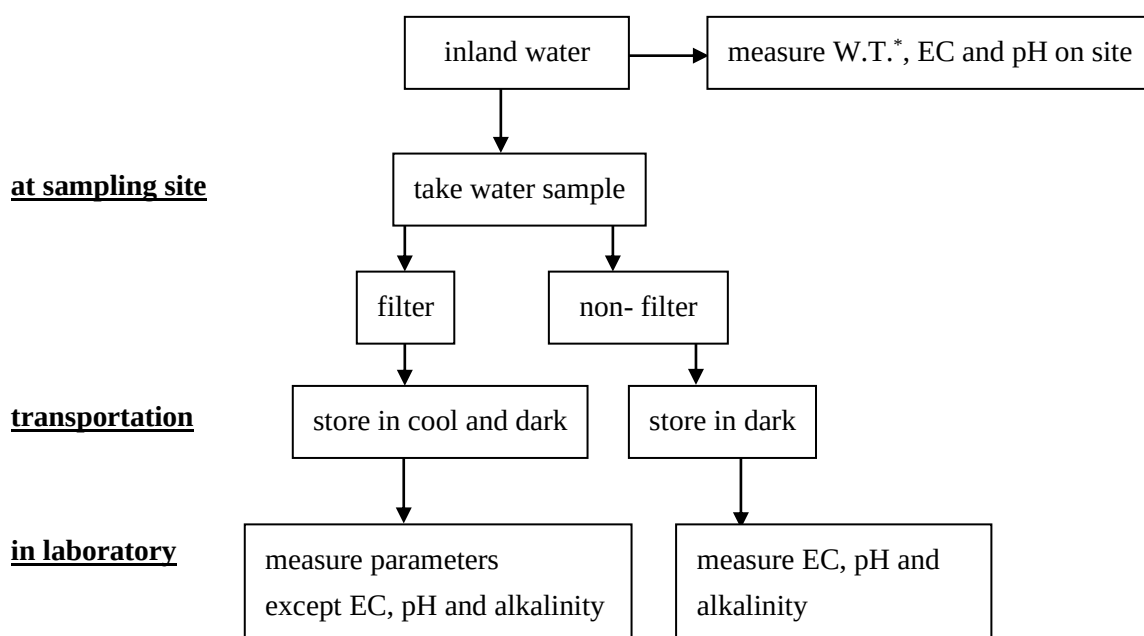
According to the technical manual (2010), the lakes chosen for monitoring should be harmonic type lakes, preferably with depths of approximately 10 m or less, a water residence time of 1 year or less, an area of 1 ha or more, with low alkalinity and electric conductivity, minimal anthropogenic water 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.

Cations weren't analyzed in Nam Houm Lake.

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, the monitoring sites were established in 13 lakes/reservoirs and 6 rivers/streams. For 2021, 7 countries (China, Japan, 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 6.4.8. Data within or exceeded the criteria of R_1 and R_2 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 6.4.9.

There were 5 sites (Futago-ike Lake in Japan, Terelj River in Mongolia, Pandin Lake in Philippines, Komarovka River in Russia and Vajiralongkorn Dam in Thailand) 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 2021 are shown in Table 6.5.1 to Table 6.5.21.

Table 6.2 Outline of Inland Aquatic Environment Monitoring of 2021

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	-
Malaysia	Baru River	-	Remote (Danum Valley)	-	-
	Kuala Tahan	-	-	-	-
Mongolia	Terelj River	-	Remote (Terelj)	2002	6 times/yr.
Philippines	Pandin Lake	30 km	Rural (Mt. Makiling)	2004	5 times/yr.
	Ambulalakaw Lake	-	Remote (Mt. Sto. Tomas)	2005	-
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	2 times/yr.
Vietnam	Hoa Binh Reservoir	-	Rural	2001	4 times/yr.

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	16.8 °C (mean) *1
Precipitation	2249.5 mm/year *1
Sunshine duration	174.3 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, 2021.

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	10.2 °C (mean) *1	
Precipitation	1482.0 mm/year *1	
Sunshine duration	186.4 hrs/month (mean) *1	
Solar radiation	-	
Wind speed	Mean 2.2 m/s *1	
Wind direction	S (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, 2021.

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	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	-
Wind direction	-
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.

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	-3.4°C
Precipitation	About 800 mm/year
Sunshine duration	-
Solar radiation	-
Wind speed	Mean: 2.5 m/sec
Wind direction	SW
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.

#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.

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	3.4°C
Precipitation	737 mm/year (2005)
Sunshine duration	-
Solar radiation	-
Wind speed	1.1-2.2 (mean 1.7) m/s (2005)
Wind direction	E, NE
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.

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	2093.6 mm*1
Sunshine duration	-
Solar radiation	-
Wind speed	0.35 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 x 10 ⁶ m ³ /year, daily : 16.8 x 10 ⁶ m ³ /day
Amount of outlet water	Annual : 2990.3 x 10 ⁶ m ³ /year, daily : 8.2 x 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, 2021.

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	24.8 °C (mean) *2
Precipitation	2189.9 mm *2
Sunshine duration	138.8 hrs/month (mean) *2
Solar radiation	-
Wind speed	Mean 0.83 m/s *2
Wind direction	N (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, 2021.

Table 6.4.1 Result of Inland Aquatic Environment Monitoring

Duration: 2021.1-2021.12

Country: China

Lake/Stream: (See below)

Mandatory Parameters : 4 times/year													
Site	Sampling	Temp.	pH	EC	Alkalinity	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	Mg ²⁺
	Date	(°C)		(mS/m)	(meq/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Chongqing -Jinyunshan Lake	25-Mar-21	16.0	6.86	10.85	0.243	23.67	6.24	1.82	0.22	2.47	1.53	9.70	3.17
	30-Jun-21	27.0	6.89	9.58	0.126	25.15	9.72	1.81	0.01	1.95	1.63	8.21	2.62
	17-Sep-21	27.0	5.80	8.48	0.000	22.15	10.68	1.24	0.00	1.40	1.63	7.74	2.34
	22-Dec-21	12.5	6.52	9.15	0.146	22.48	7.24	1.44	0.01	2.02	1.66	8.31	2.68
	mean*2	20.6	6.27	9.52	0.129	23.36	8.47	1.58	0.06	1.96	1.61	8.49	2.70
Chongqing -Simianshan Lake*3	15-Mar-21	16.0	6.68	4.59	0.122	9.96	2.01	0.37	0.03	0.62	0.67	6.44	0.59
	30-Jun-21	25.0	6.72	4.01	0.136	9.33	1.17	0.35	0.03	0.54	0.37	4.75	0.52
	15-Sep-21	22.0	6.45	3.66	0.146	7.95	1.84	0.30	0.00	0.45	0.38	4.75	0.51
	30-Nov-21	12.5	6.44	4.39	0.102	8.66	1.63	0.30	0.02	0.54	0.46	5.66	0.59
	mean*2	18.9	6.55	4.16	0.127	8.98	1.66	0.33	0.02	0.54	0.47	5.40	0.55
Xiamen -Xiaoping Dam	02-Feb-21	15.7	7.59	5.61	0.288	1.43	2.73	2.36	0.14	3.73	2.70	3.59	0.69
	10-May-21	21.3	7.57	6.38	0.322	2.62	2.38	2.48	0.02	4.87	2.74	4.19	0.78
	17-Aug-21	25.6	7.22	5.51	0.273	2.28	2.27	2.16	0.04	3.72	2.41	3.69	0.58
	22-Oct-21	18.6	7.46	5.72	0.292	1.97	2.32	2.88	0.12	4.57	2.97	3.67	0.54
	mean*2	20.3	7.43	5.81	0.294	2.08	2.43	2.47	0.08	4.22	2.71	3.79	0.65
Xi'an -Jiwozi River	23-Mar-21	2.0	6.77	5.83	0.280	6.33	5.21	0.90	0.24	1.86	0.62	7.45	0.98
	29-Apr-21	6.0	6.98	5.79	0.300	6.76	4.02	0.69	0.00	1.43	0.56	8.63	1.10
	02-Aug-21	15.0	7.02	5.26	0.310	4.68	2.79	0.62	0.13	2.12	0.79	7.89	0.00
	11-Nov-21	3.0	6.44	5.11	0.290	5.67	2.83	0.59	0.01	0.25	0.65	7.75	0.94
	mean*2	6.5	6.74	5.50	0.295	5.86	3.71	0.70	0.10	1.41	0.65	7.93	0.76
Zhuhai -Zhuxiandong Stream	04-Jan-21	18.0	7.00	7.11	0.420	1.96	2.97	5.20	0.00	8.38	1.22	3.40	1.16
	06-Apr-21	23.0	6.65	7.66	0.460	2.12	2.67	5.48	0.03	9.47	1.41	3.64	1.20
	01-Jul-21	24.8	7.15	6.42	0.280	3.14	4.03	5.98	0.00	6.26	1.62	3.62	1.49
	01-Nov-21	24.2	7.44	7.82	0.440	2.34	4.12	6.78	0.00	7.54	1.43	4.34	2.01
	mean*2	22.5	6.97	7.25	0.400	2.39	3.45	5.86	0.01	7.91	1.42	3.75	1.47

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	25-Mar-21	2.6	-	-	-	-
	30-Jun-21	2.9	-	-	-	-
	17-Sep-21	0.8	-	-	-	-
	22-Dec-21	1.4	-	<0.05*1	0.000	4.0
	mean	1.9	-	<0.05*1	0.000	4.0
Chongqing -Simianshan Lake*3	15-Mar-21	2.5	-	-	-	-
	30-Jun-21	2.3	-	-	-	-
	15-Sep-21	2.6	-	-	-	-
	30-Nov-21	2.8	-	<0.05*1	0.000	<10
	mean	2.6	-	<0.05*1	0.000	<10
Xiamen -Xiaoping Dam	02-Feb-21	0.7	-	-	0.032	3.0
	10-May-21	0.9	-	-	0.023	1.5
	17-Aug-21	1.2	-	-	0.031	1.5
	22-Oct-21	0.9	-	0.018	0.019	0.8
	mean	0.9	-	0.018	0.026	1.7
Xi'an -Jiwozi River	23-Mar-21	-	-	-	-	-
	29-Apr-21	-	-	-	-	-
	02-Aug-21	-	-	-	-	-
	11-Nov-21	-	-	<0.051*1	<0.016*1	<5*1
	mean	-	-	<0.051*1	<0.016*1	<5*1
Zhuhai -Zhuxiandong Stream	04-Jan-21	-	-	-	-	-
	06-Apr-21	1.0	-	0.010	0.004	6.8
	01-Jul-21	-	-	-	-	-
	01-Nov-21	-	-	-	-	-
	mean	1.0	-	0.010	0.004	6.8

note

- : No analysis or measurement.

*1: Less than determination limit.

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

*3: Simianshan lake was not listed in National Monitoring Plan 2021, but is shown in this table since their results were submitted.

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			
						Alcal	R2	Judge
Chongqing -Jinyunshan Lake	25-Mar-21	888	904	0.9	O	11.3	2.2	O
	30-Jun-21	857	752	-6.5	O	10.6	5.0	O
	17-Sep-21	668	683	1.1	O	9.2	4.0	O
	22-Dec-21	771	766	-0.3	O	10.0	4.2	O
Chongqing -Simianshan Lake	15-Mar-21	372	416	5.5	O	5.0	4.0	O
	30-Jun-21	359	315	-6.6	O	4.2	2.6	O
	15-Sep-21	350	309	-6.2	O	4.1	5.4	O
	30-Nov-21	317	368	7.4	O	4.3	-0.8	O
Xiamen -Xiaoping	2-Feb-21	429	475	5.1	O	5.1	-4.8	O
	10-May-21	485	556	6.8	O	5.9	-4.2	O
	17-Aug-21	419	458	4.4	O	5.0	-5.2	O
	22-Oct-21	453	509	5.9	O	5.5	-2.3	O
Xi'an -Jiwozi	23-Mar-21	521	563	3.9	O	6.4	4.5	O
	29-Apr-21	525	597	6.5	O	6.5	6.1	O
	2-Aug-21	470	513	4.4	O	5.6	3.4	O
	11-Nov-21	470	493	2.3	O	5.6	4.7	O
Zhuhai -Zhuxiandong Stream	4-Jan-21	655	661	0.4	O	7.2	0.9	O
	6-Apr-21	702	730	2.0	O	7.9	1.2	O
	1-Jul-21	579	617	3.2	O	6.9	3.8	O
	1-Nov-21	746	746	0.0	O	8.4	3.4	O

Table 6.4.2 Result of Inland Aquatic Environment Monitoring

Duration: 2021.4-2022.1
Country: Japan
Lake/Stream: Ijira Lake

Mandatory Parameters : 4times/year														
	Sampling Date	Temp. (degreeC)	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)
Center (Surface)	15-Apr-21	16.0	7.16	3.42	0.145	0.137	4.41	0.75	1.80	<0.01*1	1.79	0.22	2.28	1.14
	14-Jul-21	23.9	7.28	3.28	0.140	0.147	4.12	0.50	1.55	<0.01*1	1.80	0.24	2.20	1.12
	06-Oct-21	22.3	7.35	3.43	0.173	0.146	3.97	0.46	1.58	<0.01*1	1.80	0.26	2.45	1.13
	12-Jan-22	6.5	7.01	3.90	0.181	0.169	4.79	0.68	1.89	<0.01*1	1.94	0.23	3.15	1.08
	mean*2	17.2	7.18	3.51	0.160	0.149	4.32	0.60	1.70	<0.01*1	1.83	0.24	2.52	1.12
Center (near bottom)	15-Apr-21	15.1	7.05	3.51	0.147	0.135	4.63	0.92	1.80	<0.01*1	1.79	0.23	2.37	1.17
	14-Jul-21	17.9	6.43	3.56	0.162	0.177	3.70	0.67	1.58	0.06	1.76	0.27	2.50	1.25
	06-Oct-21	19.2	6.47	3.71	0.197	0.174	3.64	0.74	1.56	0.19	1.78	0.30	2.61	1.24
	12-Jan-22	5.9	7.05	3.93	0.182	0.175	4.75	0.68	1.92	<0.01*1	1.95	0.30	3.14	1.07
	mean*2	14.5	6.65	3.67	0.172	0.165	4.18	0.75	1.71	0.06	1.82	0.27	2.65	1.18
Kamagatani River (Input)	15-Apr-21	12.7	7.07	3.79	0.138	0.129	5.66	1.27	1.79	<0.01*1	1.90	0.23	2.46	1.35
	14-Jul-21	20.2	7.07	3.51	0.129	0.135	4.73	0.98	1.66	<0.01*1	1.85	0.26	2.28	1.23
	06-Oct-21	20.0	7.13	3.70	0.151	0.139	5.15	0.87	1.73	<0.01*1	1.94	0.27	2.45	1.28
	12-Jan-22	6.3	6.99	3.32	0.109	0.099	4.67	1.45	2.01	<0.01*1	2.11	0.19	1.67	1.16
	mean*2	14.8	7.06	3.58	0.132	0.126	5.05	1.14	1.80	<0.01*1	1.95	0.24	2.21	1.25
Kobora River (Input)	15-Apr-21	11.6	7.07	3.36	0.133	0.123	4.48	0.98	1.89	<0.01*1	2.16	0.23	1.67	1.23
	14-Jul-21	21.6	6.89	3.06	0.114	0.122	3.76	0.59	1.71	<0.01*1	2.07	0.25	1.50	1.08
	06-Oct-21	19.3	7.03	3.28	0.138	0.126	4.14	0.69	1.81	<0.01*1	2.21	0.26	1.63	1.17
	12-Jan-22	6.5	7.14	4.09	0.125	0.117	6.74	1.63	1.97	<0.01*1	1.95	0.21	2.72	1.40
	mean*2	17.5	6.99	3.23	0.128	0.123	4.13	0.75	1.80	<0.01*1	2.15	0.25	1.60	1.16

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 (ug/L)
Center (Surface)	15-Apr-21	1.8	16	clear, colorless	<0.02*1	<0.01*1	0.5	4.2
	14-Jul-21	3.3	15	clear, colorless	-	<0.01*1	-	1.4
	06-Oct-21	2.5	15	clear, colorless	-	<0.01*1	-	3.6
	12-Jan-22	1.9	16	clear, colorless	-	<0.01*1	-	8.4
	mean	2.4	-	-	<0.02*1	<0.01*1	0.5	4.4
Center (near bottom)	15-Apr-21	-	-	clear, colorless	<0.02*1	<0.01*1	0.4	4.1
	14-Jul-21	-	-	clear, colorless	-	<0.01*1	-	5.5
	06-Oct-21	-	-	clear, colorless	-	0.02	-	2.0
	12-Jan-22	-	-	clear, colorless	-	<0.01*1	-	7.8
	mean	-	-	-	<0.02*1	<0.01*1	0.4	4.8
Kamagatani River (Input)	15-Apr-21	-	-	clear, colorless	0.03	<0.01*1	0.3	-
	14-Jul-21	-	-	clear, colorless	-	<0.01*1	-	-
	06-Oct-21	-	-	clear, colorless	-	<0.01*1	-	-
	12-Jan-22	-	-	clear, colorless	-	<0.01*1	-	-
	mean	-	-	-	0.03	<0.01*1	0.3	-
Kobora River (Input)	15-Apr-21	-	-	clear, colorless	<0.02*1	<0.01*1	0.3	-
	14-Jul-21	-	-	clear, colorless	-	<0.01*1	-	-
	06-Oct-21	-	-	clear, colorless	-	<0.01*1	-	-
	12-Jan-22	-	-	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 2249.5 mm/year in 2021 (Gifu pref. Meteorological observatory).

		Anion	Cation	R1	Judge	Acale	R2	Judge
Center (Surface)	15-Apr-21	299	290	-1.5	O	3.5	0.7	O
	14-Jul-21	277	286	1.5	O	3.3	0.1	O
	06-Oct-21	308	300	-1.2	O	3.5	0.9	O
	12-Jan-22	345	336	-1.2	O	4.0	0.9	O
Center (near bottom)	15-Apr-21	309	298	-1.7	O	3.6	1.0	O
	14-Jul-21	294	314	3.2	O	3.5	-0.7	O
	06-Oct-21	329	327	-0.3	O	3.8	0.7	O
	12-Jan-22	346	337	-1.3	O	4.0	0.7	O
Kamagatani River (Input)	15-Apr-21	327	322	-0.8	O	3.9	1.2	O
	14-Jul-21	290	301	1.9	O	3.5	0.0	O
	06-Oct-21	320	318	-0.3	O	3.8	0.9	O
	12-Jan-22	286	275	-2.0	O	3.4	0.7	O
Kobora River (Input)	15-Apr-21	295	284	-2.0	O	3.4	0.7	O
	14-Jul-21	249	259	2.0	O	3.0	-1.2	O
	06-Oct-21	286	280	-1.0	O	3.3	0.3	O
	12-Jan-22	346	341	-0.8	O	4.2	1.0	O

Table 6.4.3 Result of Inland Aquatic Environment Monitoring

Duration: 2021.7-2021.10
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	06-Jul-21	13.6	6.91	1.72	0.127	0.109	1.01	0.74	0.31	<0.02*1	1.03	0.26	1.85	0.18
	26-Aug-21	15.0	6.84	1.53	0.105	0.091	0.91	0.73	0.31	<0.02*1	0.93	0.28	1.64	0.16
	11-Oct-21	10.1	7.10	1.92	0.135	0.121	1.09	0.93	0.38	<0.02*1	1.10	0.28	2.16	0.19
	mean*2	12.9	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
Oike (center) near bottom	06-Jul-21	7.2	7.01	2.14	0.152	0.136	1.13	1.00	0.37	<0.02*1	1.27	0.30	2.33	0.23
	26-Aug-21	4.9	6.81	2.04	0.141	0.127	1.07	1.15	0.36	<0.02*1	1.22	0.30	2.27	0.21
	11-Oct-21	6.2	6.87	2.03	0.145	0.132	1.10	1.01	0.38	<0.02*1	1.22	0.29	2.30	0.21
	mean*2	6.1	6.89	2.07	0.146	0.131	1.10	1.05	0.37	<0.02*1	1.24	0.30	2.30	0.22
Meike (center) surface	06-Jul-21	15.8	5.89	0.58	0.027	0.011	0.76	0.13	0.31	<0.02*1	0.29	0.17	0.31	0.08
	26-Aug-21	17.6	5.84	0.60	0.030	0.015	0.73	0.18	0.26	<0.02*1	0.33	0.20	0.39	0.08
	11-Oct-21	14.6	6.15	0.59	0.033	0.019	0.78	0.00	0.29	<0.02*1	0.38	0.21	0.41	0.08
	mean*2	16.0	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
Meike (center) near bottom	06-Jul-21	15.8	5.69	0.59	0.028	0.010	0.77	0.15	0.30	<0.02*1	0.29	0.18	0.33	0.08
	26-Aug-21	13.9	6.19	0.76	0.041	0.025	0.85	0.36	0.28	<0.02*1	0.47	0.21	0.59	0.09
	11-Oct-21	14.3	6.18	0.60	0.035	0.019	0.78	0.00	0.29	<0.02*1	0.38	0.21	0.42	0.08
	mean*2	14.7	5.95	0.65	0.035	0.018	0.80	0.17	0.29	<0.02*1	0.38	0.20	0.44	0.08

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	06-Jul-21	8.6	bluish green	clear, colorless	<0.01*1	<0.01*1	1.0	1.6	0.019	0.4
	26-Aug-21	9.5	green	clear, colorless	<0.01*1	<0.01*1	1.5	2.6	0.039	0.7
	11-Oct-21	9.2	bluish green	clear, colorless	<0.01*1	<0.01*1	1.0	1.8	0.021	0.7
	mean	9.1	-	-	<0.01*1	<0.01*1	1.2	2.0	0.026	0.6
Oike (center) near bottom	06-Jul-21	-	-	clear, colorless	<0.01*1	<0.01*1	1.3	2.0	0.019	0.7
	26-Aug-21	-	-	clear, colorless	<0.01*1	<0.01*1	1.5	2.5	0.034	0.7
	11-Oct-21	-	-	clear, colorless	<0.01*1	<0.01*1	1.1	2.0	0.025	2.7
	mean	-	-	-	<0.01*1	<0.01*1	1.3	2.1	0.026	1.3
Meike (center) surface	06-Jul-21	4.0	bluish green	clear, colorless	<0.01*1	<0.01*1	1.6	3.0	0.058	0.9
	26-Aug-21	4.5	green	clear, colorless	<0.01*1	<0.01*1	2.2	3.7	0.101	1.6
	11-Oct-21	4.2	bluish green	clear, colorless	<0.01*1	<0.01*1	1.6	2.7	0.041	1.3
	mean	4.2	-	-	<0.01*1	<0.01*1	1.8	3.1	0.067	1.3
Meike (center) near bottom	06-Jul-21	-	-	clear, colorless	<0.01*1	<0.01*1	2.4	3.8	0.093	0.9
	26-Aug-21	-	-	clear, colorless	<0.01*1	<0.01*1	2.0	3.4	0.088	1.8
	11-Oct-21	-	-	clear, colorless	<0.01*1	<0.01*1	1.6	2.9	0.041	1.6
	mean	-	-	-	<0.01*1	<0.01*1	2.0	3.4	0.074	1.4

- : 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 1482.0 mm/year in 2021 (Hara village Meteorological observatory).

		Anion	Cation	R1	Judge			Acalc	R2	Judge
Oike (center) surface	06-Jul-21	168	158	-3.0	O			1.8	1.9	O
	26-Aug-21	144	143	-0.4	O			1.6	1.7	O
	11-Oct-21	183	179	-1.2	O			2.0	2.0	O
Oike (center) near bottom	06-Jul-21	202	198	-1.0	O			2.2	1.3	O
	26-Aug-21	192	191	-0.1	O			2.1	1.8	O
	11-Oct-21	195	192	-0.7	O			2.1	2.3	O
Meike (center) surface	06-Jul-21	53	41	-13.8	O			0.6	1.9	O
	26-Aug-21	55	47	-8.1	×			0.6	3.2	O
	11-Oct-21	57	49	-7.4	O			0.6	4.6	O
Meike (center) near bottom	06-Jul-21	54	43	-11.9	O			0.6	3.7	O
	26-Aug-21	72	63	-6.7	O			0.8	3.1	O
	11-Oct-21	59	50	-8.8	×			0.7	4.2	O

Table 6.4.4 Result of Inland Aquatic Environment Monitoring

Duration: 2021.5-2021.10

Country: Mongolia

Lake/Stream: Terelj River

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)
Terelj River	19-May-21	25.0	6.60	3.13	0.216	-	0.31	-	0.020	1.10	0.66	4.90	0.59
	23-Jun-21	25.0	6.32	3.98	0.246	2.10	0.35	1.60	0.010	1.44	0.48	5.97	0.70
	21-Jul-21	25.0	6.59	4.54	0.374	1.20	0.29	2.20	0.010	1.72	0.50	6.75	0.78
	11-Aug-21	25.0	6.50	4.53	0.394	0.90	0.16	2.20	0.010	1.69	0.50	6.79	0.86
	6-Sep-21	25.0	6.19	4.11	0.354	1.30	0.32	1.60	0.020	1.53	0.47	6.07	0.77
	6-Oct-21	25.0	6.23	4.45	0.335	0.70	0.30	1.90	0.020	1.69	0.45	6.89	0.88
	mean*1	25.0	6.37	4.12	0.320	1.24	0.29	1.90	0.015	1.53	0.51	6.23	0.76

Mandatory Parameters : Once/year			
Site	Sampling Date	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)
Terelj River	19-May-21	-	-
	23-Jun-21	-	-
	21-Jul-21	-	-
	11-Aug-21	-	-
	6-Sep-21	-	-
	6-Oct-21	-	-
	mean	-	-

note

- : No analysis or measurement.

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

		Anion	Cation	R1	Judge			
Terelj River	19-May-21	-	359	-	-	Acalc	R2	Judge
	23-Jun-21	341	431	11.8	×	4.3	4.4	O
	21-Jul-21	466	489	2.5	O	5.2	6.9	O
	11-Aug-21	477	497	2.0	O	5.3	7.6	O
	6-Sep-21	431	447	1.7	O	4.8	7.5	O
	6-Oct-21	408	503	10.4	×	5.0	5.6	O

Table 6.4.5 Result of Inland Aquatic Environment Monitoring

Duration: 2021.2-2021.11

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	24-Feb-21	25.4	7.41	17.75	1.960	0.79	0.68	3.50	0.19	8.02	4.67	16.70	8.25
	03-Jun-21	30.1	8.95	18.07	1.730	0.90	0.089	3.45	*1	11.91	3.34	16.33	6.66
	23-Sep-21	29.1	8.62	16.95	1.760	1.13	0.037	3.01	*1	2.17	3.99	14.46	7.98
	21-Oct-21	28.6	9.11	16.64	1.750	1.36	0.086	3.35	0.056	2.80	4.34	15.10	7.67
	25-Nov-21	27.9	7.99	17.53	1.904	1.19	0.13	0.91	0.003	1.33	4.14	16.04	9.55
	mean*2	28.2	7.97	17.39	1.821	1.07	0.20	2.84	0.067	5.25	4.10	15.73	8.02
Ambulalakaw Lake	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	mean	-	-	-	-	-	-	-	-	-	-	-	-

Mandatory Parameters: Once/year							Optional Parameters	
Site	Sampling Date	Transparency (m)	PO ₄ ^P (mg/L)	NO ₂ ⁻ (mg/L)	DO (mg/L)	Chl-a (µg/L)	COD (mg/L)	
Pandin Lake	24-Feb-21	-	0.25	*1	-	5.66	-	
	3-Jun-21	-	*1	*1	-	7.09	-	
	23-Sep-21	-	*1	*1	-	1.66	8.31	
	21-Oct-21	-	*1	0.24	-	2.81	7.13	
	25-Nov-21	-	*1	*1	-	0.20	0.00	
	mean	-	0.049	0.047	-	3.48	5.15	
Ambulalakaw Lake	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	mean	-	-	-	-	-	-	

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	Acalc	R2	Judge
Pandin Lake	24-Feb-21	2094	1990	-2.5	O	21.0	8.5	O
	03-Jun-21	1847	1966	3.1	O	19.6	4.1	O
	23-Sep-21	1869	1574	-8.6	×	17.7	2.2	O
	21-Oct-21	1879	1620	-7.4	O	18.1	4.2	O
	25-Nov-21	1956	1750	-5.6	O	18.9	3.8	O
Ambulalakaw Lake	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-

Table 6.4.6 Result of Inland Aquatic Environment Monitoring

Duration: 2021.2-2021.11

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	19-Feb-21	0.2	6.82	5.04	0.124	12.50	0.77	0.21	0.02	1.30	0.69	5.22	0.98
	12-May-21	5.6	6.68	3.85	0.158	7.75	0.87	0.15	0.02	0.91	0.60	4.79	0.72
	9-Jul-21	11.2	7.06	4.05	0.086	10.28	0.45	0.11	0.00	0.78	0.63	3.95	0.80
	11-Oct-21	4.4	6.70	4.89	0.127	12.78	0.60	0.16	0.01	1.01	0.70	5.42	0.85
	mean*1	5.3	6.79	4.46	0.124	10.83	0.67	0.16	0.01	1.00	0.66	4.84	0.84
Komarovka River	8-Feb-21	0.1	7.61	8.51	0.400	13.37	1.03	3.35	0.10	4.37	0.88	9.70	2.77
	13-Apr-21	4.0	8.10	7.13	0.295	13.45	0.97	3.38	0.05	3.55	1.08	8.48	1.33
	14-Jun-21	12.0	7.95	8.47	0.370	14.13	1.25	3.33	0.07	4.18	1.38	9.20	2.70
	13-Sep-21	19.8	8.38	21.74	1.313	25.17	0.99	8.77	0.27	12.30	2.30	25.67	7.13
	8-Nov-21	5.3	7.85	10.72	0.390	9.50	0.98	12.38	0.06	6.30	1.80	11.05	2.70
	mean*1	8.2	7.91	11.31	0.554	15.12	1.05	6.24	0.11	6.14	1.49	12.82	3.33

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	19-Feb-21	-	colorless	0.4	0.001	0.002	3.58	13.45	0.003	-
	12-May-21	-	colorless	1.9	0.002	0.001	2.78	12.09	0.005	-
	9-Jul-21	-	light yellow	1.6	0.002	0.004	2.36	9.68	0.007	-
	11-Oct-21	-	colorless	1.5	0.002	0.003	3.17	12.03	0.003	-
	mean	-	-	1.4	0.002	0.002	2.97	11.81	0.004	-
Komarovka River	8-Feb-21	-	colorless	2.3	0.007	0.009	5.65	14.05	-	0.08
	13-Apr-21	-	colorless	2.7	0.007	0.009	5.17	13.05	-	0.47
	14-Jun-21	-	colorless	4.5	0.007	0.040	5.80	10.60	-	0.08
	13-Sep-21	-	colorless	4.5	0.007	0.006	4.88	7.61	-	0.42
	8-Nov-21	-	colorless	5.0	0.003	0.123	5.04	10.11	-	0.38
	mean	-	-	3.8	0.006	0.037	5.31	11.08	-	0.28

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	19-Feb-21	402	417	1.8	O	Acalc	R2	Judge
	12-May-21	338	354	2.4	O	5.18	1.4	O
	9-Jul-21	311	313	0.4	O	4.20	4.4	O
	11-Oct-21	407	403	-0.6	O	3.99	-0.7	O
Komarovka River	8-Feb-21	790	930	8.1	×	5.15	2.6	O
	13-Apr-21	687	718	2.2	O	10.1	8.6	O
	14-Jun-21	780	903	7.3	O	8.5	8.8	O
	13-Sep-21	2101	2476	8.2	×	10.0	8.3	O
	8-Nov-21	957	1097	6.8	O	26.1	9.0	O
						12.3	7.0	O

Table 6.4.7 Result of Inland Aquatic Environment Monitoring

Duration: 2021.2-2021.11
 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)	18-Feb-21	28.5	8.50	13.38	1.190	1.49	0.10	1.42	0.01	1.39	1.03	20.10	3.87
	25-Nov-21	29.9	7.65	7.67	1.145	1.30	0.10	1.15	0.01	1.23	1.19	17.35	3.57
	mean*1	29.2	7.89	10.53	1.168	1.39	0.10	1.28	0.01	1.31	1.11	18.73	3.72
Station2 (Ban Pang Pueng)	18-Feb-21	27.5	8.80	12.67	1.145	1.77	0.10	2.11	0.01	1.43	1.06	20.15	3.36
	25-Nov-21	28.7	7.86	12.36	1.090	2.16	0.10	1.93	0.01	1.55	1.16	17.20	3.05
	mean*1	28.1	8.11	12.52	1.118	1.96	0.10	2.02	0.01	1.49	1.11	18.68	3.20

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)	18-Feb-21	3.2	light green	0.01	-	-
	25-Nov-21	3.5	light green	0.01	-	-
	mean	3.4	-	0.01	-	-
Station2 (Ban Pang Pueng)	18-Feb-21	3.5	light green	0.01	-	-
	25-Nov-21	3.0	light green	0.01	-	-
	mean	3.3	-	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)	18-Feb-21	1263	1408	5.4	O	14.1	2.5	O
	25-Nov-21	1206	1244	1.5	O	12.8	25.1	×
Station2 (Ban Pang Pueng)	18-Feb-21	1243	1371	4.9	O	13.9	4.5	O
	25-Nov-21	1191	1206	0.6	O	12.7	1.2	O

Table 6.4.8 Result of Inland Aquatic Environment Monitoring

Duration: 2021.3-2021.12
 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-21	22.5	7.64	17.10	1.410	3.89	1.43	2.12	0.16	2.89	1.77	23.77	2.32
	15-Jun-21	32.1	7.67	16.40	1.330	3.54	1.08	2.54	0.21	2.79	1.43	22.32	2.76
	15-Sep-21	28.4	7.73	17.60	1.460	4.34	1.24	2.56	0.35	3.86	2.32	22.89	2.76
	15-Dec-21	23.3	7.71	18.30	1.420	4.98	1.65	3.79	0.39	3.56	1.76	24.65	2.78
	mean*1	26.6	7.69	17.35	1.405	4.19	1.35	2.75	0.28	3.28	1.82	23.41	2.66

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-21	1.2	-	0.022	0.078	0.023	4.3
	15-Jun-21	1.2	-	0.027	0.065	0.019	3.8
	15-Sep-21	1.2	-	0.021	0.083	0.026	4.9
	15-Dec-21	1.2	14	0.029	0.079	0.021	4.6
	mean	1.2	-	0.025	0.076	0.022	4.4

note

- : No analysis or measurement.

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

		Anion	Cation	R1	Judge			
Hoa Binh Reservoir	15-Mar-21	1577	1557	-0.6	O	Acalc	R2	Judge
	15-Jun-21	1495	1510	0.5	O	16.7	-1.2	O
	15-Sep-21	1646	1616	-0.9	O	16.0	-1.1	O
	15-Dec-21	1660	1680	0.6	O	17.4	-0.6	O
						18.0	-0.8	O

Table 6.4.9 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	6.27	9.52	0.129	-	23.36	8.47	1.58	0.06	1.96	1.61	8.49	2.70
	Chongqing	Simianshan Lake*8	6.55	4.16	0.127	-	8.98	1.66	0.33	0.02	0.54	0.47	5.40	0.55
	Xiamen	Xiaoping Dam	7.43	5.81	0.294	-	2.08	2.43	2.47	0.08	4.22	2.71	3.79	0.65
	Xi'an	Jiwozi River	6.74	5.50	0.295	-	5.86	3.71	0.70	0.10	1.41	0.65	7.93	0.76
	Zhuhai	Zhuxiandong Stream	6.97	7.25	0.400	-	2.39	3.45	5.86	0.01	7.91	1.42	3.75	1.47
Indonesia	Bandung	Patengang Lake	-	-	-	-	-	-	-	-	-	-	-	-
	Sukabumi, West Java	Gunung Lake	-	-	-	-	-	-	-	-	-	-	-	-
Japan	Gifu pref.	Ijira Lake (Center, surface)	7.18	3.51	0.160	0.149	4.32	0.60	1.70	<0.01*1	1.83	0.24	2.52	1.12
	Nagano pref.	Futago-ike Lake(Oike)*3 (Center, surface)	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
		Futago-ike Lake(Meike)*3 (Center, surface)	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
Lao PDR	Vientiane province	Nam Houm Lake	-	-	-	-	-	-	-	-	-	-	-	-
Malaysia	-	Baru River	-	-	-	-	-	-	-	-	-	-	-	-
	-	Kuala Tahan	-	-	-	-	-	-	-	-	-	-	-	-
Mongolia	Terelj	Terelj River*6	6.37	4.12	0.320	-	1.24	0.29	1.90	0.02	1.53	0.51	6.23	0.76
Philippines	San Pablo City	Pandin Lake*5	7.97	17.39	1.821	-	1.07	0.20	2.84	0.07	5.25	4.10	15.73	8.02
	Benguet	Ambulalakaw Lake	-	-	-	-	-	-	-	-	-	-	-	-
Russia	Southern Baikal	Pereemnya River	6.79	4.46	0.124	-	10.83	0.67	0.16	0.01	1.00	0.66	4.84	0.84
	Primorskaya	Komarovka River*5	7.91	11.31	0.554	-	15.12	1.05	6.24	0.11	6.14	1.49	12.82	3.33
Thailand	Kanchanaburi Province	Vajiralongkom Dam*2 (Ban Pong Chang)	7.89	10.53	1.168	-	1.39	0.10	1.28	0.01	1.31	1.11	18.73	3.72
		Vajiralongkom Dam*2 (Ban Pang Pueng)	8.11	12.52	1.118	-	1.96	0.10	2.02	0.01	1.49	1.11	18.68	3.20
Vietnam	Hoa Binh Province	Hoa Binh Reservoir	7.69	17.35	1.405	-	4.19	1.35	2.75	0.28	3.28	1.82	23.41	2.66

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	1.9*4	<0.05*1	0.000	-	4.0
	Chongqing	Simianshan Lake*8	2.55*4	<0.05*1	0.000	-	<10*1
	Xiamen	Xiaoping Dam*7	0.9*4	0.018	0.026	-	1.7
	Xi'an	Jiwozi River	-	<0.051*1	<0.016*1	-	<5*1
	Zhuhai	Zhuxiandong Stream	1.0	0.020	0.004	-	1.7
Indonesia	Bandung	Patengang Lake	-	-	-	-	-
	Sukabumi, West Java	Gunung Lake	-	-	-	-	-
Japan	Gifu pref.	Ijira Lake*7 (Center, surface)	2.4*4	<0.02*1	<0.01*1	0.5	-
	Nagano pref.	Futago Lake(Oike)*3 (Center, surface)	9.1	<0.01*1	<0.01*1	1.2	2.0
		Futago Lake(Meike)*3 (Center, surface)	4.2	<0.01*1	<0.01*1	1.8	3.1
Lao PDR	Vientiane province	Nam Houm Lake	-	-	-	-	-
Malaysia	-	Baru River	-	-	-	-	-
	-	Kuala Tahan	-	-	-	-	-
Mongolia	Terelj	Terelj River	-	-	-	-	-
Philippines	San Pablo City	Pandin Lake*5	-	0.049	0.047	-	5.1
	Benguet	Ambulalakaw Lake	-	-	-	-	-
Russia	Southern Baikal	Pereemnya River*4	-	0.002	0.002	-	1.4
	Primorskaya	Komarovka River*5	-	0.037	0.006	-	3.8
Thailand	Kanchanaburi Province	Vajiralongkorn Dam*2 (Ban Pong Chang)	3.4	0.010	-	-	-
		Vajiralongkorn Dam*2 (Ban Pang Pueng)	3.3	0.010	-	-	-
Vietnam	Hoa Binh Province	Hoa Binh Reservoir*4	1.2	0.076	0.022	-	4.4

note

- : No analysis or measurement.

*1: Less than determination/detection limit.

*2: Surveyed twice a year.

*3: Surveyed 3 times a year.

*4: Surveyed 4 times a year.

*5: Surveyed 5 times a year.

*6: Surveyed 6 times a year.

*7: NO₂ was surveyed 4 times a year.

*8: Simianshan lake was not listed in National Monitoring Plan 2021, but is shown in this table since their results were submitted.

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 m/s/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	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 2021 at Jinyunshan Lake (China)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	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	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

Table 6.5.3 Annual mean values of each parameters from 2001 to 2021 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

Table 6.5.4 Annual mean values of each parameters from 2001 to 2021 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	-	-	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

Table 6.5.5 Annual mean values of each parameters from 2004 to 2021 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

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	-	-	-	-	-

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 2021 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	<0.06*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	-

Table 6.5.9 Annual mean values of each parameters from 2019 to 2021 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

Table 6.5.10 Annual mean values of each parameters from 2019 to 2021 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

Table 6.5.11 Annual mean values of each parameters from 2009 to 2019 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

Table 6.5.12 Annual mean values of each parameters from 2005 to 2015 at Semenyih Dam (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
2005	7.08	2.27	0.226	-	0.75	1.07	1.41	0.11	2.34	2.01	4.93	1.40	-	-	-	-	-
2006	7.24	3.03	0.688	-	5.04	0.87	7.03	0.29	14.55	16.83	14.39	2.70	-	-	-	-	-
2007	7.02	2.67	0.266	-	1.22	0.10	0.75	0.04	2.35	2.05	2.30	0.69	-	-	-	-	-
2008	6.94	1.53	0.265	-	1.73	0.18	0.83	0.06	2.46	2.08	2.54	0.66	-	-	-	-	-
2009	6.91	3.30	0.229	-	1.80	0.22	0.83	0.02	2.13	1.90	1.83	0.55	-	-	-	-	-
2010	6.92	2.77	0.225	-	2.40	0.05	0.81	0.02	2.18	2.00	2.43	0.65	-	<0.10*1	-	-	-
2011	6.99	2.69	0.270	-	2.85	0.54	0.96	0.05	2.15	2.01	2.53	0.60	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	6.63	2.96	0.230	-	2.98	0.25	0.77	0.06	2.12	1.94	2.55	0.61	-	<0.10*1	-	-	5.3
2014	7.06	3.63	0.234	-	3.16	0.42	0.78	0.15	2.18	2.07	3.24	0.68	-	<0.10*1	-	-	4.9
2015	6.99	3.20	0.243	-	1.32	0.14	1.61	0.03	3.70	1.60	2.21	0.64	-	<0.10*1	-	-	7.6

Table 6.5.13 Annual mean values of each parameters from 2007 to 2017 at Tembaling 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
2007	6.80	13.90	1.640	-	7.03	0.63	2.20	0.05	3.01	3.37	16.50	8.68	-	-	-	-	-
2008	7.07	18.62	1.850	-	8.10	0.75	1.20	0.01	5.83	0.40	22.00	10.40	-	-	-	-	-
2009	7.97	20.28	1.975	-	9.38	0.72	1.33	0.01	6.25	0.53	20.50	10.23	-	-	-	-	-
2010	8.11	21.81	2.070	-	9.94	0.59	1.55	0.03	6.99	0.81	18.38	15.98	-	<0.10*1	-	-	4.0
2011	8.18	17.43	1.626	-	7.23	1.19	1.35	0.01	4.99	0.40	16.32	7.50	-	<0.10*1	-	-	7.8
2012	8.06	17.82	1.796	-	6.11	0.29	1.18	0.01	4.71	0.25	19.37	9.20	-	<0.10*1	-	-	4.5
2013	8.05	19.16	1.905	-	5.50	0.38	1.20	0.04	5.73	0.38	20.35	10.67	-	<0.10*1	-	-	4.6
2014	7.82	20.77	1.996	-	7.79	0.47	1.02	0.04	6.39	0.57	21.51	11.03	-	<0.10*1	-	-	4.8
2015	8.02	23.37	2.210	-	11.33	0.54	2.33	0.03	9.37	0.64	24.03	12.06	-	<0.10*1	-	-	4.8
2016	7.77	18.17	1.587	-	9.26	0.55	3.73	0.06	7.77	1.73	17.78	8.50	-	<0.10*1	-	-	6.3
2017	7.97	17.07	1.525	-	7.39	0.95	2.27	0.00	7.44	0.51	16.05	7.91	-	<0.10*1	-	-	4.9

Table 6.5.14 Annual mean values of each parameters from 2002 to 2021 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	-	-	-	-	-

- : No analysis or measurement.

*1: Less than determination/detection limit.

Table 6.5.15 Annual mean values of each parameters from 2004 to 2021 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	-	5.15

Table 6.5.16 Annual mean values of each parameters from 2005 to 2016 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	5.72	30.33	0.275	-	23.14	14.75	9.27	0.13	6.54	0.33	32.58	2.84	-	-	-	-	-
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	-	-	-	-	-

Table 6.5.17 Annual mean values of each parameters from 2004 to 2021 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

Table 6.5.18 Annual mean values of each parameters from 2005 to 2021 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

- : No analysis or measurement.

*1: Less than determination/detection limit.

Table 6.5.19 Annual mean values of each parameters from 2002 to 2021 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	-	-	-

Table 6.5.20 Annual mean values of each parameters from 2002 to 2021 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	-	-	-

Table 6.5.21 Annual mean values of each parameters from 2001 to 2021 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

- : No analysis or measurement.

*1: Less than determination/detection limit.

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 the 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.

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 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: $\text{mol}_e \text{L}^{-1}$ (ex. $\mu\text{mol}_e \text{L}^{-1}$ or $\text{mmol}_e \text{L}^{-1}$)
- Ion flux (deposition, discharge or soil/vegetation flux): $\text{mol}_e \text{ha}^{-1}$ or $\text{mol}_e \text{m}^{-2}$
- 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 done 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 the experience on 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 and Thailand as the EANET joint research projects. Some countries may have an intention to start the 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) ^{*1} 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.

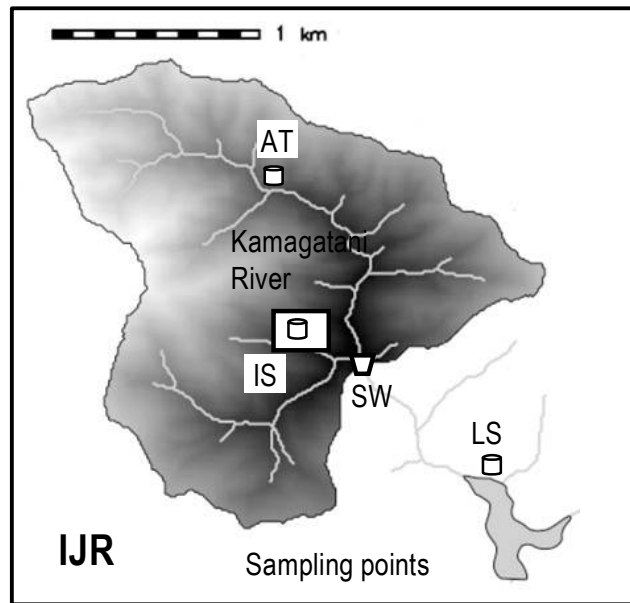


Figure 7.1 Catchment area and sampling design at the Lake Ijira catchment site

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.

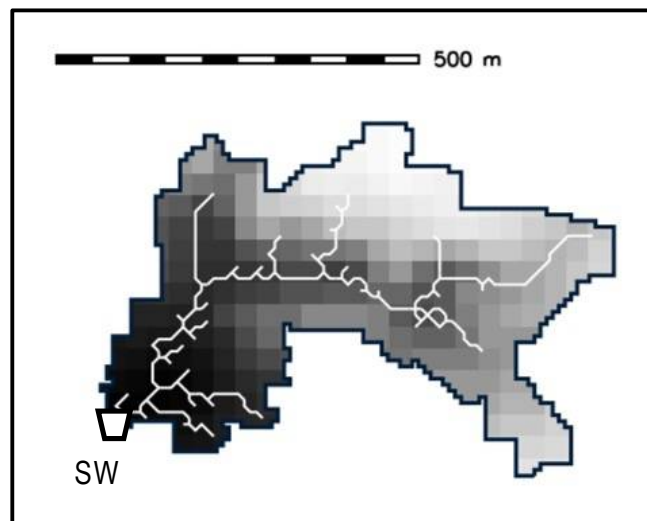


Figure 7.2 Catchment area and sampling design at the La Mesa Watershed site (Stream at Tower 1 Station)

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.

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 2021

Site	Items	Detailed items	Water year
Lake Ijira Catchment	Input ^{*1}	1. Precipitation amount (at 3 different slope positions)	2020-2021 ^{*2}
	Output	1. Water discharge 2. Stream water chemistry: biweekly 3. Chemical discharge	2020-2021 ^{*2}
La Mesa Watershed	Input ^{*1}	1. Precipitation amount (observed at PAGASA-Science Garden Station)	2021
	Output	1. Stream water chemistry: monthly	2021

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 2020 and/or 2021; ^{*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 2016 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

As for Lake Ijira catchment, recalculated chemical discharge data for the water year 2019-2020 are available in the appendix, because the equation to estimate water discharge was updated.

Table 7.6a Water balance in the catchment: Lake Ijira Catchment

Fluxes ^{*1}	Points	Water year ^{*2}
		2020-2021
Input by precipitation, mm y ⁻¹	Akatani (260 m)	4129
	Ijira monitoring site (140 m)	3964
	Lakeside (110 m)	3498
	Mean	3864
Output by the stream, mm y ⁻¹	Outlet of Kamagatani River	3320
Runoff rate, %		86

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
		2021
Input by precipitation, mm y ⁻¹	Science Garden	2333
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 2020-2021)

Collection date	alkalinity													Water level, m
	pH	EC	pH4.8	Gran's ANC	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ⁺⁺¹	H ⁺	
	mS m ⁻¹				μmol L ⁻¹									
2020/11/16	6.91	4.11	154	152	151	18.1	54.5	94	164	97	5.1	<3.0	0.12	0.25
2020/11/30	6.78	4.29	156	146	139	15.4	47.9	97	183	102	6.1	<3.0	0.17	0.26
2020/12/11	6.81	4.36	154	152	173	20.0	55.3	99	189	104	5.3	<3.0	0.15	0.26
2020/12/23	6.90	4.45	154	138	174	24.2	59.0	98	196	107	5.1	<3.0	0.13	0.26
2021/1/15	6.98	4.37	144	133	166	32.4	58.2	92	190	101	5.2	<3.0	0.10	0.35
2021/1/29	6.88	3.87	130	119	131	37.1	54.1	81	142	94	4.5	<3.0	0.13	0.39
2021/2/12	7.04	3.81	138	135	141	22.9	54.9	86	130	89	4.9	<3.0	0.09	0.35
2021/2/26	6.97	3.98	144	143	128	20.9	49.6	87	138	90	4.9	<3.0	0.11	0.35
2021/3/15	6.97	3.83	140	128	129	23.2	53.8	84	150	83	5.6	<3.0	0.11	0.34
2021/3/29	6.75	3.00	102	108	85	27.4	46.8	69	132	70	5.5	<3.0	0.18	0.45
2021/4/13	6.98	3.74	146	135	123	17.6	56.1	84	126	85	6.1	<3.0	0.10	0.29
2021/4/26	6.89	3.61	146	136	121	17.5	54.6	84	132	84	5.9	<3.0	0.13	0.29
2021/5/14	7.03	3.49	136	129	111	15.8	54.0	82	128	81	6.4	<3.0	0.09	0.29
2021/5/31	6.91	3.44	138	128	110	15.8	52.6	81	145	81	6.6	<3.0	0.12	0.32
2021/6/15	6.79	3.58	146	134	90	7.5	55.2	96	112	85	6.6	<3.0	0.16	0.27
2021/6/30	6.87	3.56	150	140	113	16.4	51.3	82	135	81	5.8	<3.0	0.13	0.31
2021/7/15	6.97	3.46	144	142	107	15.4	49.3	80	149	82	6.4	<3.0	0.11	0.33
2021/7/29	6.97	3.90	158	143	127	17.7	52.8	91	156	82	7.5	<3.0	0.11	0.27
2021/8/10	6.79	4.25	152	139	125	45.5	67.9	94	209	89	8.4	<3.0	0.16	0.28
2021/8/31	6.69	3.43	140	129	109	17.9	53.8	84	175	78	6.9	<3.0	0.20	0.32
2021/9/15	6.98	3.45	144	131	106	13.4	51.5	82	145	76	6.4	<3.0	0.11	0.32
2021/9/30	6.85	3.52	154	143	110	12.3	50.8	84	179	82	6.5	<3.0	0.14	0.31
2021/10/15	6.94	3.88	160	154	129	18.4	53.5	91	191	88	6.9	<3.0	0.12	0.29
2021/10/29	6.87	4.00	148	136	147	19.4	54.4	94	169	85	6.2	<3.0	0.14	0.28

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 2021)

Collection date	alkalinity												
	pH	EC	pH4.8	PO ₄ ³⁻	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ⁺⁺¹	H ⁺
	mS m ⁻¹			μmol L ⁻¹									
2021/1/20	7.78	19.0	2050	13.3	37.7	0.9	70.0	583	1048	613	54.5	0.0	0.02
2021/2/17	7.90	25.2	2620	0.0	35.6	7.5	66.6	679	1248	817	57.3	0.8	0.01
2021/3/26	7.86	23.1	2611	6.8	39.1	6.7	51.9	697	830	705	46.0	15.4	0.01
2021/4/21	7.67	28.0	2680	0.0	33.7	31.9	41.5	748	1482	652	56.8	12.6	0.02
2021/5/21	7.66	30.3	3060	16.6	46.2	5.8	66.4	783	1537	780	32.7	0.4	0.02
2021/6/16	7.62	26.4	2420	14.4	44.8	9.6	48.2	1053	1287	655	0.0	0.3	0.02
2021/7/22	7.74	19.5	1980	41.4	43.7	0.2	36.1	905	634	561	33.2	24.4	0.02
2021/9/1	7.97	19.8	2110	9.5	37.7	8.6	45.4	154	968	715	32.7	24.6	0.01
2021/9/23	8.01	21.9	2260	0.0	36.3	0.0	48.6	169	1108	766	37.9	17.9	0.01
2721/10/1	7.92	24.3	2703	0.0	34.5	13.5	50.6	180	1317	854	44.2	3.4	0.01
2021/11/17	7.62	23.9	2671	10.1	36.5	11.3	62.5	177	1143	839	49.4	3.7	0.02
2021/12/15	7.93	26.6	3067	0.0	54.7	0.0	62.4	255	773	888	41.4	15.0	0.01

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 7.8 Periodic chemical discharges from the stream: Lake Ijira Catchment (Water year 2020-2021)

Start date	End date	pH4.8	Gran's ANC	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ⁺	H ⁺	Al	TOC	SiO ₂	Periodic discharge,
kmol _c ha ⁻¹												mg L ⁻¹ kg-C ha ⁻¹ kg-SiO ₂ ha ⁻¹ mm				
2020/10/30	2020/11/16	0.07	0.07	0.06	0.01	0.02	0.04	0.06	0.04	0.002	ND	5.93E-05	ND	0.18	3.9	44
2020/11/16	2020/11/30	0.05	0.05	0.05	0.01	0.02	0.03	0.06	0.04	0.002	ND	5.10E-05	ND	0.13	3.1	35
2020/11/30	2020/12/11	0.05	0.04	0.05	0.01	0.02	0.03	0.05	0.03	0.002	ND	4.70E-05	ND	0.09	2.5	29
2020/12/11	2020/12/23	0.05	0.05	0.05	0.01	0.02	0.03	0.06	0.03	0.002	ND	4.41E-05	ND	0.09	2.6	31
2020/12/23	2021/1/15	0.10	0.09	0.12	0.02	0.04	0.07	0.13	0.07	0.004	ND	7.89E-05	ND	0.21	5.5	69
2021/1/15	2021/1/29	0.16	0.15	0.17	0.04	0.07	0.10	0.19	0.11	0.006	ND	1.34E-04	ND	0.45	9.1	116
2021/1/29	2021/2/12	0.21	0.20	0.21	0.05	0.08	0.13	0.21	0.14	0.007	ND	1.69E-04	ND	0.55	11.9	154
2021/2/12	2021/2/26	0.14	0.14	0.13	0.02	0.05	0.09	0.13	0.09	0.005	ND	9.86E-05	ND	0.32	7.8	99
2021/2/26	2021/3/15	0.21	0.20	0.19	0.03	0.08	0.13	0.21	0.13	0.008	ND	1.63E-04	ND	0.61	12.1	148
2021/3/15	2021/3/29	0.22	0.21	0.19	0.05	0.09	0.14	0.26	0.14	0.010	ND	2.63E-04	ND	0.89	14.2	181
2021/3/29	2021/4/13	0.10	0.09	0.08	0.02	0.04	0.06	0.10	0.06	0.004	ND	1.09E-04	ND	0.51	6.1	78
2021/4/13	2021/4/26	0.16	0.14	0.13	0.02	0.06	0.09	0.14	0.09	0.006	ND	1.22E-04	ND	0.65	9.1	106
2021/4/26	2021/5/14	0.44	0.41	0.36	0.05	0.17	0.26	0.40	0.26	0.019	ND	3.40E-04	ND	1.21	27.2	309
2021/5/14	2021/5/31	0.37	0.35	0.30	0.04	0.14	0.22	0.37	0.22	0.018	ND	2.84E-04	ND	1.34	24.1	270
2021/5/31	2021/6/15	0.23	0.22	0.16	0.02	0.09	0.14	0.21	0.14	0.011	ND	2.30E-04	ND	0.91	14.9	164
2021/6/15	2021/6/30	0.25	0.23	0.17	0.02	0.09	0.15	0.21	0.14	0.010	ND	2.46E-04	ND	0.99	15.6	170
2021/6/30	2021/7/15	0.20	0.19	0.15	0.02	0.07	0.11	0.19	0.11	0.008	ND	1.64E-04	ND	0.88	12.4	136
2021/7/15	2021/7/29	0.07	0.07	0.06	0.01	0.03	0.04	0.08	0.04	0.003	ND	5.41E-05	ND	0.31	4.6	49
2021/7/29	2021/8/10	0.05	0.05	0.04	0.01	0.02	0.03	0.06	0.03	0.003	ND	4.76E-05	ND	0.22	3.3	35
2021/8/10	2021/8/31	0.98	0.90	0.78	0.21	0.41	0.59	1.28	0.56	0.051	ND	1.20E-03	ND	4.11	61.9	668
2021/8/31	2021/9/15	0.22	0.20	0.16	0.02	0.08	0.13	0.24	0.12	0.010	ND	2.35E-04	ND	0.95	13.9	151
2021/9/15	2021/9/30	0.26	0.24	0.19	0.02	0.09	0.14	0.28	0.14	0.011	ND	2.16E-04	ND	1.18	15.7	173
2021/9/30	2021/10/15	0.09	0.08	0.07	0.01	0.03	0.05	0.11	0.05	0.004	ND	7.43E-05	ND	0.37	5.3	57
2021/10/15	2021/10/29	0.07	0.07	0.06	0.01	0.02	0.04	0.08	0.04	0.003	ND	5.91E-05	ND	0.22	4.1	45

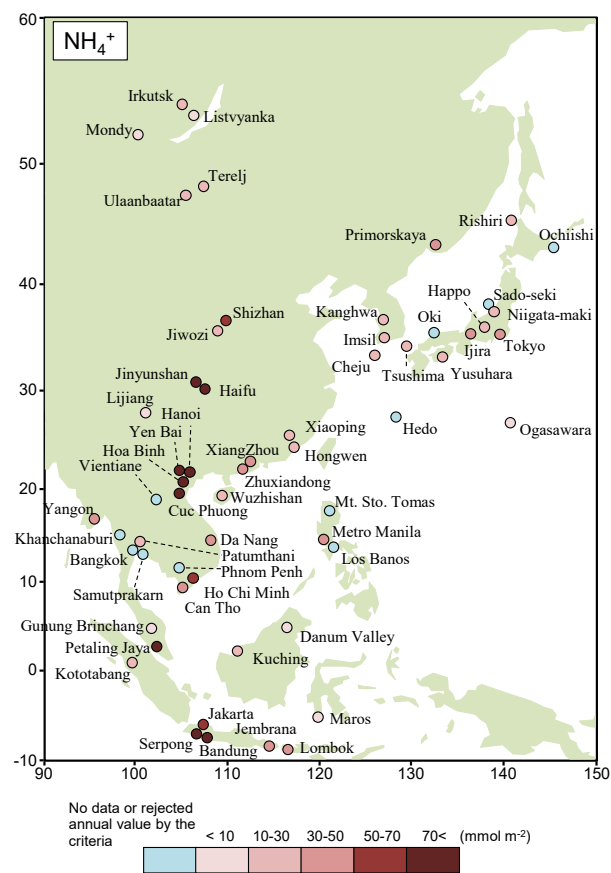
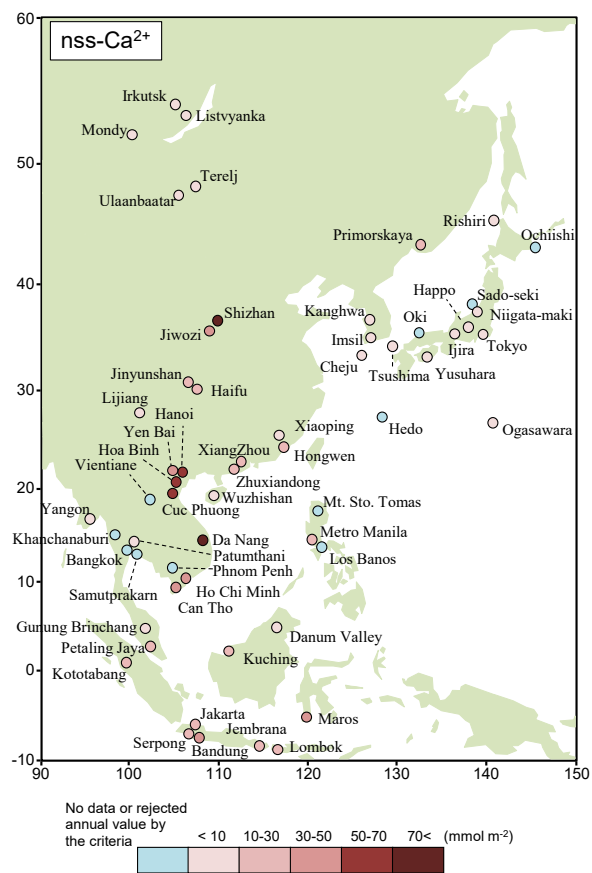
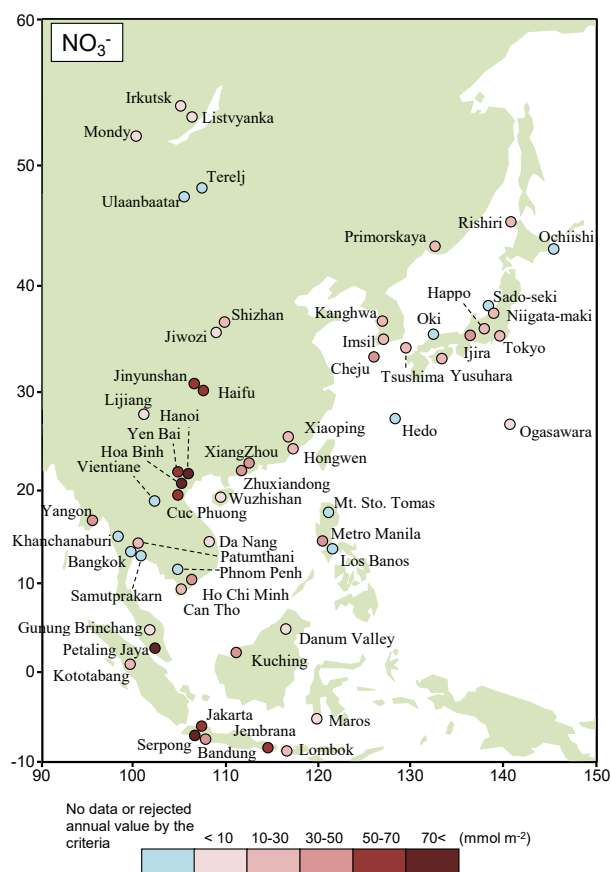
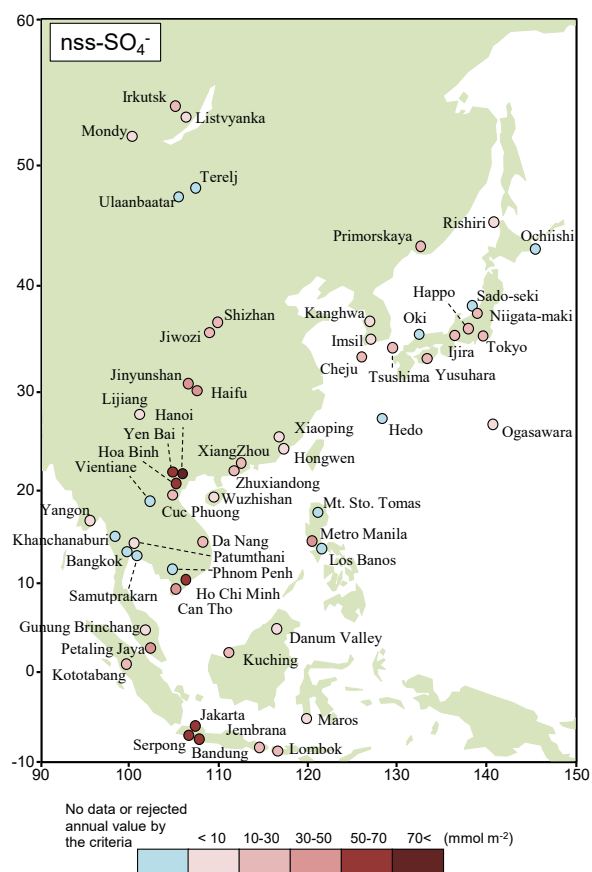
Note. Periodic chemical discharges were calculated based on the mean concentrations and the water discharge for the respective sampling intervals.

Table 7.9 Annual chemical discharges from the stream: Lake Ijira Catchment (Water year 2020-2021)

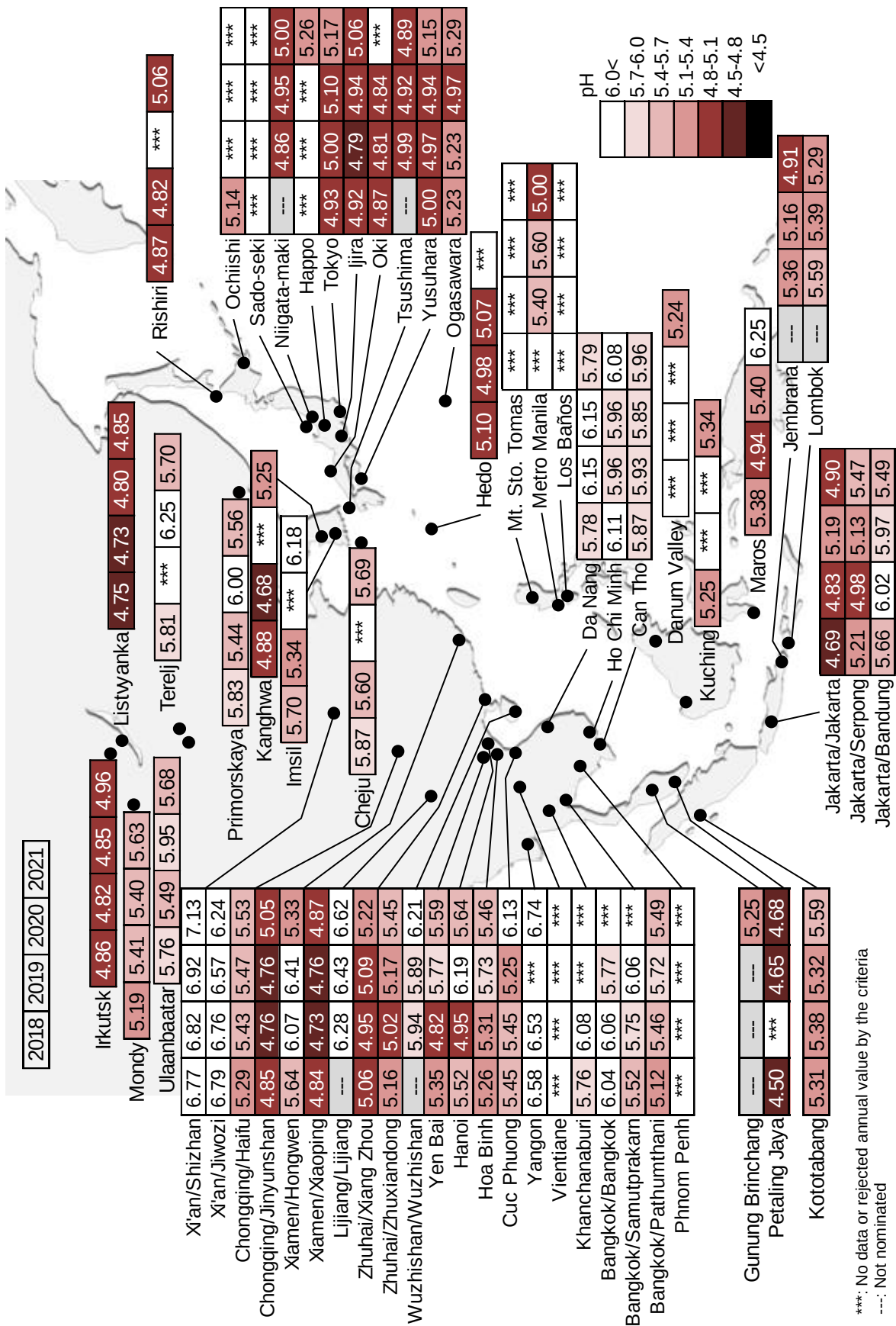
Water year	alkalinity											Al	TOC	SiO ₂
	pH4.8	Gran's ANC	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ⁺	H ⁺			
	kmol _c ha ⁻¹													
2020 - 2021	4.7	4.4	3.9	0.7	1.8	2.8	5.1	2.8	0.2	ND	0.0	mg L ⁻¹	kg-C ha ⁻¹	kg-SiO ₂ ha ⁻¹
												ND	17.4	291

Appendix 1

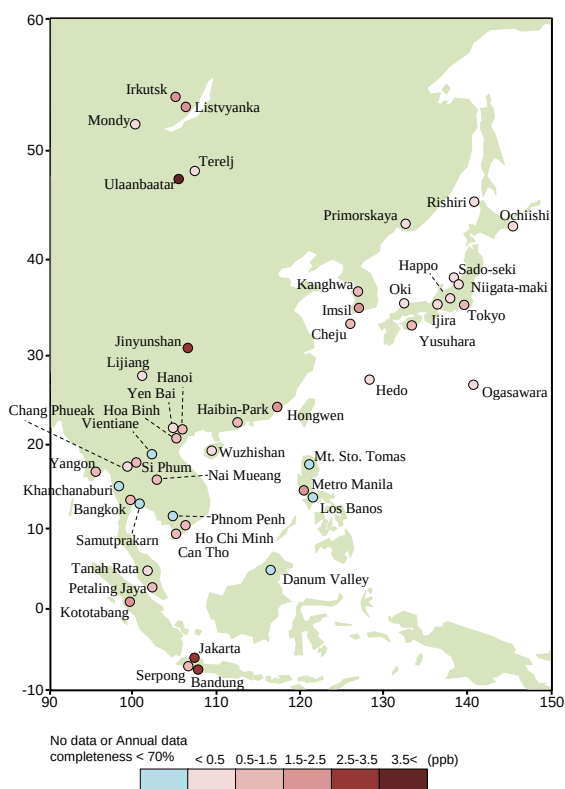
Overview of Data Report 2021



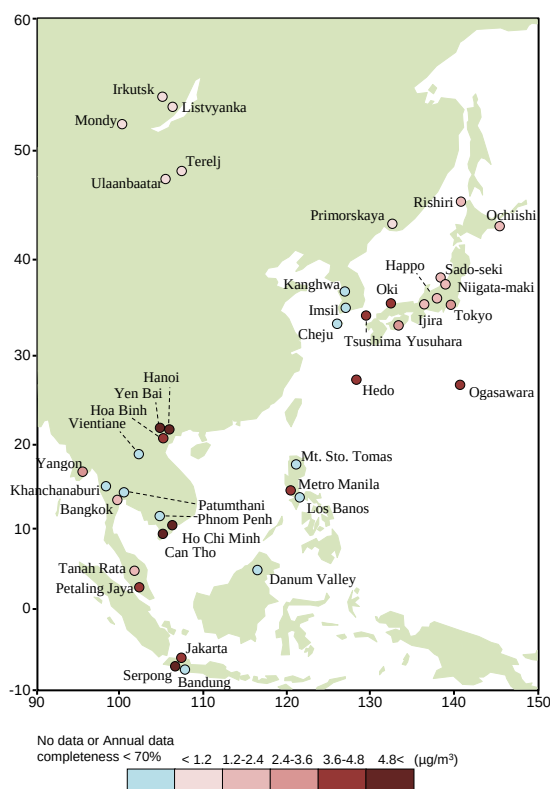
Appendix Fig. 1-1 Annual wet deposition levels of nss-SO₄²⁻, NO₃⁻, nss-Ca²⁺ and NH₄⁺ in 2021



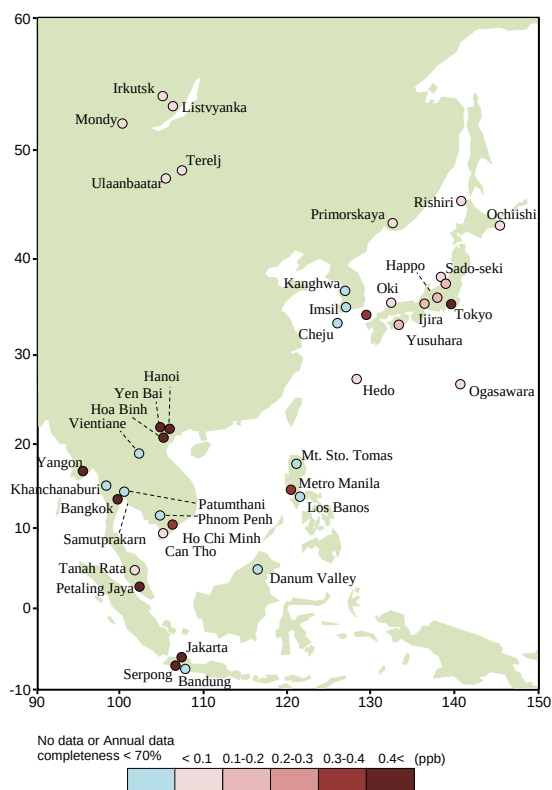
Appendix Fig. 1-2 Trends of pH in each EANET site from 2018 to 2021



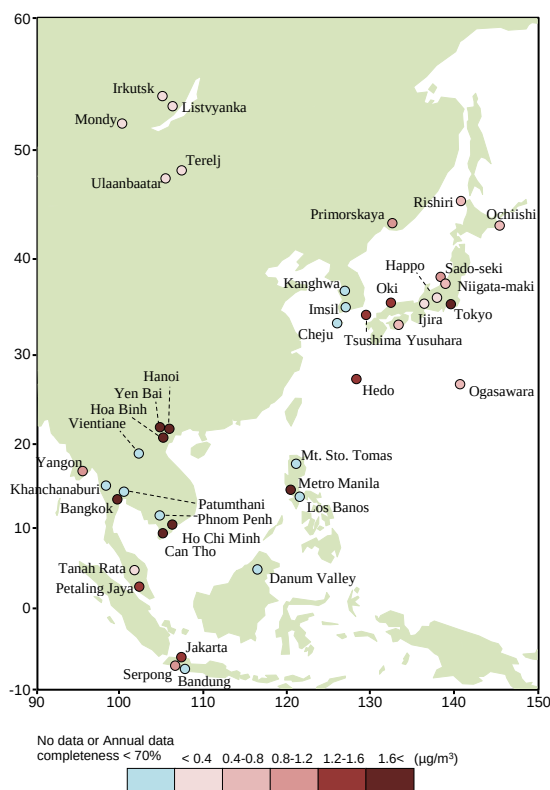
Appendix Fig. 1-3 Levels of annual SO_2 concentrations at EANET monitoring sites in 2021.



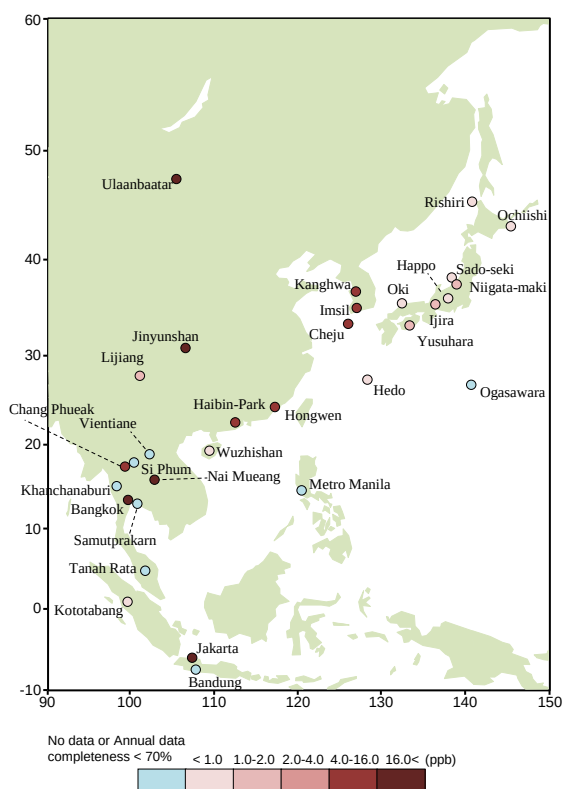
Appendix Fig. 1-4 Levels of annual particulate SO_4^{2-} concentrations at EANET monitoring sites in 2021.



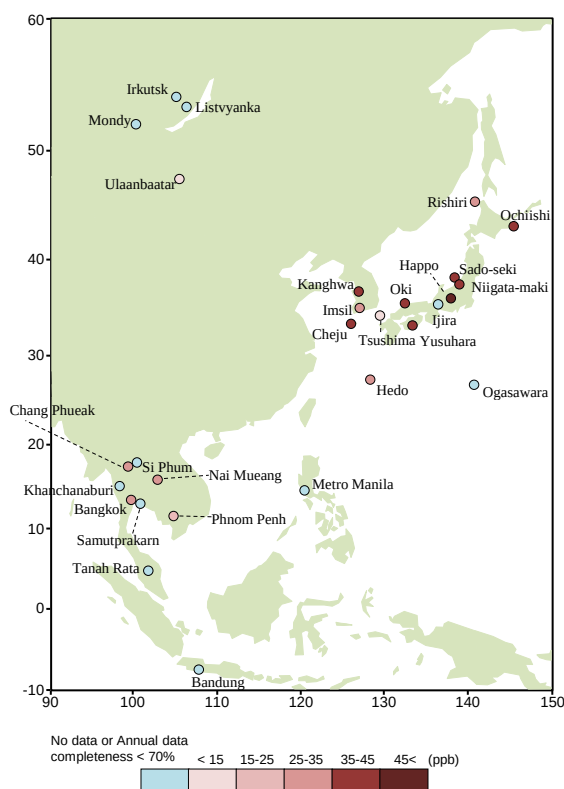
Appendix Fig. 1-5 Levels of annual HNO_3 concentrations at EANET monitoring sites in 2021.



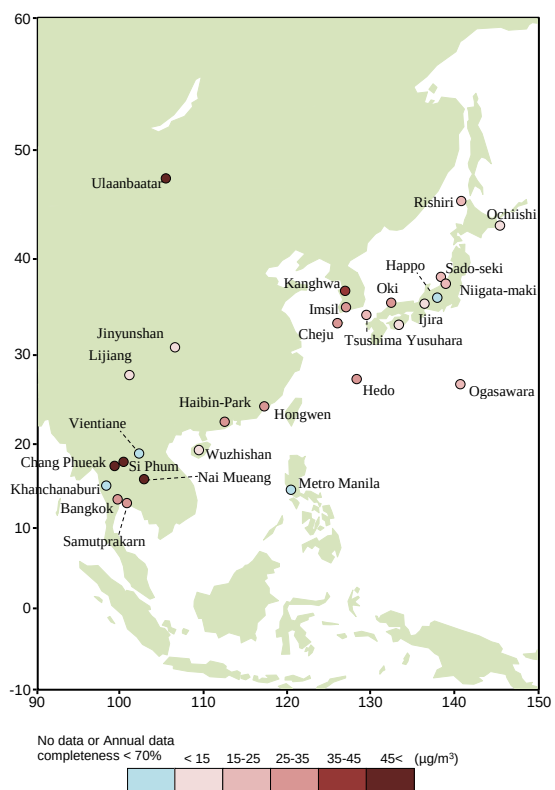
Appendix Fig. 1-6 Levels of annual particulate NO_3^- concentrations at EANET monitoring sites in 2021.



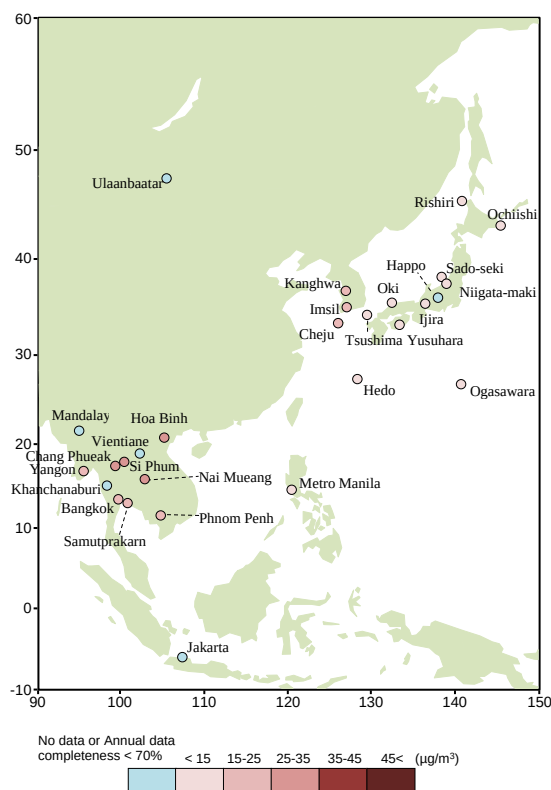
Appendix Fig. 1-7 Levels of annual NO_x or NO_2 concentrations at EANET monitoring sites in 2021.



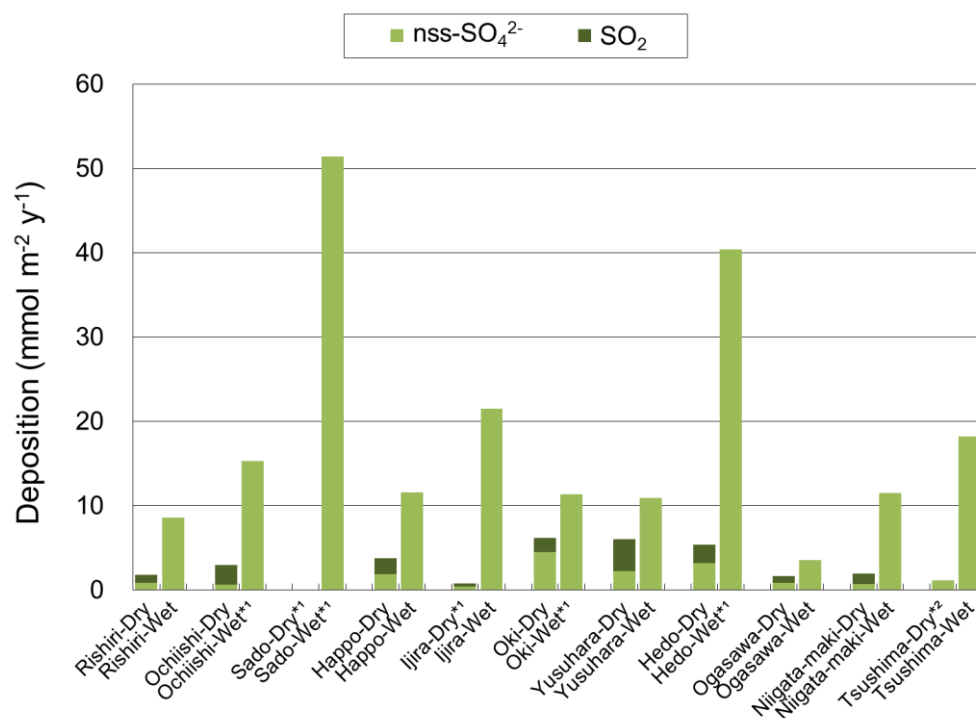
Appendix Fig. 1-8 Levels of annual O_3 concentrations at EANET monitoring sites in 2021.



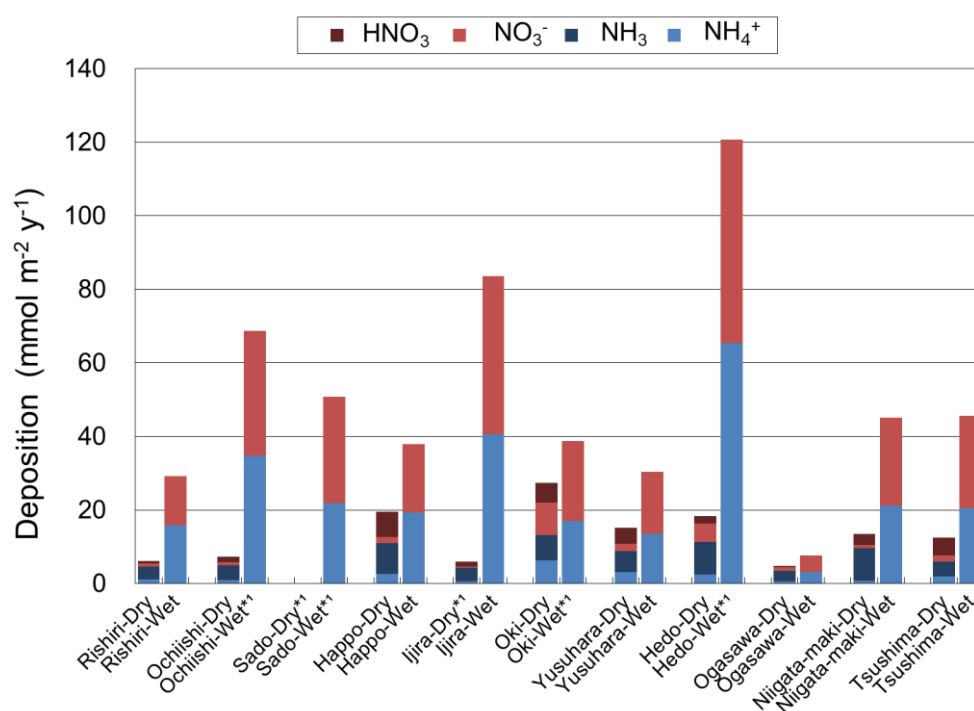
Appendix Fig. 1-9 Levels of annual PM_{10} concentrations at EANET monitoring sites in 2021.



Appendix Fig. 1-10 Levels of annual $\text{PM}_{2.5}$ concentrations at EANET monitoring sites in 2021.



Appendix Fig. 1-11 Annual dry and wet deposition amount of sulfur compounds at EANET sites in 2021.



Appendix Fig. 1-12 Annual dry and wet deposition amount of nitrogen compounds at EANET sites in 2021.

*1 The data did not meet the EANET criteria for completeness of wet/dry deposition monitoring.

*2 SO₂ deposition amounts were excluded since SO₂ monitoring by AT was not carried out.

Appendix 2

Meteorological Statistics at the Monitoring Sites

Appendix Table 2-1 Meteorological statistics at the monitoring site
Site : Rishiri, Japan

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-6.4	-4.0	1.1	4.7	9.6	14.2	21.1	19.8	16.5	10.3	5.5	-1.7
	max.daily mean	-0.1	3.1	7.4	9.9	15.8	18.2	26.1	25.3	19.4	17.0	12.4	8.1
	min.daily mean	-11.1	-14.8	-5.9	-1.0	2.5	8.3	17.6	13.5	12.7	3.7	-1.4	-9.9
Relative humidity (%)	monthly mean	69	75	71	76	82	86	90	85	82	77	75	75
	max.daily mean	86	91	91	91	95	98	97	97	96	94	88	90
	min.daily mean	49	56	50	56	64	59	78	70	64	52	52	60
Mean wind speed (m/s)		3.7	3.5	2.9	2.5	2.2	1.9	1.2	2.4	2.1	2.5	3.3	3.2
Most frequent wind direction (bearings)		NW	NW	NNW	NW	E	W	WSW	E	NE	NE	E	NNW
Precipitation amount (mm/month)		62	107	45	83	88	40	6	84	59	131	152	173
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		112	154	374	426	457	551	512	491	448	265	133	82

Appendix Table 2-2 Meteorological statistics at the monitoring site
Site : Ochiishi, Japan

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-5.8	-4.9	-1.1	1.4	5.0	8.4	13.8	13.6	13.0	9.9	5.9	-0.7
	max.daily mean	-0.8	-0.7	2.8	5.5	7.4	11.6	19.2	17.8	14.6	13.9	10.2	8.1
	min.daily mean	-10.0	-9.4	-8.4	-1.5	0.8	4.7	9.7	10.8	11.2	5.8	0.9	-7.0
Relative humidity (%)	monthly mean	68	72	84	84	92	93	97	91	83	78	72	65
	max.daily mean	100	100	100	100	100	100	100	100	97	94	93	86
	min.daily mean	47	42	56	51	70	75	86	72	65	54	51	47
Mean wind speed (m/s)		8.2	8.4	8.4	8.5	6.6	5.6	4.4	4.8	5.8	7.1	8.8	8.5
Most frequent wind direction (bearings)		NW	WNW	WSW	SW	WSW	WSW	S	SE	S	SW	WNW	NW
Precipitation amount (mm/month)		15	23	51	49	44	34	33	95	91	107	146	31
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		206	301	386	513	525	611	506	428	441	290	211	192

Appendix Table 2-3 Meteorological statistics at the monitoring site
Site : Sado-seki*, Japan

2021												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	0.5	--	--	--	--	--	--	--	--	--	--
	max.daily mean	1.7	--	--	--	--	--	--	--	--	--	--
	min.daily mean	-0.9	--	--	--	--	--	--	--	--	--	--
Relative humidity (%)	monthly mean	86	--	--	--	--	--	--	--	--	--	--
	max.daily mean	96	--	--	--	--	--	--	--	--	--	--
	min.daily mean	78	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)	6.2	--	--	--	--	--	--	--	--	--	--	--
Most frequent wind direction (bearings)	WNW	--	--	--	--	--	--	--	--	--	--	--
Precipitation amount (mm/month)	32	--	--	--	--	--	--	--	--	--	--	--
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	15	--	--	--	--	--	--	--	--	--	--	--

* No meteorological data after Feb. 2021, because their meteorological mast was fallen down due to strong wind on January 7, 2021.

Appendix Table 2-4 Meteorological statistics at the monitoring site
Site : Happo, Japan

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-8.1	-6.4	-0.6	1.6	7.8	12.3	16.4	16.4	12.5	7.2	0.7	-5.1
	max.daily mean	-0.4	1.5	5.7	9.8	13.1	15.0	19.9	20.0	15.2	15.4	5.7	1.9
	min.daily mean	-14.9	-13.3	-8.6	-6.7	-1.1	9.9	12.4	12.8	9.3	-1.4	-7.6	-15.1
Relative humidity (%)	monthly mean	88	81	69	73	79	86	94	95	93	90	89	87
	max.daily mean	97	97	96	97	97	97	97	97	97	97	97	97
	min.daily mean	38	27	26	29	38	47	86	84	60	57	51	31
Mean wind speed (m/s)		4.5	6.1	4.6	3.7	3.8	2.0	2.1	2.4	1.9	2.1	2.9	5.6
Most frequent wind direction (bearings)		SSE	WNW	NW	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	NW
Precipitation amount (mm/month)		175	189	118	173	308	241	313	527	179	105	136	199
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		252	346	540	625	559	477	430	342	315	336	251	229

Appendix Table 2-5 Meteorological statistics at the monitoring site
Site : Ijira, Japan

2021													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	1.5	4.0	9.1	12.1	15.9	20.1	24.2	24.1	21.0	12.9	9.7	4.2
	max.daily mean	8.5	10.5	14.8	17.0	20.7	22.3	26.5	27.8	22.8	18.7	14.0	9.7
	min.daily mean	-3.6	-2.0	4.2	6.6	9.5	16.8	20.8	21.4	18.6	10.2	3.8	-1.3
Relative humidity (%)	monthly mean	94	84	78	71	85	85	90	91	87	83	85	92
	max.daily mean	98	98	98	98	98	98	98	98	98	97	98	99
	min.daily mean	82	54	50	33	59	63	75	77	57	69	69	75
Mean wind speed (m/s)	0.3	0.5	0.6	0.6	0.4	0.4	0.3	0.4	0.3	0.5	0.4	0.3	
Most frequent wind direction (bearings)	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm
Precipitation amount (mm/month)	180	124	450	425	524	520	272	886	383	27	130	234	
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	169	249	366	491	464	523	516	428	233	190	244	171	

Appendix Table 2-6 Meteorological statistics at the monitoring site
Site : Yusuhara, Japan

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	1.4	4.0	9.0	11.0	15.0	18.0	21.8	22.0	19.9	15.0	8.5	3.3
	max.daily mean	10.7	10.7	13.3	17.0	19.2	21.9	24.1	24.2	22.6	20.1	13.3	9.0
	min.daily mean	-8.7	-6.3	2.4	5.0	5.7	13.9	18.3	19.4	16.2	7.7	2.7	-4.9
Relative humidity (%)	monthly mean	78	74	78	70	83	89	92	94	93	83	81	78
	max.daily mean	98	97	99	99	99	99	99	99	99	99	99	94
	min.daily mean	57	49	43	28	52	65	77	83	73	51	62	61
Mean wind speed (m/s)		2.2	2.1	1.6	1.6	1.4	1.0	1.1	1.1	1.0	1.7	2.0	2.5
Most frequent wind direction (bearings)		NNW	NNW	NNW	NNW	NNW	SSE	NNW	SSE	NNW	NNW	NNW	NNW
Precipitation amount (mm/month)		95	124	171	197	486	191	392	629	243	69	169	44
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		305	344	451	522	460	436	527	427	380	446	330	302

Appendix Table 2-7 Meteorological statistics at the monitoring site
Site : Hedo, Japan

Site 4: Hoshi, Japan

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	16.1	17.4	19.6	20.6	24.5	25.9	27.8	27.7	27.5	24.9	21.0	18.0
	max.daily mean	19.9	20.6	22.1	23.7	27.5	28.0	29.1	28.9	28.7	27.6	23.7	21.8
	min.daily mean	11.1	11.9	15.6	18.6	20.1	23.8	26.1	25.0	25.2	21.9	17.6	14.1
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		6.0	5.3	4.3	5.7	3.9	4.1	4.7	3.8	3.4	5.5	5.5	5.5
Most frequent wind direction (bearings)		NW	ENE	E	ENE	S	SSW	E	E,SSE	ESE	ENE	NNE	NNW
Precipitation amount (mm/month)		96	--	--	--	--	--	--	--	--	--	51	58
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		237	359	450	503	535	425	618	629	602	408	270	280

Appendix Table 2-8 Meteorological statistics at the monitoring site
Site : Ogasawara, Japan

2021												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	--	--	--	--	--	--	--	--	--	--	17.7
	max.daily mean	--	--	--	--	--	--	--	--	--	--	21.1
	min.daily mean	--	--	--	--	--	--	--	--	--	--	14.6
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	78
	max.daily mean	--	--	--	--	--	--	--	--	--	--	98
	min.daily mean	--	--	--	--	--	--	--	--	--	--	63
Mean wind speed (m/s)	1.6	1.8	1.9	2.2	1.6	2.2	1.4	1.4	1.4	2.1	1.5	1.7
Most frequent wind direction (bearings)	WSW	WSW	NE	NE	SSW	SSW	NE	SSW	NE	NE	WSW	W
Precipitation amount (mm/month)	261	62	92	110	52	315	195	34	51	241	251	188
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	239	352	470	425	621	460	680	673	560	359	285	277

Appendix Table 2-9 Meteorological statistics at the monitoring site
Site : Niigata-maki, Japan

2021													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	1.6	4.2	8.1	11.0	16.4	21.5	26.1	26.4	21.8	16.8	11.1	5.1
	max.daily mean	6.5	13.5	14.5	16.7	21.8	24.5	28.7	31.6	23.9	23.4	16.3	10.6
	min.daily mean	-2.6	-0.6	1.7	6.2	10.8	16.8	22.1	21.0	17.9	11.7	5.7	-1.6
Relative humidity (%)	monthly mean	80	70	68	66	74	75	78	76	73	75	75	78
	max.daily mean	94	90	83	94	93	89	93	92	89	93	85	92
	min.daily mean	62	52	48	50	57	61	65	60	57	59	59	59
Mean wind speed (m/s)	5.4	6.4	4.1	4.1	4.0	2.6	2.7	3.0	3.3	3.6	5.1	6.3	
Most frequent wind direction (bearings)	SE	WNW	SE	SE	WSW	N	SE	SE	SE	SE	SE,SS	WNW	
Precipitation amount (mm/month)	256	96	62	114	104	75	225	195	136	120	197	222	
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--	
Solar radiation (MJ/m ² /month)	154	227	404	539	539	615	640	531	474	321	213	135	

Appendix Table 2-10 Meteorological statistics at the monitoring site
Site : Tsushima, Japan

2021												
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)	3.4	3.5	2.9	2.9	3.1	2.0	2.4	2.5	2.2	2.1	3.2	3.5
Most frequent wind direction (bearings)	NNW	ENE	ENE	ENE	WSW	ENE	ENE	ENE	ENE	ENE	W	WNW
Precipitation amount (mm/month)	59	98	185	111	162	156	135	579	407	113	94	19
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-11 Meteorological statistics at the monitoring site
Site : Ulaanbaatar, Mongolia

												2021	
	Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
	Items												
Temperature (°C)	monthly mean	-18.7	-11.0	-1.6	3.7	8.2	15.3	19.7	15.7	10.6	2.1	-6.8	-13.8
	max.daily mean	-12.1	2.3	6.2	12.8	19.0	23.4	23.9	22.6	17.5	9.0	2.3	-6.1
	min.daily mean	-27.3	-23.0	-12.6	-2.0	0.9	5.3	12.3	11.6	1.5	-6.6	-17.0	-22.9
Relative humidity (%)	monthly mean	61	52	40	43	47	53	58	58	56	48	51	56
	max.daily mean	66	61	60	63	75	77	75	73	70	70	67	63
	min.daily mean	55	40	26	21	30	30	40	40	41	30	34	48
Mean wind speed (m/s)		1.4	1.5	1.8	1.9	1.9	1.7	1.4	1.8	1.8	1.8	1.6	1.2
Most frequent wind direction (bearings)		SW	SSW	NE	ENE	ENE	ENE	NNE	ENE	ENE	NE	NNE	S
Precipitation amount (mm/month)		9	8	40	14	32	96	59	37	58	19	17	8
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-12 Meteorological statistics at the monitoring site
Site : Metro Manila*, Philippines

2021													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	26.4	26.8	28.2	28.7	30.6	29.2	28.0	28.5	28.2	28.0	28.4	26.6
	max.daily mean	27.8	29.8	29.9	29.8	32.0	31.0	29.8	30.0	30.0	29.7	30.0	29.3
	min.daily mean	24.4	23.6	27.0	26.5	29.0	26.7	25.4	26.5	25.9	25.3	25.2	24.7
Relative humidity (%)	monthly mean	77	73	68	66	64	77	84	81	82	80	75	73
	max.daily mean	89	87	81	78	73	89	94	91	96	91	90	90
	min.daily mean	64	61	58	55	54	66	73	74	70	65	63	62
Mean wind speed (m/s)	1.1	1.2	1.2	1.4	1.3	1.2	1.2	1.2	1.2	1.1	1.1	1.2	
Most frequent wind direction (bearings)	N	NNE	N	NE	SE	W	SW	W	NE, SE	NE	NNE	NNE	
Precipitation amount (mm/month)	180	27	80	59	15	227	824	251	400	118	55	99	
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 (DOST)

Appendix Table 2-13 Meteorological statistics at the monitoring site
Site : Los Baños*, Philippines

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	26.0	25.9	27.4	28.0	29.7	28.6	28.4	28.2	27.9	27.7	27.8	26.1
	max.daily mean	28.0	28.5	28.7	29.3	31.1	30.5	29.8	29.6	29.5	29.9	28.6	28.0
	min.daily mean	24.1	23.0	25.3	26.3	28.5	27.5	26.7	26.0	25.7	25.6	26.4	24.2
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		2.2	1.8	2.0	2.1	2.4	4.3	2.1	1.9	1.6	1.8	1.7	2.1
Most frequent wind direction (bearings)		NE	NE, NNE	E	NE	E	E	E	E	S	E	N	NNE
Precipitation amount (mm/month)		87	93	65	27	66	228	377	173	322	250	91	151
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

* location of the meteorological monitoring : the PAGASA Agromet Station in UP Los Baños College

Data Source: Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Department of Science and Technology (DOST)

Appendix Table 2-14 Meteorological statistics at the monitoring site
Site : Mondy, Russia

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-18.2	-13.2	-6.5	-0.5	5.7	12.1	16.0	12.4	5.6	-1.0	-8.4	-14.1
	max.daily mean	-11.4	-4.4	2.3	6.4	11.8	20.1	23.3	19.7	13.1	7.5	-0.9	-6.4
	min.daily mean	-24.3	-20.4	-15.2	-7.3	0.0	4.3	8.9	6.4	0.1	-7.6	-15.3	-20.2
Relative humidity (%)	monthly mean	60	60	52	55	60	65	72	78	78	67	63	63
	max.daily mean	74	78	78	78	83	93	95	97	97	90	81	76
	min.daily mean	43	37	26	32	38	39	46	52	52	34	41	43
Mean wind speed (m/s)		3.1	2.8	2.5	3.3	3.4	2.3	2.0	1.8	2.0	1.8	2.4	2.1
Most frequent wind direction (bearings)		WNW	W	W	E	W	E	E	ESE	ESE	WNW	W	WNW
Precipitation amount (mm/month)		3	3	6	16	35	66	55	149	48	11	8	2
Sunshine duration (hours/month)		106	166	242	248	226	252	236	204	189	212	135	143
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-15 Meteorological statistics at the monitoring site
Site : Listvyanka, Russia

Site 4 - Estryjanna, Russia

2021													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	-16.6	-15.1	-6.2	0.4	5.5	10.1	13.0	13.7	8.2	2.8	-3.7	-10.5
	max.daily mean	-12.9	-10.6	-0.9	5.1	10.1	16.1	18.1	18.1	12.6	7.9	1.0	-5.9
	min.daily mean	-19.7	-18.9	-10.4	-2.9	2.0	5.7	8.9	10.4	4.9	-0.8	-7.2	-13.9
Relative humidity (%)	monthly mean	79	73	66	64	71	77	87	88	78	73	75	76
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	70	61	48	44	51	59	73	72	60	53	55	65
Mean wind speed (m/s)	3.2	4.6	3.7	3.5	3.3	3.3	2.7	2.0	2.9	3.4	3.2	3.7	
Most frequent wind direction (bearings)	N	SSE	N	N	N	N	SSE	N	N	N	N	N	
Precipitation amount (mm/month)	27	9	8	15	107	64	148	111	64	11	10	16	
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--	
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--	

Appendix Table 2-16 Meteorological statistics at the monitoring site
Site : Irkutsk, Russia

												2021	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-18.1	-14.9	-4.2	3.0	8.6	15.4	18.8	16.6	8.8	2.8	-4.7	-13.4
	max.daily mean	-14.1	-9.0	2.7	9.0	13.9	23.1	25.4	22.7	14.5	9.5	0.6	-8.0
	min.daily mean	-21.8	-19.4	-9.6	-2.1	4.0	9.2	13.1	12.2	4.6	-2.0	-8.6	-17.6
Relative humidity (%)	monthly mean	71	65	54	50	58	62	69	75	73	67	72	77
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	61	52	34	30	37	40	49	55	51	44	58	67
Mean wind speed (m/s)		1.8	2.0	2.1	2.2	2.1	1.7	1.6	1.5	1.7	1.7	1.8	1.4
Most frequent wind direction (bearings)		NW	SE, NW	SE	NW	NW	WNW	SE	WNW NW	WNW	SE	ESE	NW
Precipitation amount (mm/month)		39	18	5	17	86	98	151	99	61	6	13	13
Sunshine duration (hours/month)		75	133	243	222	210	240	280	191	178	189	101	79
Solar radiation (MJ/m ² /month)		112	207	414	494	500	567	629	431	340	264	132	92

Appendix Table 2-17 Meteorological statistics at the monitoring site
Site : Primorskaya, Russia

													2021
	Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
	Items												
Temperature (°C)	monthly mean	-17.4	-10.5	0.1	6.4	12.2	17.3	23.4	21.1	16.2	6.8	-0.9	-13.6
	max.daily mean	-9.6	-3.1	6.9	14.4	20.0	23.2	28.8	27.1	22.7	14.5	5.2	-6.1
	min.daily mean	-23.8	-17.0	-5.3	-0.3	6.2	12.6	19.5	16.8	12.0	1.7	-5.3	-19.2
Relative humidity (%)	monthly mean	72	68	67	81	74	79	80	80	85	75	77	71
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		1.1	1.4	1.4	1.6	1.1	0.8	0.9	0.7	0.9	1.1	1.1	1.2
Most frequent wind direction (bearings)		--	--	--	--	--	--	--	--	--	--	--	--
Precipitation amount (mm/month)		40	17	32	49	79	101	21	130	111	37	93	16
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-18 Meteorological statistics at the monitoring site
Site : Bangkok, Thailand

													2021
	Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
	Items												
Temperature (°C)	monthly mean	25.8	28.2	29.7	29.1	29.9	30.0	28.5	28.6	27.3	27.4	27.8	26.5
	max.daily mean	29.1	30.1	31.3	31.4	32.0	32.1	32.0	31.1	29.6	29.3	29.5	28.5
	min.daily mean	20.9	26.8	27.7	26.2	27.0	28.0	26.2	24.7	25.3	23.6	26.4	23.4
Relative humidity (%)	monthly mean	55	59	68	73	71	66	76	77	85	84	72	56
	max.daily mean	68	77	75	93	83	80	95	98	97	99	95	72
	min.daily mean	45	45	51	64	60	56	58	64	66	62	52	46
Mean wind speed (m/s)		0.5	0.6	0.7	0.5	0.5	0.7	0.6	0.5	0.4	0.4	0.4	0.5
Most frequent wind direction (bearings)		NE	WSW	WSW	W	W	WNW	WNW	WNW	WNW	NNE	NE	NE
Precipitation amount (mm/month)		1	6	46	175	228	33	300	347	302	252	56	0
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-19 Meteorological statistics at the monitoring site
Site : Samutprakarn, Thailand

2021												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	25.6	27.7	29.3	29.3	30.3	29.9	28.9	29.0	27.8	28.1	26.7
	max.daily mean	28.6	29.4	30.5	31.3	31.9	32.0	32.2	30.9	30.2	29.8	29.2
	min.daily mean	21.1	25.8	27.9	26.5	27.1	27.2	26.3	25.6	26.0	23.9	23.7
Relative humidity (%)	monthly mean	60	69	78	81	76	69	82	83	88	86	76
	max.daily mean	81	88	88	94	91	87	98	98	98	99	79
	min.daily mean	43	47	52	69	64	58	60	69	67	64	46
Mean wind speed (m/s)	1.2	1.4	2.0	1.4	1.6	1.8	1.5	1.5	1.2	1.2	1.2	1.3
Most frequent wind direction (bearings)	E	S	S	S	S	SSW	SSW	SSW	WNW	NW	E	ENE
Precipitation amount (mm/month)	0	59	1	110	177	155	228	182	302	277	51	0
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-20 Meteorological statistics at the monitoring site
Site : Chang Phueak, Thailand

2021												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	21.8	24.3	27.7	27.4	29.1	27.6	27.2	27.1	26.7	26.3	21.7
	max.daily mean	24.9	27.7	30.5	31.3	31.8	30.4	29.5	29.1	28.4	28.7	23.4
	min.daily mean	16.2	21.4	24.6	20.3	25.3	23.0	25.5	24.5	24.7	23.9	19.9
Relative humidity (%)	monthly mean	63	53	44	65	65	73	77	79	79	77	68
	max.daily mean	77	74	56	85	83	95	87	95	88	88	75
	min.daily mean	54	39	30	37	48	59	64	69	70	67	60
Mean wind speed (m/s)	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4
Most frequent wind direction (bearings)	NNW	N	N	NNW	NNW	NW	S	NW	NNW	NNW	NW	NNW
Precipitation amount (mm/month)	18	10	11	122	157	69	222	147	174	127	83	0
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-21 Meteorological statistics at the monitoring site
Site : Si Phum, Thailand

Site 4 - SFT Main - Franklin

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	25.1	27.7	31.3	30.6	32.5	30.6	30.1	30.4	29.5	29.2	28.8	25.2
	max.daily mean	28.0	30.8	34.3	34.8	34.9	33.5	32.3	32.9	31.6	32.0	30.4	26.6
	min.daily mean	18.9	24.5	28.5	26.1	29.0	25.4	28.2	27.0	27.0	26.7	26.1	23.3
Relative humidity (%)	monthly mean	59	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	77	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	4	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.3	0.3
Most frequent wind direction (bearings)		NE	NNE	NNE	SE	NNE	SE	SE	SE	NNE	NNE	NE	NNE
Precipitation amount (mm/month)		--	--	--	--	--	--	--	--	--	--	--	--
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-22 Meteorological statistics at the monitoring site
Site : Nai Mueang, Thailand

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	22.0	25.5	29.0	27.8	29.0	29.6	27.9	28.2	26.3	26.1	25.6	23.1
	max.daily mean	27.2	29.9	31.6	31.3	31.2	31.5	31.3	31.0	29.2	28.8	28.6	25.2
	min.daily mean	15.6	21.2	24.4	24.3	25.7	26.3	24.6	25.2	24.0	21.0	23.0	20.3
Relative humidity (%)	monthly mean	56	53	57	71	68	61	71	69	81	78	67	60
	max.daily mean	65	81	71	88	84	73	89	86	93	95	77	76
	min.daily mean	46	42	49	51	54	55	53	58	66	66	55	48
Mean wind speed (m/s)		1.4	1.1	1.1	1.1	1.1	1.8	1.5	1.4	1.2	1.2	1.5	1.6
Most frequent wind direction (bearings)		ENE	E	E	SW,W	SW	W	W	SW,W	W	E	E	ENE
Precipitation amount (mm/month)		0	27	24	315	143	73	298	134	322	254	1	49
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-23 Meteorological statistics at the monitoring site
Site : Hanoi, Vietnam

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	16.0	20.5	22.4	25.6	29.6	30.9	30.3	29.8	28.1	24.0	20.9	18.1
	max.daily mean	19.9	24.5	25.4	29.5	34.6	35.9	35.3	34.8	31.7	27.7	25.1	26.0
	min.daily mean	13.1	17.5	20.6	23.0	25.8	27.1	27.0	26.4	25.2	21.6	18.4	11.0
Relative humidity (%)	monthly mean	76	85	88	87	85	78	83	83	89	92	81	77
	max.daily mean	87	88	94	94	94	85	92	92	96	98	91	89
	min.daily mean	64	74	79	80	73	66	72	71	80	82	67	65
Mean wind speed (m/s)		1.3	1.5	1.7	2.0	1.8	1.4	1.6	1.3	1.2	1.5	1.3	1.3
Most frequent wind direction (bearings)		NE	SE	SE	SE, NE	SE	SW	SE, NW	SE, NW	NW	NE	N, NE	N, NE
Precipitation amount (mm/month)		3	63	30	160	161	199	213	301	425	425	14	0
Sunshine duration (hours/month)		69	67	21	75	207	201	216	167	148	83	113	124
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-24 Meteorological statistics at the monitoring site
Site : Hoa Binh*, Vietnam

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	16.0	20.5	22.9	26.3	29.6	30.6	29.9	29.8	27.9	23.9	21.5	18.1
	max.daily mean	20.5	25.0	26.5	30.7	35.3	36.1	35.4	35.4	32.6	27.7	26.0	23.3
	min.daily mean	13.0	17.7	20.8	23.6	25.9	27.2	26.7	26.5	25.2	21.6	18.8	14.9
Relative humidity (%)	monthly mean	77	82	84	83	79	76	80	80	87	87	80	78
	max.daily mean	90	93	91	93	89	85	90	91	96	95	89	91
	min.daily mean	59	66	71	69	61	59	63	63	70	72	60	55
Mean wind speed (m/s)		1	1	0	1	1	1	1	1	1	1	1	0
Most frequent wind direction (bearings)		N	N	-	SE	ESE	SE	SE	SW	N	NE	N	-
Precipitation amount (mm/month)		10	27	8	96	167	328	400	315	321	510	8	1
Sunshine duration (hours/month)		90	84	46	107	235	195	210	206	168	100	111	113
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

* Location of the meteorological monitoring: (Latitude: 20°49'34"N Longitude: 105°20'19"E Altitude: 22 m)

Appendix Table 2-25 Meteorological statistics at the monitoring site
Site : Cuc Phuong, Vietnam

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	14.6	18.9	21.6	24.4	28.0	29.3	28.1	28.3	26.2	22.5	20.4	16.8
	max.daily mean	24.7	26.8	32.2	31.6	38.9	39.2	36.6	36.4	35.0	32.3	30.6	26.1
	min.daily mean	5.0	11.3	14.6	18.0	21.5	22.5	23.0	22.9	22.3	15.6	13.3	8.5
Relative humidity (%)	monthly mean	79	86	90	92	84	77	85	85	90	88	81	81
	max.daily mean	100	100	100	100	99	100	100	100	100	99	99	100
	min.daily mean	35	46	50	58	41	43	48	59	55	51	38	37
Mean wind speed (m/s)		1	1	1	1	1	1	1	0	1	1	1	1
Most frequent wind direction (bearings)		NE	E	SE	SE	SW	SW	SW	SW	NW	NNE	NE	NE
Precipitation amount (mm/month)		6	53	64	115	116	288	306	122	422	399	11	13
Sunshine duration (hours/month)		72	72	24	41	205	178	198	182	132	90	119	128
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

* Location of the meteorological monitoring: Tan Son Hoa
(Latitude: 10°47'47"N Longitude: 106°40'00"E Altitude: 2 m)

Appendix Table 2-26 Meteorological statistics at the monitoring site
Site : Da Nang, Vietnam

2021													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	22.1	22.3	28.2	27.5	29.6	31.1	30.9	30.8	27.8	26.8	24.4	22.4
	max.daily mean	23.3	25.8	31.4	31.2	33.7	36.6	35.5	36.1	31.5	30.0	27.0	25.4
	min.daily mean	15.9	19.7	19.9	24.9	26.4	27.5	27.5	27.3	24.9	24.5	22.4	20.6
Relative humidity (%)	monthly mean	82	80	91.3	80	77	68	68	68	82	85	82	82
	max.daily mean	88	87	86	85	81	86	81	85	94	93	95	94
	min.daily mean	69	71	77	74	68	35	54	49	76	73	75	70
Mean wind speed (m/s)		1	1	1	2	2	1	2	2	2	2	2	1
Most frequent wind direction (bearings)		NW	E	E	E	E	E	SW	E	E	NW	NE	NW
Precipitation amount (mm/month)		35	32	15	24	2	39	12	57	817	817	255	494
Sunshine duration (hours/month)		65	185	250	230	312	251	261	267	180	126	181	58
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-27 Meteorological statistics at the monitoring site
Site : Can Tho, Vietnam

												2021	
<u>Month</u>		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
<u>Items</u>													
Temperature (°C)	monthly mean	25.2	26.7	27.9	28.2	28.3	28.2	27.0	28.7	28.8	28.6	28.7	28.7
	max.daily mean	29.9	31.0	33.4	33.6	33.2	33.0	32.0	33.4	33.2	33.2	33.4	32.5
	min.daily mean	22.1	23.3	24.6	25.2	25.6	25.5	24.5	25.9	26.2	25.8	25.9	25.6
Relative humidity (%)	monthly mean	78	81	75	80	84	83	83	83	78	85	83	85
	max.daily mean	84	86	88	87	88	88	91	91	92	91	90	91
	min.daily mean	53	47	44	44	52	53	52	51	49	56	51	55
Mean wind speed (m/s)		1.4	1.5	1.4	1.3	1.4	1.2	1.4	1.3	1.5	1.4	1.5	1.5
Most frequent wind direction (bearings)		NE	SE	SE	SE	SW	SW	SW	SW	SW	E	SE	SE
Precipitation amount (mm/month)		0	12	0	146	286	561	642	155	250	218	133	134
Sunshine duration (hours/month)		108	239	294	233	203	204	155	217	214	210	217	214
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-28 Meteorological statistics at the monitoring site
Site : Ho Chi Minh*, Vietnam

Site : Hô Chi Minh, Vietnam

												2021	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	26.6	26.7	29.2	29.4	29.7	29.5	28.5	28.9	29.2	28.3	28.0	28.3
	max.daily mean	34.5	32.1	35.1	34.5	34.5	34.5	33.4	34.7	32.6	32.9	33.5	31.7
	min.daily mean	23.1	23.7	26.1	26.4	27.1	26.8	25.9	26.0	26.8	25.9	25.2	25.9
Relative humidity (%)	monthly mean	67	71	67	74	78	76	77	77	79	82	82	81
	max.daily mean	88	86	85	88	87	86	85	86	88	85	87	88
	min.daily mean	37	31	33	35	45	47	45	46	59	47	46	52
Mean wind speed (m/s)		1.5	1.3	1.3	1.3	1.4	1.2	1.2	1.2	1.4	1.3	1.2	1.1
Most frequent wind direction (bearings)		SE	SE	SE	SE	W	W	W	W	W	W	SE	SE
Precipitation amount (mm/month)		0	30	0	82	309	349	350	331	254	205	209	172
Sunshine duration (hours/month)		171	177	234	187	190	202	169	198	181	187	179	204
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

* Location of the meteorological monitoring: Tan Son Hoa
(Latitude: 10°47'47"N Longitude: 106°40'00"E Altitude: 2 m)

Appendix Table 2-29 Meteorological statistics at the monitoring site
Site : Yen Bai, Vietnam

Site : Yen Bai, Vietnam

												2021	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	15.1	19.7	21.8	25.0	29.2	29.8	29.6	29.5	27.7	23.9	20.5	18.7
	max.daily mean	18.7	22.6	24.2	28.1	33.6	34.3	34.3	34.1	32.8	27.4	24.0	22.4
	min.daily mean	12.5	17.7	20.2	22.9	26.3	26.3	26.4	26.4	24.7	21.7	18.4	14.6
Relative humidity (%)	monthly mean	85	90	92	90	82	82	83	83	84	87	87	78
	max.daily mean	96	98	99	99	91	96	90	93	93	97	97	94
	min.daily mean	69	60	8.2	7.9	68	67	65	67	66	71	71	63
Mean wind speed (m/s)		1.1	1.2	1.0	1.5	1.5	1.4	1.3	1.4	1.1	1.5	1.1	1.4
Most frequent wind direction (bearings)		NW	NW	NW	SE	SE	SE	WNW	SE	NW	NW	E	WNW
Precipitation amount (mm/month)		28	47	37	91	294	120	185	104	209	212	84	0
Sunshine duration (hours/month)		63	32	21	56	173	183	187	190	186	85	60	122
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix 3

Corrigenda of Dry Deposition Monitoring Data in 2020

Appendix 3-1 Corrigenda of Data Report 2020

FP results monitored in 2020 at Kanghwa, Cheju, and Imsil were provided after publishing Data Report 2020. The pages and table numbers shown below correspond to those of Data Report 2020. These updated results are disclosed on the EANET website.

Page 155

Table 4.4.2 HNO₃ - Measured by FP with PM_{2.5} cyclone

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa FP with PM _{2.5} cyclone	Mean	<0.1	0.1	0.4	0.4	0.6	0.4	0.3	0.4	0.4	0.2	0.2	<0.1	0.3
		%	16	17	6	17	16	17	16	16	13	16	13	16	15
		Max-d	0.1	0.2	0.5	0.7	1.2	0.6	0.8	0.7	0.8	0.3	0.4	0.1	1.2
		Min-d	<0.1	<0.1	0.2	0.2	0.1	0.3	<0.1	0.1	0.1	<0.1	0.1	<0.1	<0.1
	Cheju (Kosan) FP with PM _{2.5} cyclone	Mean	0.3	0.8	0.5	0.5	0.3	0.5	<0.1	<0.1	0.6	0.3	0.4	0.5	0.4
		%	13	13	16	17	10	13	19	13	7	6	10	16	13
		Max-d	0.9	1.2	1.5	1.0	0.6	0.7	0.1	0.1	0.7	0.4	0.6	1.6	1.5
		Min-d	0.1	0.3	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.6	0.1	<0.1	<0.1	<0.1
	Imsil FP with PM _{2.5} cyclone	Mean	<0.1	0.1	0.1	0.2	0.5	0.4	0.1	***	<0.1	***	<0.1	<0.1	0.2
		%	16	14	16	13	16	13	16	***	13	***	13	16	13
		Max-d	<0.1	0.2	0.3	0.4	1.5	0.5	0.5	***	0.2	***	0.2	0.2	1.5
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	<0.1	***	<0.1	<0.1	<0.1

Unit : ppb

Page 158

Table 4.5.2 HCl - Measured by FP with PM_{2.5} cyclone

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.1	0.2	0.2	<0.1	<0.1	0.2	0.1	0.2	<0.1	<0.1	<0.1	0.1	0.1
		%	16	17	6	17	16	17	16	16	13	16	13	16	15
		Max-d	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.5	0.1	<0.1	0.2	0.2	0.5
		Min-d	<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
	Cheju (Kosan)	Mean	0.2	0.1	0.2	0.1	0.1	<0.1	0.2	0.1	<0.1	<0.1	0.3	<0.1	0.1
		%	13	13	16	17	10	13	19	13	7	6	10	16	13
		Max-d	0.3	0.2	0.4	0.2	0.2	0.1	0.2	0.2	<0.1	0.1	0.6	0.1	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
	Imsil	Mean	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	<0.1	***	0.2	<0.1	<0.1
		%	16	14	16	13	16	13	16	***	13	***	13	16	13
		Max-d	<0.1	0.2	<0.1	0.2	0.1	0.2	<0.1	***	0.1	***	0.3	0.1	0.2
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	***	<0.1	***	<0.1	<0.1	<0.1

Unit : ppb

Page 161

Table 4.6.2 NH₃ - Measured by FP with PM_{2.5} cyclone

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	2.5	2.0	2.1	3.5	4.7	5.0	4.0	4.1	3.8	2.2	2.3	1.0	3.6
		%	16	17	6	17	16	17	16	16	13	16	13	16	15
		Max-d	3.9	2.8	2.4	4.6	7.2	6.0	6.3	5.5	5.3	3.0	3.8	2.2	7.2
		Min-d	1.2	1.5	1.9	2.7	2.9	3.5	2.3	2.9	3.0	1.0	1.4	0.3	1.2
	Cheju (Kosan)	Mean	1.5	2.1	5.3	1.3	1.8	3.8	3.6	3.0	6.9	1.2	2.9	0.9	3.1
		%	13	13	16	17	10	13	19	13	7	6	10	16	13
		Max-d	2.3	3.7	8.9	1.9	2.3	4.8	4.4	6.1	12.9	2.0	6.2	1.9	12.9
		Min-d	0.4	0.4	0.9	0.5	1.0	2.3	3.0	1.6	0.9	0.4	0.6	<0.1	0.4
	Imsil	Mean	2.1	2.7	5.9	4.0	3.4	2.3	4.4	***	2.0	***	2.6	1.6	3.4
		%	16	14	16	13	16	13	16	***	13	***	13	16	13
		Max-d	3.2	3.8	9.7	6.4	8.0	6.0	6.0	***	4.1	***	4.7	4.3	9.7
		Min-d	1.6	1.7	3.7	1.3	1.1	0.3	1.6	***	0.8	***	0.6	0.2	0.3

Unit : ppb

Page 175

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

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	5.09	6.17	2.68	2.78	4.02	3.59	4.12	5.56	3.89	1.63	3.23	3.00	4.23
		%	16	17	10	17	16	17	10	16	10	13	13	16	14
		Max-d	10.22	8.21	3.50	3.98	5.92	6.83	5.72	14.49	4.84	2.61	6.45	5.31	14.49
		Min-d	1.08	3.27	2.22	1.85	1.68	1.68	2.71	2.16	3.28	1.26	1.50	1.25	1.08
	Cheju (Kosan)	Mean	3.54	5.30	3.09	2.04	3.19	3.71	1.25	5.82	3.78	1.01	1.49	1.97	3.41
		%	13	13	13	17	6	10	16	13	7	6	10	16	12
		Max-d	4.80	11.24	4.19	2.63	4.02	4.35	1.70	9.04	4.52	1.44	2.21	2.30	11.24
		Min-d	1.70	1.84	1.56	1.54	2.35	2.90	0.91	1.01	3.03	0.57	0.82	1.61	0.91
	Imsil	Mean	3.91	3.43	2.36	1.58	3.23	3.14	2.22	***	1.60	***	3.29	1.53	2.65
		%	13	10	16	17	16	13	10	***	13	***	10	16	12
		Max-d	6.36	5.66	4.32	2.36	5.56	6.44	2.79	***	2.26	***	7.06	3.07	6.44
		Min-d	1.60	2.31	1.05	1.05	1.60	0.77	1.37	***	0.71	***	1.24	0.74	0.71

Unit : µg/m³

Table 4.14.2 Particulate matter component: NO_3^- - Measured by FP with $\text{PM}_{2.5}$ cycloneUnit : $\mu\text{g}/\text{m}^3$

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	5.20	8.00	6.76	1.94	1.90	0.20	0.71	0.14	0.15	0.39	2.92	8.43	2.75
		%	16	17	10	17	16	17	10	16	10	13	13	16	14
		Max-d	14.18	18.32	13.90	3.65	5.52	0.60	1.80	0.31	0.17	0.56	7.27	16.05	18.32
		Min-d	0.15	1.07	2.34	0.78	0.59	0.06	0.16	<0.01	0.14	0.15	0.28	1.38	<0.01
	Cheju (Kosan)	Mean	0.75	0.83	1.93	0.54	0.08	0.09	0.47	0.15	0.09	0.12	0.50	0.48	0.61
		%	13	13	13	17	6	10	16	13	7	6	10	16	12
		Max-d	1.93	1.61	5.28	0.96	0.08	0.18	0.98	0.55	0.11	0.16	0.74	1.36	5.28
		Min-d	0.23	0.32	0.34	0.16	0.07	0.03	0.14	0.01	0.07	0.07	0.18	0.10	0.01
	Imsil	Mean	8.25	5.45	4.52	1.19	0.97	0.68	0.72	***	0.15	***	4.64	4.04	2.67
		%	13	10	16	17	16	13	10	***	13	***	10	16	12
		Max-d	17.31	8.35	9.79	2.03	3.29	1.43	1.14	***	0.22	***	9.77	9.74	17.31
		Min-d	1.92	3.15	0.50	0.34	0.12	0.26	0.36	***	0.07	***	1.90	1.46	0.07

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

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.16	0.18	0.21	0.04	0.02	0.03	0.02	0.03	0.02	0.02	0.09	0.44	0.08
		%	16	17	10	17	16	17	10	16	10	13	13	16	14
		Max-d	0.33	0.44	0.35	0.06	0.05	0.06	0.04	0.08	0.02	0.04	0.18	0.96	0.44
		Min-d	0.04	0.02	0.14	0.03	<0.01	0.01	<0.01	<0.01	0.01	0.01	0.03	0.12	<0.01
	Cheju (Kosan)	Mean	0.10	0.58	0.25	0.09	0.03	0.02	0.20	0.29	<0.01	0.14	0.13	0.24	0.19
		%	13	13	13	17	6	10	16	13	7	6	10	16	12
		Max-d	0.14	1.61	0.75	0.21	0.04	0.04	0.54	1.06	0.01	0.17	0.27	1.00	1.61
		Min-d	0.05	<0.01	0.02	0.04	0.01	0.01	0.05	<0.01	<0.01	0.10	0.03	<0.01	<0.01
	Imsil	Mean	0.38	0.36	0.11	0.07	0.13	0.08	0.10	***	<0.01	***	0.12	0.28	0.14
		%	13	10	16	17	16	13	10	***	13	***	10	16	12
		Max-d	0.66	0.61	0.21	0.14	0.20	0.14	0.13	***	0.02	***	0.16	0.70	0.66
		Min-d	0.15	0.19	0.03	0.02	0.03	0.05	0.08	***	<0.01	***	0.07	0.09	<0.01

Table 4.16.2 Particulate matter component: NH_4^+ - Measured by FP with $\text{PM}_{2.5}$ cycloneUnit : $\mu\text{g}/\text{m}^3$

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	3.23	4.57	2.56	1.36	1.95	1.07	1.16	1.44	0.98	0.53	1.75	3.33	2.06
		%	16	17	10	17	16	17	10	16	10	13	13	16	14
		Max-d	6.53	7.21	5.48	2.44	3.15	2.21	1.97	4.16	1.15	0.88	4.31	6.54	7.21
		Min-d	0.35	1.17	0.72	0.70	0.50	0.50	0.57	0.43	0.88	0.30	0.31	0.65	0.30
	Cheju (Kosan)	Mean	1.19	1.72	1.15	0.87	1.01	1.22	0.50	1.68	1.43	0.43	0.76	0.83	1.16
		%	13	13	13	17	6	10	16	13	7	6	10	16	12
		Max-d	1.86	3.52	1.96	1.13	1.28	1.34	0.75	3.04	1.69	0.62	1.06	1.08	3.52
		Min-d	0.68	0.67	0.49	0.68	0.74	1.05	0.33	0.23	1.17	0.23	0.53	0.61	0.23
	Imsil	Mean	3.49	2.45	1.98	0.77	1.24	1.12	1.00	***	0.68	***	2.50	1.90	1.56
		%	13	10	16	17	16	13	10	***	13	***	10	16	12
		Max-d	7.11	3.04	3.78	1.14	2.05	2.03	1.19	***	0.93	***	5.00	3.99	7.11
		Min-d	1.07	1.36	0.64	0.37	0.59	0.36	0.67	***	0.25	***	1.24	0.95	0.25

Table 4.17.2 Particulate matter component: Na^+ - Measured by FP with $\text{PM}_{2.5}$ cycloneUnit : $\mu\text{g}/\text{m}^3$

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.22	0.26	0.44	0.20	0.24	0.19	0.17	0.30	0.27	0.13	0.13	0.25	0.24
		%	16	17	10	17	16	17	10	16	10	13	13	16	14
		Max-d	0.34	0.33	0.79	0.30	0.35	0.31	0.19	0.60	0.39	0.19	0.19	0.41	0.79
		Min-d	0.16	0.21	0.21	0.11	0.14	0.12	0.13	0.11	0.16	0.07	0.08	0.15	0.09
	Cheju (Kosan)	Mean	0.29	0.41	0.46	0.25	0.23	0.12	0.28	0.45	0.09	0.12	0.17	0.09	0.31
		%	13	13	13	17	6	10	16	13	7	6	10	16	12
		Max-d	0.43	0.89	0.76	0.40	0.33	0.24	0.44	0.98	0.09	0.15	0.21	0.16	0.98
		Min-d	0.20	0.18	0.19	0.17	0.13	0.06	0.11	0.08	0.08	0.08	0.09	0.03	0.06
	Imsil	Mean	0.23	0.21	0.14	0.18	0.14	0.11	0.14	***	0.05	***	0.09	0.03	0.15
		%	13	10	16	17	16	13	10	***	13	***	10	16	12
		Max-d	0.29	0.23	0.16	0.22	0.18	0.30	0.16	***	0.11	***	0.13	0.05	0.30
		Min-d	0.15	0.18	0.11	0.16	0.09	0.03	0.12	***	0.01	***	0.05	0.02	0.01

Table 4.18.2 Particulate matter component: K⁺ - Measured by FP with PM_{2.5} cycloneUnit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.28	0.31	0.16	0.19	0.08	0.05	<0.01	0.04	0.11	0.17	0.27	0.28	0.14
		%	16	17	10	17	16	17	10	16	10	13	13	16	14
		Max-d	0.44	0.71	0.28	0.34	0.09	0.08	<0.01	0.06	0.15	0.23	0.50	0.45	0.71
		Min-d	0.03	0.08	0.05	0.05	0.04	0.03	<0.01	<0.01	0.05	0.10	0.12	0.12	<0.01
	Cheju (Kosan)	Mean	0.06	0.15	0.08	0.09	0.04	0.02	0.02	0.02	0.04	0.03	0.03	0.16	0.06
		%	13	13	13	17	6	10	16	13	7	6	10	16	12
		Max-d	0.11	0.30	0.14	0.16	0.04	0.06	0.05	0.03	0.04	0.03	0.05	0.70	0.30
		Min-d	0.02	0.02	0.03	0.03	0.03	<0.01	<0.01	0.01	0.04	0.02	0.02	0.02	<0.01
	Imsil	Mean	0.12	0.10	0.08	0.08	0.04	0.13	0.09	***	0.03	***	0.22	0.08	0.08
		%	13	10	16	17	16	13	10	***	13	***	10	16	12
		Max-d	0.27	0.12	0.12	0.12	0.07	0.45	0.13	***	0.04	***	0.45	0.14	0.45
		Min-d	0.05	0.09	0.02	0.01	0.03	0.02	0.04	***	0.02	***	0.07	0.02	0.01

Table 4.19.2 Particulate matter component: Mg²⁺ - Measured by FP with PM_{2.5} cycloneUnit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	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
		%	16	17	10	17	16	17	10	16	10	13	13	16	14
		Max-d	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	<0.01	0.01	0.01	0.02
		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
	Cheju (Kosan)	Mean	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.05	0.01	<0.01	0.01	0.05	0.01
		%	13	13	13	17	6	10	16	13	7	6	10	16	12
		Max-d	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.03	0.09	0.01	0.01	0.02	0.21	0.09
		Min-d	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.01	0.01	<0.01	0.01	<0.01	<0.01
	Imsil	Mean	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	***	<0.01	***	0.01	<0.01	<0.01
		%	13	10	16	17	6	13	10	***	13	***	10	16	11
		Max-d	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	***	0.01	***	0.01	0.01	0.01
		Min-d	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	***	<0.01	***	0.01	<0.01	<0.01

Table 4.20.2 Particulate matter component: Ca²⁺ - Measured by FP with PM_{2.5} cycloneUnit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	0.06	0.05	0.04	0.03	0.02	0.02	0.03	0.04	0.05	0.02	0.04	0.05	0.04
		%	16	17	10	17	16	17	10	16	10	13	13	16	14
		Max-d	0.12	0.08	0.07	0.04	0.03	0.03	0.05	0.11	0.06	0.03	0.10	0.08	0.12
		Min-d	0.01	0.02	0.03	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.01	0.02	0.01
	Cheju (Kosan)	Mean	0.02	0.05	<0.01	0.03	0.02	0.02	0.04	0.04	0.02	0.01	0.01	0.04	0.03
		%	13	13	13	17	6	10	16	13	7	6	10	16	12
		Max-d	0.04	0.08	0.01	0.12	0.04	0.04	0.07	0.06	0.02	0.01	0.02	0.19	0.12
		Min-d	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.02	0.01	0.01	0.01	<0.01	<0.01
	Imsil	Mean	0.02	0.02	<0.01	0.03	0.04	0.02	0.06	***	0.01	***	0.02	<0.01	0.02
		%	13	10	16	17	16	13	10	***	13	***	10	16	12
		Max-d	0.05	0.02	0.01	0.06	0.15	0.03	0.11	***	0.02	***	0.03	0.01	0.15
		Min-d	<0.01	0.02	<0.01	<0.01	0.01	<0.01	0.01	***	0.01	***	0.01	<0.01	<0.01

Appendix 3-2 Corrigenda of Data Report 2020

Their dry deposition amounts at Hedo site were re-calculated using another relative humidity data (%) nearby area, because their relative humidity data of Hedo were invalid from the end of July to December, 2020.

Page 217 (Error)

Table 4.46 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Hedo		Country: Japan										
2020	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	0.26	0.40	0.72	0.02	0.40	0.40	22.44	0.29	23.88	0.68	3.12	0.93
Feb	0.30	0.22	0.94	0.01	0.46	0.51	20.36	0.39	21.28	0.63	2.86	1.41
Mar	0.29	0.33	1.61	0.09	0.46	0.76	27.40	0.46	29.14	0.84	3.80	1.81
Apr	0.37	0.56	1.47	0.12	0.60	0.97	25.47	0.65	28.09	0.90	3.63	2.17
May	0.34	0.35	2.87	0.06	0.46	0.57	17.10	0.25	21.80	0.94	2.90	2.03
June	0.21	0.10	2.05	0.09	0.11	0.22	16.59	0.10	15.85	0.57	1.91	0.55
July	0.10	0.08	1.29	0.08	0.22	0.10	7.73	0.13	8.17	0.29	0.97	0.26
Aug	0.17	0.28	0.38	0.08	0.62	0.11	12.54	0.28	15.99	0.48	1.87	0.51
Sept	0.17	0.12	0.33	0.10	0.22	0.31	42.63	0.12	39.14	1.01	4.60	1.08
Oct	0.08	0.34	0.10	0.03	0.51	0.52	32.26	0.23	32.77	0.81	3.88	1.14
Nov	0.08	0.15	0.09	0.03	0.27	0.41	26.99	0.21	25.47	0.61	2.98	0.82
Dec	0.33	0.14	0.06	0.03	0.34	0.41	49.63	0.23	47.47	1.16	5.65	1.47
Annual	2.70	3.07	11.91	0.74	4.65	5.27	301.14	3.34	309.05	8.92	38.15	14.17

Table 4.46 Monthly and annual dry deposition amounts of gaseous and particulate substances (Correction)

Site: Hedo		Country: Japan										
2020	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	0.26	0.40	0.72	0.02	0.40	0.40	22.44	0.29	23.88	0.68	3.12	0.93
Feb	0.30	0.22	0.94	0.01	0.46	0.51	20.36	0.39	21.28	0.63	2.86	1.41
Mar	0.29	0.33	1.61	0.09	0.46	0.76	27.40	0.46	29.14	0.84	3.80	1.81
Apr	0.37	0.56	1.47	0.12	0.60	0.97	25.47	0.65	28.09	0.90	3.63	2.17
May	0.34	0.35	2.87	0.06	0.46	0.57	17.10	0.25	21.80	0.94	2.90	2.03
June	0.21	0.10	2.05	0.09	0.11	0.22	16.59	0.10	15.85	0.57	1.91	0.55
July	0.10	0.08	1.33	0.08	0.22	0.10	7.77	0.13	8.22	0.30	0.98	0.27
Aug	0.23	0.28	0.79	0.08	0.71	0.14	17.57	0.33	21.85	0.65	2.55	0.69
Sept	0.31	0.12	0.86	0.10	0.26	0.40	59.15	0.15	54.19	1.39	6.37	1.49
Oct	0.20	0.34	0.47	0.03	0.55	0.58	37.31	0.26	37.91	0.93	4.48	1.31
Nov	0.18	0.15	0.34	0.03	0.28	0.45	30.42	0.23	28.71	0.69	3.36	0.93
Dec	0.46	0.14	0.62	0.03	0.42	0.53	68.75	0.30	65.75	1.60	7.82	2.02
Annual	3.24	3.07	14.07	0.74	4.93	5.60	350.34	3.53	356.69	10.13	43.77	15.60

Appendix 4

Supplemental Data of Catchment-scale Monitoring from 2019 to 2020

Appendix Table 4-1 Chemical Discharge: Lake Ijira Catchment (2019-2020)

The chemical discharge data for the water year 2019-2020 at Lake Ijira Catchment are recalculated, because the equation to estimate water discharge was updated.

Periodic chemical discharge																
Start date	End date	pH4.8	Gran's ANC	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	NH ₄ ⁺	H ⁺	Al	TOC	SiO ₂	Periodic discharge,
												mg L ⁻¹	kg-C ha ⁻¹	kg-SiO ₂ ha ⁻¹	mm	
kmol _e ha ⁻¹																
2019/10/29	2019/11/15	0.04	0.04	0.03	0.01	0.01	0.02	0.03	0.03	0.002	ND	3.26E-05	ND	0.15	2.4	27
2019/11/15	2019/11/29	0.03	0.03	0.03	0.00	0.01	0.02	0.02	0.02	0.001	ND	2.43E-05	ND	0.09	1.4	19
2019/11/29	2019/12/16	0.02	0.02	0.02	0.00	0.01	0.01	0.02	0.02	0.001	ND	2.23E-05	ND	0.06	1.1	15
2019/12/16	2019/12/25	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.001	ND	1.30E-05	ND	0.03	0.7	8
2019/12/25	2020/1/15	0.05	0.04	0.05	0.01	0.02	0.03	0.04	0.04	0.002	ND	4.77E-05	ND	0.08	2.5	32
2020/1/15	2020/1/29	0.02	0.02	0.02	0.00	0.01	0.01	0.02	0.02	0.001	ND	1.85E-05	ND	0.03	1.0	13
2020/1/29	2020/2/14	0.03	0.03	0.03	0.01	0.01	0.02	0.03	0.02	0.001	ND	2.75E-05	ND	0.06	1.4	19
2020/2/14	2020/2/28	0.03	0.02	0.03	0.01	0.01	0.02	0.03	0.02	0.001	ND	2.32E-05	ND	0.06	1.2	18
2020/2/28	2020/3/16	0.03	0.03	0.04	0.01	0.01	0.02	0.03	0.03	0.001	ND	2.78E-05	ND	0.07	1.7	24
2020/3/16	2020/3/26	0.02	0.02	0.02	0.00	0.01	0.01	0.01	0.01	0.001	ND	1.23E-05	ND	0.03	0.9	12
2020/3/26	2020/4/15	0.03	0.03	0.02	0.00	0.01	0.02	0.03	0.02	0.001	ND	1.83E-05	ND	0.06	1.4	18
2020/4/15	2020/4/27	0.04	0.03	0.03	0.00	0.01	0.02	0.04	0.02	0.001	ND	2.36E-05	ND	0.10	1.9	25
2020/4/27	2020/5/15	0.04	0.04	0.04	0.01	0.01	0.03	0.05	0.03	0.002	ND	2.98E-05	ND	0.14	2.3	28
2020/5/15	2020/5/29	0.04	0.04	0.04	0.01	0.01	0.02	0.05	0.03	0.002	ND	3.18E-05	ND	0.15	2.0	24
2020/5/29	2020/6/15	0.19	0.18	0.16	0.04	0.07	0.11	0.19	0.13	0.009	ND	1.80E-04	ND	0.71	10.6	133
2020/6/15	2020/6/30	0.15	0.14	0.12	0.04	0.06	0.09	0.11	0.11	0.008	ND	1.42E-04	ND	1.07	8.7	123
2020/6/30	2020/7/15	1.07	1.01	0.89	0.26	0.44	0.69	0.83	0.83	0.060	ND	1.15E-03	ND	7.71	69.1	958
2020/7/15	2020/7/30	0.50	0.46	0.39	0.08	0.22	0.33	0.41	0.32	0.029	ND	5.36E-04	ND	1.76	34.3	429
2020/7/30	2020/8/13	0.10	0.09	0.08	0.01	0.04	0.06	0.09	0.05	0.006	ND	9.08E-05	ND	0.38	6.0	70
2020/8/13	2020/8/31	0.10	0.09	0.08	0.02	0.03	0.06	0.09	0.06	0.005	ND	1.04E-04	ND	0.41	5.7	65
2020/8/31	2020/9/15	0.19	0.17	0.15	0.05	0.06	0.11	0.17	0.14	0.009	ND	1.82E-04	ND	0.77	11.3	130
2020/9/15	2020/9/30	0.08	0.08	0.07	0.01	0.03	0.05	0.07	0.06	0.004	ND	6.76E-05	ND	0.34	4.9	56
2020/9/30	2020/10/15	0.07	0.07	0.06	0.01	0.02	0.04	0.06	0.05	0.003	ND	6.54E-05	ND	0.25	4.4	48
2020/10/15	2020/10/30	0.08	0.08	0.07	0.02	0.03	0.05	0.07	0.06	0.003	ND	7.50E-05	ND	0.21	4.9	54

Note. Periodic chemical discharges were calculated based on the mean concentrations and the water discharge for the respective sampling intervals.

Chemical discharge														
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 _e ha ⁻¹													
2019 - 2020	3.0	2.8	2.5	0.6	1.2	1.8	2.5	2.1	0.2	ND	0.0	mg L ⁻¹	kg-C ha ⁻¹	kg-SiO ₂ ha ⁻¹
												ND	14.7	182

