

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

Data Report 2020

December 2021

Network Center for EANET

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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 2020 through the discussion with QA/QC managers from participating countries at the 22nd Senior Technical Managers' Meeting (STM22). After verification by the experts of each monitoring field, the NC submitted the draft Data Report to the 21st session of Scientific Advisory Committee (SAC21) held in October 2021, and the Data Report 2020 was adopted. Following the comments and guidance at the SAC21, the NC elaborated and finalized the report.

The Data Report 2020 contains the data obtained from monitoring activities carried out in 2020.

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 2020

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 2020. A total of 64 sites are nominated for the acid deposition monitoring, including 26 urban, 17 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 2020

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	51
	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	438
	Kuching	<i>MYA004</i>	Urban	01°29'25"N	110°21'09"E	20
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°25' N	120°36' 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* ³	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.

*3 Mae Hia and Sakaerat sites in Thailand were closed in 2020.

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 Hum 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* ²	<i>MYI103</i>
	-	UPMKB Rehabilitated Forest Planted in 1991	<i>MYS005</i>	-	-
		UPMKB Rehabilitated Forest Planted in 2008	<i>MYS105</i>	-	-
	-	-	-	Kuala Tahan* ²	<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.)

*2 Baru River and Kuala Tahan sites are newly added and they are under preparation. The monitoring sites at Semenyih Dam and Tembaling River in Malaysia discontinued monitoring.

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.)

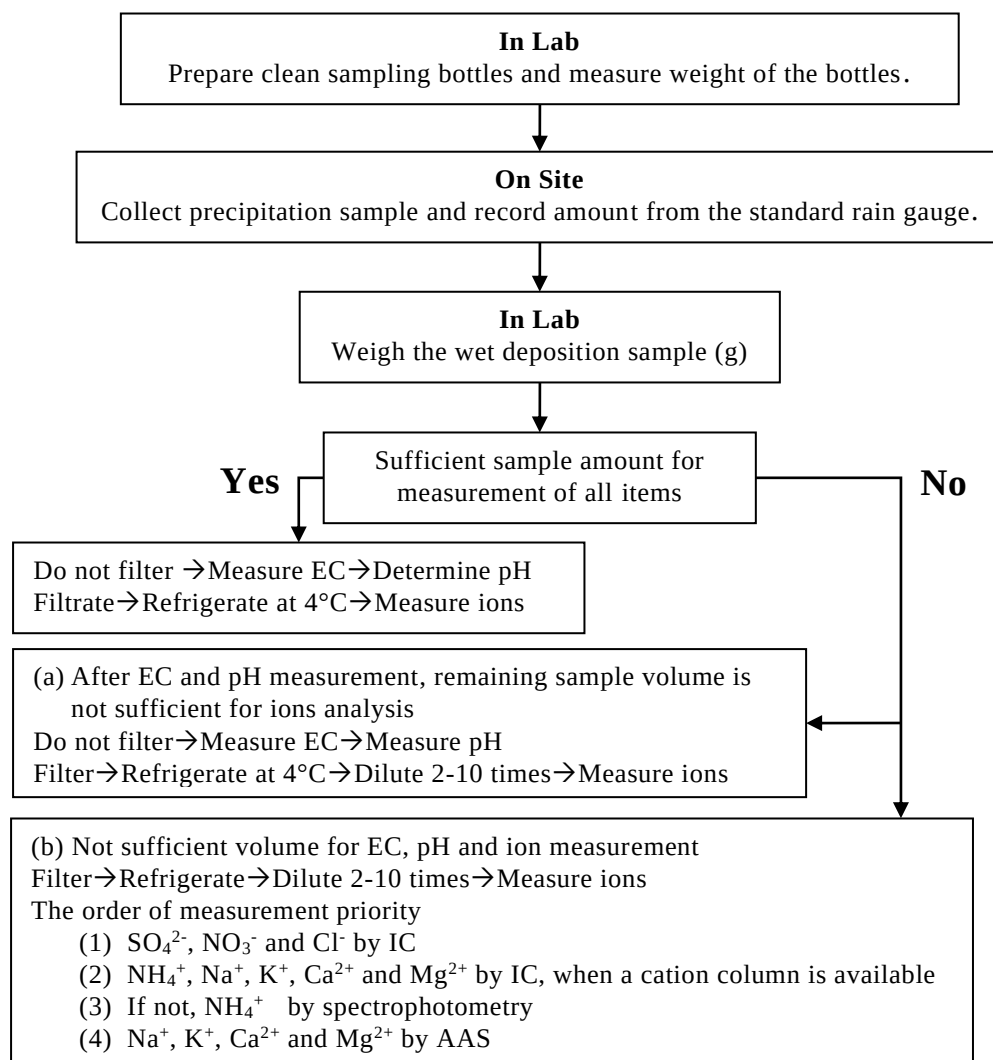
CHAPTER 3

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

* 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 (S cm² 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 2020

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	
	Tanah Rata	Rural	Weekly	January 1999	
	Danum Valley	Remote	Weekly	January 2005	
	Kuching	Urban	Weekly	January 2008	
Mongolia	Ulaanbaatar	Urban	Daily	August 1998	
	Terelj	Remote	Daily	September 1998	
Myanmar	Yangon	Urban	Weekly	January 2007	

Table 3.6 Sampling frequencies for wet deposition monitoring in 2020 (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 ^{*1}	Rural	Daily	March 1999
	Cheju (Kosan) ^{*1}	Remote	Daily	April 1999
	Imsil ^{*1}	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	Urban	Daily	April 1999
	Samutprakarn	Urban	Daily	January 2004
	Pathumthani	Rural	Daily	March 1999
	Khanchanaburi ^{*1}	Remote	Daily	April 1999
Vietnam	Hanoi	Urban	Weekly	August 1999
	Hoa Binh	Rural	Weekly	August 1999
	Cuc Phuong	Remote	Weekly	January 2009
	Da Nang	Urban	Weekly	January 2009
	Can Tho	Rural	Weekly	January 2014
	Ho Chi Minh	Urban	Weekly	January 2014
	Yen Bai	Rural	Weekly	May 2015

^{*1} Wet deposition monitoring data of Phnom Penh, Los Baños, Mt. Sto. Tomas, Kanghwa, Cheju (Kosan), Imsil and Khanchanaburi were not submitted.

Table 3.7 Analytical methods and additional items in 2020

Country	Site	Analytical methods			Additional items (Analytical methods)
		Anions	NH ₄ ⁺	Other Cations	
China	Chongqing	- Haifu	IC, TI	IC	F ⁻ (IC)
		- Jinyunshan	IC, TI	IC	F ⁻ (IC)
	Xi'an	- Shizhan	IC	IC	
		- Jiwozi	IC	IC	
	Xiamen	- Hongwen	IC	IC	F ⁻ (IC)
		- Xiaoping	IC	IC	F ⁻ (IC)
	Zhuhai	- Xiang Zhou	IC	IC	F ⁻ (IC)
		- Zhuxiandong	IC	IC	F ⁻ (IC)
	Wuzhishan	IC	IC	IC	F ⁻ (IC)
	Lijiang	IC	IC	IC	F ⁻ (IC)
Indonesia	Jakarta	IC	IC	IC	
	Serpong	IC	IC	IC	
	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 2020 (continued)

Country	Site	Analytical methods			Additional items (Analytical methods)
		Anions	NH ₄ ⁺	Other Cations	
Japan	Rishiri	IC	IC	IC	
	Ochiishi	IC	IC	IC	HCO ₃ ⁻ (TI), PO ₄ ³⁻ (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 ⁻ (TI)
	Tsushima	IC	IC	IC	
Lao PDR	Vientiane	IC	IC	IC	
Malaysia	Petaling Jaya	IC	IC	IC	HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Tanah Rata	IC	IC	IC	HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Danum Valley	IC	IC	IC	HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
	Kuching	IC	IC	IC	HCOO ⁻ , CH ₃ COO ⁻ , (COO ⁻) ₂ (IC)
Mongolia	Ulaanbaatar	IC	IC	IC	
	Terelj	IC	IC	IC	
Myanmar	Yangon	IC	IC	IC	
Philippines	Metro Manila	IC	IC	IC	NO ₂ ⁻ (IC)
	Los Baños	IC	IC	IC	
	Mt. Sto. Tomas	IC	IC	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	Bangkok	IC	IC	IC	PO ₄ ³⁻ , HCOO ⁻ , CH ₃ COO ⁻ (IC)
	Samutprakarn	IC	IC	IC	PO ₄ ³⁻ , HCOO ⁻ , CH ₃ COO ⁻ (IC)
	Pathumthani	IC	IC	IC	PO ₄ ³⁻ , HCOO ⁻ , CH ₃ COO ⁻ (IC)
	Khanchanaburi	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

3.2 Results of Monitoring

The monthly summaries of each monitoring site in 2020 are shown in Table 3.8 through Table 3.66. The annual summaries of wet deposition monitoring in 2020 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 2006 to 2020 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 2006 are disclosed in EANET homepage and the data in 2000 was 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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	79.9	79.4	101	23.0	201	6.77	17.0	37.9	37.8	4.57	2.90	5.54	4.66	24.9
Feb	110	110	132	22.1	276	13.1	14.0	49.7	49.4	7.16	11.5	4.94	6.50	17.9
Mar	45.1	44.7	56.3	7.10	104	6.81	7.00	41.5	41.3	5.44	3.10	5.51	2.81	94.3
Apr	57.0	56.7	101	9.36	156	5.34	6.49	47.6	47.5	4.98	1.31	5.88	3.79	68.9
May	32.3	32.0	45.1	7.35	103	4.97	3.92	36.6	36.5	3.56	0.507	6.29	2.47	65.1
June	15.4	15.3	26.3	3.80	55.3	2.40	1.22	16.5	16.4	1.21	1.22	5.91	1.21	266
July	10.7	10.6	23.1	3.50	37.0	2.60	0.955	8.59	8.53	0.823	2.01	5.70	0.895	341
Aug	15.0	14.8	31.1	4.53	46.2	2.81	1.29	31.3	31.3	1.84	0.636	6.20	1.41	48.7
Sept	17.3	17.2	32.9	5.41	55.3	2.96	1.32	17.3	17.3	1.72	2.57	5.59	1.38	178
Oct	30.5	30.4	49.0	5.28	72.8	2.37	1.90	15.2	15.2	2.04	11.4	4.94	2.09	126
Nov	56.1	55.7	94.1	10.6	155	5.22	3.50	51.7	51.6	4.78	0.675	6.17	3.64	28.6
Dec	89.7	89.2	186	51.3	261	8.59	7.04	75.5	75.3	5.97	36.1	4.44	7.88	19.6
Annual	25.8	25.6	42.9	6.35	74.5	3.55	2.71	22.0	22.0	2.22	3.41	5.47	1.86	1279
Max.	322	318	529	531	840	65.2	66.2	324	323	36.2	355	7.01	32.7	
Min.	1.25	1.17	2.26	1.13	6.10	0.870	0.512	2.00	1.97	0.411	0.0977	3.45	0.204	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.99	1.98	2.51	0.572	4.99	0.169	0.423	0.944	0.940	0.114	0.0722
Feb	1.97	1.96	2.37	0.396	4.95	0.235	0.251	0.889	0.884	0.128	0.206
Mar	4.25	4.21	5.31	0.670	9.78	0.642	0.660	3.91	3.90	0.513	0.293
Apr	3.93	3.91	6.97	0.645	10.8	0.368	0.447	3.28	3.27	0.343	0.0905
May	2.10	2.08	2.94	0.479	6.70	0.324	0.255	2.38	2.37	0.232	0.0330
June	4.10	4.06	7.01	1.01	14.7	0.639	0.325	4.39	4.37	0.323	0.326
July	3.65	3.60	7.88	1.19	12.6	0.886	0.325	2.92	2.90	0.280	0.685
Aug	0.729	0.720	1.51	0.221	2.25	0.137	0.0628	1.53	1.52	0.0895	0.0310
Sept	3.09	3.06	5.86	0.962	9.84	0.527	0.235	3.08	3.07	0.307	0.458
Oct	3.85	3.83	6.18	0.666	9.18	0.299	0.240	1.92	1.91	0.257	1.44
Nov	1.60	1.59	2.69	0.302	4.42	0.149	0.100	1.48	1.47	0.137	0.0193
Dec	1.76	1.75	3.65	1.00	5.11	0.168	0.138	1.48	1.48	0.117	0.707
Annual	33.0	32.7	54.9	8.12	95.3	4.54	3.46	28.2	28.1	2.84	4.36

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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	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
June	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
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	165	164	153	32.2	278	4.23	30.3	54.7	54.6	9.88	48.5	4.31	8.74	18.0
Feb	173	172	161	27.9	322	13.7	17.8	62.2	61.9	10.8	40.8	4.39	8.90	14.0
Mar	63.6	63.2	77.2	8.58	114	7.24	6.85	50.6	50.4	7.93	8.52	5.07	3.63	52.8
Apr	70.6	70.5	96.8	7.87	145	2.65	4.59	35.0	35.0	5.99	22.8	4.64	4.30	67.2
May	31.1	31.1	38.4	3.77	79.6	0.968	3.32	24.9	24.9	3.25	3.34	5.48	1.94	123
June	13.2	13.1	17.9	2.12	34.2	0.973	0.875	6.95	6.93	1.01	4.32	5.36	0.844	268
July	12.8	12.7	20.3	2.17	28.6	1.34	0.959	14.7	14.6	1.24	10.5	4.98	1.15	300
Aug	20.9	20.9	32.6	4.16	38.9	1.24	0.842	22.5	22.5	3.09	4.00	5.40	1.42	12.6
Sept	18.2	18.0	28.9	3.49	32.2	1.81	0.875	9.84	9.80	1.45	22.9	4.64	1.63	137
Oct	33.7	33.6	49.7	4.79	50.6	1.98	2.06	18.2	18.1	2.15	44.2	4.35	3.10	156
Nov	47.9	47.8	74.2	6.90	98.2	2.67	3.34	31.0	30.9	4.29	27.8	4.56	3.46	53.0
Dec	93.6	93.3	188	16.6	207	5.71	5.98	47.9	47.8	5.08	60.6	4.22	7.77	29.7
Annual	30.9	30.8	42.9	4.69	62.5	2.02	2.60	19.3	19.2	2.55	17.5	4.76	2.20	1231
Max.	370	367	748	75.9	739	43.9	69.6	361	361	56.3	692	7.55	41.9	
Min.	1.46	1.33	5.48	1.13	<0.8	0.435	0.512	2.25	2.22	0.411	0.0282	3.16	0.291	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	2.96	2.96	2.76	0.579	5.00	0.0762	0.545	0.985	0.983	0.178	0.873
Feb	2.42	2.41	2.26	0.391	4.51	0.192	0.249	0.871	0.867	0.151	0.571
Mar	3.36	3.34	4.08	0.453	6.03	0.383	0.362	2.67	2.66	0.419	0.450
Apr	4.75	4.74	6.50	0.529	9.76	0.178	0.309	2.35	2.35	0.402	1.53
May	3.82	3.82	4.72	0.463	9.78	0.119	0.408	3.06	3.06	0.399	0.410
June	3.54	3.52	4.81	0.569	9.17	0.261	0.235	1.86	1.86	0.271	1.16
July	3.82	3.80	6.09	0.650	8.58	0.400	0.287	4.40	4.39	0.371	3.15
Aug	0.264	0.263	0.411	0.0525	0.490	0.0156	0.0106	0.283	0.283	0.0389	0.0504
Sept	2.49	2.48	3.96	0.479	4.43	0.248	0.120	1.35	1.35	0.199	3.14
Oct	5.25	5.24	7.74	0.746	7.88	0.308	0.320	2.83	2.82	0.335	6.88
Nov	2.54	2.53	3.93	0.366	5.20	0.142	0.177	1.64	1.64	0.228	1.47
Dec	2.78	2.77	5.58	0.492	6.15	0.170	0.178	1.42	1.42	0.151	1.80
Annual	38.0	37.9	52.8	5.77	77.0	2.49	3.20	23.7	23.7	3.14	21.5

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	584	580	138	81.5	768	66.6	43.1	320	319	44.2	0.126	6.90	20.8	9.8
Mar	40.0	38.5	20.1	23.5	145	25.1	10.7	86.8	86.3	10.7	0.100	7.00	4.11	6.5
Apr	116	114	208	37.3	359	25.0	14.5	186	185	19.9	0.102	6.99	9.46	8.0
May	17.2	16.7	27.2	14.2	116	8.99	5.89	34.4	34.2	4.88	0.116	6.94	2.27	38.1
June	27.7	26.4	14.6	19.0	136	22.1	7.34	54.6	54.1	7.26	0.132	6.88	2.99	88.6
July	18.6	18.3	11.9	14.1	113	5.26	3.46	21.3	21.2	18.7	0.248	6.61	2.23	91.4
Aug	15.2	15.0	13.3	12.8	103	3.72	2.79	32.3	32.2	4.90	0.0608	7.22	2.13	84.3
Sept	54.9	49.4	18.1	20.0	115	91.8	7.79	33.3	31.4	7.22	0.0652	7.19	3.19	31.1
Oct	40.4	38.5	27.1	22.3	214	29.9	9.46	34.3	33.6	5.47	0.0746	7.13	3.70	44.4
Nov	57.8	57.3	24.1	22.5	247	8.47	12.6	45.2	45.0	3.97	0.0196	7.71	4.38	34.0
Dec	511	500	282	155	915	169	86.4	43.5	39.8	64.9	0.0891	7.05	23.4	2.1
Annual	44.6	43.3	24.8	19.5	160	20.4	7.55	46.1	45.6	9.92	0.120	6.92	3.43	438
Max.	584	580	404	155	915	169	86.4	320	319	66.4	0.550	7.76	23.4	
Min.	5.09	4.99	2.68	9.89	20.1	0.679	0.931	2.69	<0.2	<0.3	0.0174	6.26	0.585	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	5.72	5.68	1.36	0.798	7.52	0.653	0.423	3.14	3.13	0.433	<0.01
Mar	0.260	0.250	0.131	0.153	0.945	0.163	0.0693	0.564	0.561	0.0693	<0.01
Apr	0.927	0.914	1.66	0.298	2.87	0.200	0.116	1.49	1.48	0.159	<0.01
May	0.655	0.634	1.03	0.540	4.41	0.343	0.224	1.31	1.30	0.186	<0.01
June	2.45	2.34	1.29	1.68	12.0	1.96	0.650	4.84	4.80	0.643	0.0117
July	1.70	1.67	1.08	1.29	10.3	0.481	0.316	1.94	1.93	1.71	0.0227
Aug	1.28	1.26	1.12	1.08	8.65	0.314	0.235	2.73	2.72	0.414	<0.01
Sept	1.71	1.54	0.562	0.622	3.59	2.86	0.242	1.04	0.977	0.225	<0.01
Oct	1.79	1.71	1.20	0.992	9.48	1.33	0.420	1.52	1.49	0.243	<0.01
Nov	1.96	1.95	0.818	0.764	8.38	0.288	0.429	1.54	1.53	0.135	<0.01
Dec	1.07	1.05	0.592	0.325	1.92	0.355	0.182	0.0913	0.0837	0.136	<0.01
Annual	19.5	19.0	10.8	8.54	70.1	8.94	3.31	20.2	20.0	4.35	0.0528

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	100	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 3.12 Monthly results

Site: Jiwozi

Country: China

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	19.0	17.6	6.46	28.8	78.1	22.8	5.11	36.2	35.7	4.73	0.350	6.46	2.19	35.5
Feb	25.3	23.1	16.5	15.3	20.6	37.1	5.01	49.0	48.2	3.50	0.0706	7.15	1.99	9.9
Mar	28.4	24.7	12.5	30.1	22.0	61.7	14.9	193	192	12.4	0.0837	7.08	5.01	35.5
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	10.7	9.87	2.64	12.7	5.68	13.2	10.1	62.0	61.7	6.02	0.524	6.28	1.77	56.9
June	28.9	27.4	10.2	12.1	27.1	24.2	27.4	204	204	20.7	0.0898	7.05	5.01	37.7
July	9.58	9.20	3.10	12.6	71.0	6.31	7.93	19.7	19.5	2.28	0.418	6.38	1.43	111
Aug	22.8	19.3	1.75	10.3	<0.8	58.5	47.3	110	109	18.6	0.161	6.79	3.35	24.3
Sept	12.2	11.2	3.27	15.1	11.5	16.6	11.5	86.6	86.3	10.3	0.142	6.85	2.32	15.2
Oct	9.83	8.94	2.07	13.8	36.2	14.7	12.7	21.7	21.4	1.99	0.159	6.80	1.32	106
Nov	15.4	14.1	7.60	27.5	1.25	22.2	5.67	20.9	20.4	<0.3	0.100	7.00	0.870	17.4
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	15.0	13.7	4.81	16.1	37.9	20.8	13.4	63.8	63.4	6.32	0.268	6.57	2.21	450
Max.	53.3	52.0	25.2	110	305	184	67.1	398	397	40.5	1.51	7.35	9.77	
Min.	5.72	5.55	1.29	1.50	<0.8	0.739	0.806	0.357	0.300	<0.3	0.0451	5.82	0.444	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.674	0.625	0.229	1.02	2.77	0.808	0.181	1.29	1.27	0.168	0.0124
Feb	0.250	0.228	0.163	0.151	0.204	0.367	0.0496	0.485	0.477	0.0347	<0.01
Mar	1.01	0.877	0.445	1.07	0.782	2.19	0.531	6.85	6.80	0.441	<0.01
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.607	0.562	0.150	0.724	0.323	0.750	0.577	3.53	3.51	0.343	0.0298
June	1.09	1.03	0.385	0.457	1.02	0.912	1.03	7.70	7.68	0.782	<0.01
July	1.07	1.03	0.346	1.41	7.92	0.703	0.884	2.19	2.18	0.254	0.0466
Aug	0.555	0.469	0.0424	0.250	<0.01	1.42	1.15	2.68	2.65	0.452	<0.01
Sept	0.185	0.170	0.0497	0.230	0.174	0.253	0.175	1.32	1.31	0.156	<0.01
Oct	1.04	0.947	0.219	1.46	3.83	1.56	1.35	2.30	2.26	0.211	0.0169
Nov	0.269	0.245	0.132	0.478	0.0218	0.387	0.0986	0.364	0.356	<0.01	<0.01
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	6.75	6.18	2.16	7.25	17.1	9.35	6.02	28.7	28.5	2.84	0.121

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	45.3	34.4	46.0	179	30.8	182	14.1	159	155	25.2	0.345	6.46	6.64	22.6
Mar	71.3	67.3	134	89.7	88.1	66.1	16.4	587	586	19.5	0.0831	7.08	12.5	22.5
Apr	30.9	29.4	65.8	34.9	55.3	25.8	9.01	386	385	10.0	0.116	6.94	6.56	43.6
May	24.9	23.1	48.7	36.7	18.3	30.1	6.66	549	549	13.1	0.0865	7.06	8.63	71.2
June	15.6	14.5	29.2	26.7	8.00	18.6	5.76	308	308	7.86	0.164	6.79	4.51	32.8
July	44.7	40.3	84.0	78.6	41.2	73.4	17.2	477	476	23.9	0.111	6.95	9.89	3.6
Aug	27.8	24.6	34.0	40.5	14.0	53.7	11.7	737	736	20.7	0.312	6.51	10.8	52.2
Sept	27.0	24.8	39.1	29.6	34.4	36.1	9.71	147	146	12.5	0.880	6.06	3.57	52.0
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	82.8	71.6	92.5	139	95.8	186	37.7	29.9	25.9	29.5	1.55	5.81	6.46	1.9
Dec	19.6	17.6	17.5	21.4	40.5	32.6	6.35	40.3	39.6	6.25	2.14	5.67	1.89	15.3
Annual	30.6	27.7	50.0	49.1	31.9	48.1	9.74	413	412	14.5	0.391	6.41	7.26	318
Max.	106	93.3	223	232	158	232	50.6	1340	1339	33.5	2.24	7.48	18.3	
Min.	4.96	4.59	8.05	3.62	<0.8	3.16	2.48	18.5	18.2	3.47	0.0331	5.65	1.09	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	1.03	0.777	1.04	4.05	0.696	4.11	0.319	3.59	3.50	0.569	<0.01
Mar	1.60	1.51	3.00	2.02	1.98	1.49	0.368	13.2	13.2	0.438	<0.01
Apr	1.35	1.28	2.87	1.52	2.41	1.12	0.393	16.8	16.8	0.437	<0.01
May	1.77	1.64	3.47	2.61	1.30	2.14	0.474	39.1	39.1	0.929	<0.01
June	0.513	0.476	0.960	0.875	0.262	0.612	0.189	10.1	10.1	0.258	<0.01
July	0.161	0.145	0.303	0.284	0.149	0.265	0.0620	1.72	1.72	0.0863	<0.01
Aug	1.45	1.29	1.78	2.12	0.732	2.80	0.614	38.5	38.4	1.08	0.0163
Sept	1.40	1.29	2.04	1.54	1.79	1.88	0.505	7.62	7.58	0.648	0.0458
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.161	0.139	0.179	0.269	0.186	0.360	0.0731	0.0580	0.0502	0.0572	<0.01
Dec	0.299	0.269	0.268	0.327	0.618	0.497	0.0969	0.616	0.605	0.0955	0.0326
Annual	9.74	8.82	15.9	15.6	10.1	15.3	3.09	131	131	4.60	0.124

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.14 Monthly results

Site: Xiaoping

Country: China

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	13.8	13.3	38.1	14.1	26.9	8.62	4.53	4.28	4.17	1.99	21.2	4.67	1.81	24.5
Feb	9.35	8.31	28.0	20.4	15.0	17.2	3.08	3.97	3.60	2.85	26.5	4.58	1.72	32.3
Mar	22.7	22.2	65.8	13.2	33.0	8.62	4.00	6.20	6.01	3.90	69.4	4.16	3.42	41.0
Apr	17.8	17.2	44.1	29.7	49.7	9.97	5.10	5.62	5.41	2.80	28.4	4.55	2.05	48.5
May	9.77	9.43	29.6	6.17	22.2	5.71	3.28	6.10	5.97	2.34	11.2	4.95	1.18	109
June	7.66	7.03	17.4	13.2	16.7	10.6	2.40	1.86	1.63	2.34	9.53	5.02	0.865	123
July	15.8	14.1	36.8	31.5	27.3	27.8	1.08	8.92	8.32	4.89	10.9	4.96	1.91	10.7
Aug	8.03	7.06	17.5	19.1	15.3	16.1	2.45	3.93	3.58	3.26	10.0	5.00	0.979	185
Sept	14.8	14.4	33.3	9.86	41.4	6.94	1.99	5.92	5.77	2.89	13.4	4.87	1.51	188
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	14.3	13.4	60.7	16.5	3.71	14.2	1.86	8.50	8.19	3.55	62.5	4.20	2.80	11.8
Dec	9.97	9.71	25.2	9.61	13.7	4.38	0.990	5.62	5.53	2.31	22.8	4.64	1.38	21.4
Annual	11.7	11.0	29.1	14.3	25.9	10.5	2.71	4.79	4.56	2.85	17.2	4.76	1.41	795
Max.	81.0	78.1	308	109	240	97.2	15.0	73.9	72.9	11.7	123	5.65	8.26	
Min.	1.92	1.80	3.71	1.03	<0.8	1.70	0.644	<0.2	<0.2	0.325	2.24	3.91	0.230	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.338	0.325	0.932	0.345	0.658	0.211	0.111	0.105	0.102	0.0487	0.519
Feb	0.302	0.268	0.904	0.660	0.484	0.557	0.0996	0.128	0.116	0.0922	0.857
Mar	0.931	0.910	2.70	0.543	1.36	0.353	0.164	0.254	0.247	0.160	2.85
Apr	0.861	0.832	2.14	1.44	2.41	0.483	0.247	0.272	0.262	0.136	1.38
May	1.06	1.03	3.22	0.671	2.41	0.621	0.357	0.663	0.650	0.255	1.22
June	0.944	0.866	2.15	1.63	2.06	1.30	0.296	0.229	0.201	0.289	1.17
July	0.169	0.151	0.394	0.337	0.293	0.298	0.0116	0.0956	0.0891	0.0524	0.117
Aug	1.49	1.31	3.24	3.53	2.84	2.98	0.453	0.727	0.663	0.603	1.86
Sept	2.79	2.71	6.25	1.85	7.76	1.30	0.373	1.11	1.08	0.543	2.52
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.168	0.158	0.714	0.194	0.0437	0.168	0.0219	0.100	0.0963	0.0417	0.735
Dec	0.214	0.208	0.540	0.206	0.293	0.0939	0.0212	0.120	0.118	0.0494	0.489
Annual	9.26	8.76	23.2	11.4	20.6	8.37	2.16	3.81	3.63	2.27	13.7

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.15 Monthly results

Site: Xiang Zhou

Country: China

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	18.0	15.6	43.9	41.0	55.5	40.3	4.08	14.2	13.4	5.85	11.0	4.96	2.20	51.5
Mar	26.9	23.1	81.6	65.9	113	61.9	7.22	14.0	12.7	9.06	30.9	4.51	4.25	41.0
Apr	19.1	17.6	61.4	29.9	69.9	24.6	3.46	7.20	6.67	3.93	31.0	4.51	3.15	82.0
May	8.58	8.14	22.9	15.6	27.0	7.23	1.09	5.72	5.56	1.77	7.25	5.14	0.928	366
June	4.94	3.83	11.8	24.4	8.96	18.5	<0.3	4.65	4.25	3.44	3.98	5.40	0.754	232
July	6.99	5.11	13.0	31.6	10.1	31.2	1.47	9.92	9.24	4.77	3.69	5.43	1.01	77.0
Aug	5.99	3.73	9.94	41.3	8.98	37.4	1.09	7.43	6.62	5.67	2.28	5.64	0.954	501
Sept	9.51	8.67	30.0	16.5	26.0	14.0	0.439	6.64	6.34	2.34	13.0	4.89	1.40	386
Oct	8.88	6.60	20.2	40.6	24.0	37.9	1.71	12.6	11.8	5.52	2.08	5.68	1.21	47.5
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	8.70	7.28	22.6	28.1	23.3	23.5	1.22	7.13	6.62	3.82	8.13	5.09	1.24	1783
Max.	66.0	65.6	245	130	247	120	10.5	58.9	58.8	17.3	63.1	6.11	6.55	
Min.	3.54	2.51	6.45	7.33	3.33	1.74	<0.3	0.499	0.461	0.823	0.776	4.20	0.300	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.929	0.804	2.26	2.11	2.86	2.07	0.210	0.734	0.689	0.301	0.566
Mar	1.10	0.949	3.34	2.70	4.62	2.54	0.296	0.574	0.519	0.371	1.27
Apr	1.56	1.44	5.04	2.46	5.74	2.02	0.283	0.590	0.547	0.322	2.54
May	3.13	2.98	8.37	5.70	9.86	2.64	0.400	2.09	2.03	0.648	2.65
June	1.14	0.886	2.73	5.65	2.07	4.28	0.0665	1.08	0.984	0.796	0.922
July	0.538	0.393	0.997	2.43	0.776	2.40	0.113	0.764	0.712	0.367	0.284
Aug	3.00	1.87	4.98	20.7	4.50	18.8	0.548	3.72	3.32	2.84	1.14
Sept	3.67	3.34	11.6	6.38	10.0	5.40	0.169	2.56	2.45	0.903	5.03
Oct	0.422	0.313	0.961	1.93	1.14	1.80	0.0812	0.598	0.559	0.262	0.0987
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	15.5	13.0	40.3	50.1	41.6	41.9	2.17	12.7	11.8	6.81	14.5

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	100	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
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	15.4	13.1	27.5	45.2	37.3	38.4	5.80	29.9	29.0	7.79	0.792	6.10	1.76	26.5
Feb	22.7	19.1	47.8	62.3	63.2	60.4	4.19	15.7	14.4	8.56	10.9	4.96	2.63	84.0
Mar	39.5	34.4	125	95.0	115	83.8	8.04	65.8	64.0	12.7	15.6	4.81	5.09	69.0
Apr	17.7	16.3	53.5	30.2	67.6	23.0	3.52	19.3	18.8	4.18	7.94	5.10	2.17	89.5
May	8.67	8.11	20.5	17.2	19.4	9.29	1.31	7.40	7.20	2.12	6.07	5.22	0.859	522
June	6.15	4.56	12.8	31.4	5.82	26.3	1.24	11.4	10.8	4.46	3.86	5.41	0.967	255
July	7.50	5.02	12.7	43.5	13.1	41.1	2.26	26.9	26.0	6.72	1.01	6.00	1.35	60.5
Aug	8.03	3.88	11.3	77.6	5.75	68.9	2.13	9.06	7.57	9.81	3.01	5.52	1.46	551
Sept	10.2	8.61	26.6	27.5	19.8	25.6	1.32	6.82	6.26	3.82	14.6	4.84	1.55	389
Oct	14.1	9.99	28.3	81.2	31.4	67.5	4.97	16.8	15.3	10.0	2.13	5.67	2.22	69.5
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	10.6	8.35	24.3	44.6	21.6	38.1	2.15	12.1	11.3	5.87	6.82	5.17	1.49	2115
Max.	72.5	66.0	277	539	200	478	17.9	191	188	59.6	110	6.49	11.1	
Min.	2.39	1.46	5.48	4.80	<0.8	1.30	<0.3	0.998	0.425	0.411	0.324	3.96	0.230	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.409	0.348	0.729	1.20	0.989	1.02	0.154	0.792	0.770	0.206	0.0210
Feb	1.91	1.60	4.02	5.23	5.31	5.07	0.352	1.32	1.21	0.719	0.912
Mar	2.73	2.38	8.60	6.55	7.96	5.78	0.555	4.54	4.41	0.878	1.08
Apr	1.59	1.46	4.79	2.70	6.05	2.06	0.315	1.73	1.69	0.374	0.710
May	4.53	4.23	10.7	9.00	10.1	4.85	0.684	3.86	3.76	1.11	3.17
June	1.57	1.16	3.27	8.01	1.48	6.71	0.316	2.91	2.77	1.14	0.985
July	0.454	0.304	0.770	2.63	0.792	2.49	0.137	1.63	1.57	0.407	0.0609
Aug	4.42	2.13	6.22	42.7	3.16	37.9	1.17	4.99	4.17	5.40	1.66
Sept	3.94	3.35	10.3	10.7	7.69	9.93	0.512	2.65	2.43	1.48	5.67
Oct	0.977	0.695	1.96	5.64	2.18	4.69	0.345	1.17	1.07	0.695	0.148
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	22.5	17.7	51.4	94.3	45.7	80.5	4.54	25.6	23.8	12.4	14.4

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	14.1	12.8	4.28	22.0	32.4	21.6	4.41	9.54	9.07	3.27	1.70	5.77	1.33	35.0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	15.2	14.3	34.0	13.8	85.3	15.4	7.60	9.81	9.48	3.41	0.842	6.07	2.21	32.9
Apr	9.45	8.78	21.9	11.2	58.1	11.1	4.08	8.12	7.88	3.99	4.49	5.35	1.34	79.5
May	6.56	6.06	21.3	8.66	31.3	8.39	3.52	12.6	12.4	4.37	1.21	5.92	1.04	22.9
June	2.84	2.37	10.7	7.24	26.6	7.73	3.10	6.20	6.03	3.40	1.35	5.87	0.489	86.1
July	2.24	2.04	9.01	6.09	15.0	3.16	0.780	2.23	2.16	<0.3	0.509	6.29	0.492	39.8
Aug	1.81	1.64	6.74	4.12	7.12	2.21	0.765	1.75	1.70	<0.3	0.361	6.44	0.296	213
Sept	1.37	1.00	4.53	5.22	10.4	7.28	1.01	0.709	0.675	<0.3	1.08	5.97	0.407	146
Oct	3.65	3.21	6.14	11.8	7.80	7.30	4.12	1.92	1.77	0.605	1.29	5.89	0.402	174
Nov	14.5	11.9	52.9	41.4	20.0	43.0	19.0	20.5	19.6	9.20	1.00	6.00	1.90	3.7
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	4.21	3.80	9.77	8.42	20.0	7.39	2.68	3.75	3.61	1.34	1.29	5.89	0.613	833
Max.	66.7	61.0	64.8	99.6	141	95.2	109	28.0	27.2	11.7	22.4	8.01	4.62	
Min.	0.400	<0.3	2.60	1.80	<0.8	<0.3	<0.3	<0.2	<0.2	<0.3	0.0098	4.65	0.180	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.494	0.448	0.150	0.770	1.13	0.756	0.154	0.334	0.317	0.115	0.0596
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.502	0.471	1.12	0.455	2.81	0.505	0.250	0.323	0.312	0.112	0.0277
Apr	0.751	0.698	1.74	0.889	4.62	0.881	0.325	0.646	0.627	0.317	0.357
May	0.150	0.139	0.487	0.198	0.716	0.192	0.0805	0.288	0.284	0.100	0.0277
June	0.244	0.204	0.919	0.624	2.29	0.666	0.267	0.534	0.519	0.292	0.116
July	0.0890	0.0814	0.358	0.242	0.596	0.126	0.0310	0.0888	0.0860	<0.01	0.0203
Aug	0.386	0.349	1.44	0.879	1.52	0.471	0.163	0.373	0.362	0.0289	0.0769
Sept	0.200	0.146	0.663	0.764	1.53	1.07	0.147	0.104	0.0987	<0.01	0.158
Oct	0.634	0.557	1.07	2.04	1.36	1.27	0.717	0.334	0.308	0.105	0.225
Nov	0.0537	0.0441	0.196	0.153	0.0740	0.159	0.0703	0.0759	0.0724	0.0340	<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	3.50	3.17	8.14	7.02	16.6	6.16	2.23	3.12	3.01	1.12	1.07

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	100	94.0	100	100	100	94.0	94.0	94.0	94.0	94.0	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	98.5	100	100	100	98.5	98.5	98.5	98.5	98.5	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	7.06	6.85	11.3	10.2	8.51	3.47	2.70	11.8	11.7	3.05	0.307	6.51	0.515	27.5
Feb	7.09	7.07	11.4	6.57	4.52	0.400	2.73	14.0	14.0	3.36	0.505	6.30	0.607	10.9
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	<0.3	<0.3	12.6	18.5	<0.8	0.474	0.400	0.400	0.390	0.400	0.189	6.72	1.08	13.5
May	6.27	6.25	22.6	23.3	4.04	0.400	3.21	0.984	0.975	0.789	0.210	6.68	0.674	26.2
June	20.2	20.2	45.2	33.9	4.63	0.400	0.735	5.63	5.62	4.65	0.119	6.92	0.560	38.7
July	44.7	44.7	23.4	16.2	4.33	0.559	0.404	6.50	6.49	3.26	0.106	6.97	0.651	151
Aug	35.7	35.6	40.2	17.2	1.44	0.578	0.677	0.400	0.388	1.35	0.352	6.45	0.308	395
Sept	25.4	25.4	39.1	19.2	1.33	0.400	0.400	4.25	4.24	3.88	0.477	6.32	0.327	159
Oct	61.2	61.2	5.92	33.3	2.44	0.400	0.864	1.34	1.33	3.67	0.658	6.18	0.398	177
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	37.0	36.9	29.7	20.7	2.44	0.580	0.768	2.78	2.77	2.62	0.374	6.43	0.418	998
Max.	344	344	285	159	56.7	13.9	14.4	30.3	30.3	15.0	1.00	7.23	2.34	
Min.	<0.3	<0.3	<0.5	<0.5	<0.8	0.400	0.400	0.400	0.296	0.400	0.0589	6.00	0.180	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.194	0.188	0.311	0.279	0.234	0.0955	0.0744	0.325	0.323	0.0839	<0.01
Feb	0.0773	0.0770	0.125	0.0716	0.0493	<0.01	0.0298	0.153	0.153	0.0366	<0.01
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	<0.01	<0.01	0.170	0.250	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
May	0.164	0.164	0.592	0.611	0.106	0.0105	0.0842	0.0258	0.0256	0.0207	<0.01
June	0.783	0.782	1.75	1.31	0.179	0.0155	0.0284	0.218	0.218	0.180	<0.01
July	6.76	6.76	3.54	2.45	0.654	0.0845	0.0611	0.983	0.981	0.493	0.0160
Aug	14.1	14.1	15.9	6.78	0.570	0.229	0.268	0.158	0.153	0.532	0.139
Sept	4.03	4.03	6.21	3.05	0.210	0.0635	0.0635	0.674	0.673	0.616	0.0757
Oct	10.8	10.8	1.04	5.88	0.430	0.0706	0.153	0.236	0.235	0.648	0.116
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	36.9	36.9	29.6	20.7	2.44	0.579	0.767	2.78	2.77	2.62	0.374

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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
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
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	9.53	8.68	8.59	16.4	13.3	14.0	2.20	2.17	1.87	1.71	4.69	5.33	0.787	886
Feb	7.33	6.36	7.63	20.6	10.9	16.1	2.30	2.60	2.25	1.97	3.25	5.49	0.683	925
Mar	24.9	23.8	28.5	12.9	26.5	17.8	2.13	12.6	12.2	2.95	10.8	4.97	1.71	145
Apr	37.0	36.2	31.7	19.3	66.5	12.2	12.8	18.7	18.5	2.60	9.89	5.00	2.38	184
May	24.3	22.6	15.5	33.5	45.3	27.8	6.76	45.1	44.5	6.03	7.72	5.11	2.04	49.4
June	57.8	51.5	57.9	48.0	197	106	37.3	120	118	19.6	5.80	5.24	8.51	14.6
July	29.3	28.3	36.7	21.2	51.9	15.4	2.33	16.2	15.9	3.20	16.8	4.78	2.53	87.3
Aug	26.2	25.6	24.7	13.8	42.7	9.09	1.60	9.09	8.89	3.28	9.55	5.02	1.53	102
Sept	24.0	23.0	34.9	20.8	38.7	16.2	2.76	8.22	7.87	3.89	15.5	4.81	2.09	149
Oct	22.1	21.5	33.1	13.3	28.7	9.81	3.29	9.31	9.10	2.87	9.04	5.04	2.06	233
Nov	17.2	16.5	20.8	13.5	50.2	11.3	8.19	14.7	14.5	2.83	4.43	5.35	1.35	76.2
Dec	23.4	21.8	14.7	16.4	38.5	26.5	5.80	14.9	14.4	4.76	9.74	5.01	2.14	125
Annual	15.4	14.5	16.2	18.1	24.5	15.5	3.53	7.50	7.16	2.52	6.52	5.19	1.27	2976
Max.	135	133	160	68.9	267	167	72.4	145	144	20.2	55.0	6.22	11.8	
Min.	4.29	0.708	2.60	3.63	4.19	3.48	0.642	1.24	1.10	0.395	0.603	4.26	0.290	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	8.44	7.69	7.61	14.5	11.8	12.4	1.95	1.92	1.66	1.51	4.15
Feb	6.78	5.88	7.06	19.1	10.1	14.9	2.13	2.41	2.08	1.83	3.01
Mar	3.61	3.46	4.14	1.87	3.85	2.58	0.310	1.82	1.77	0.429	1.56
Apr	6.80	6.66	5.82	3.55	12.2	2.24	2.35	3.45	3.40	0.479	1.82
May	1.20	1.12	0.763	1.65	2.24	1.37	0.334	2.23	2.20	0.298	0.381
June	0.844	0.751	0.845	0.701	2.87	1.54	0.545	1.76	1.72	0.286	0.0847
July	2.55	2.47	3.21	1.85	4.53	1.34	0.204	1.41	1.39	0.279	1.46
Aug	2.66	2.60	2.50	1.40	4.33	0.923	0.162	0.923	0.903	0.333	0.970
Sept	3.57	3.42	5.20	3.10	5.77	2.42	0.411	1.22	1.17	0.580	2.30
Oct	5.14	5.01	7.72	3.10	6.69	2.29	0.767	2.17	2.12	0.669	2.11
Nov	1.31	1.26	1.59	1.03	3.82	0.860	0.624	1.12	1.10	0.216	0.338
Dec	2.92	2.72	1.84	2.05	4.80	3.31	0.724	1.87	1.79	0.594	1.22
Annual	45.8	43.0	48.3	53.9	73.0	46.2	10.5	22.3	21.3	7.50	19.4

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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 3.20 Monthly results

Site: Serpong

Country: Indonesia

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	23.7	22.0	19.9	30.0	47.4	28.7	8.68	6.32	5.87	1.98	6.73	5.17	1.63	339
Feb	13.3	12.8	11.6	16.0	45.7	8.00	2.45	3.16	3.01	0.490	1.54	5.81	0.964	388
Mar	29.0	28.7	24.1	15.4	56.5	4.41	2.22	5.19	5.10	1.08	21.0	4.68	2.09	373
Apr	22.7	22.5	25.3	17.1	72.9	3.27	1.44	5.62	5.55	0.827	5.19	5.28	1.73	289
May	13.6	13.4	16.4	26.1	60.5	2.85	13.2	4.60	4.53	0.586	0.846	6.07	1.32	300
June	28.8	28.1	33.8	182	108	11.1	143	9.77	9.53	2.07	0.919	6.04	4.42	194
July	32.7	31.7	39.7	29.8	82.1	15.9	2.82	17.0	16.6	2.63	0.801	6.10	2.38	96.6
Aug	38.8	37.4	40.5	52.6	119	24.1	18.2	19.5	19.0	3.71	0.246	6.61	2.67	91.8
Sept	45.5	44.4	53.6	37.8	107	18.2	9.13	18.8	18.4	4.54	4.68	5.33	2.88	258
Oct	33.7	33.0	47.4	23.4	74.7	11.3	2.75	11.3	11.1	2.36	21.3	4.67	2.48	341
Nov	30.0	29.2	46.9	26.7	77.1	13.4	7.66	11.3	11.0	2.89	5.17	5.29	1.98	299
Dec	20.4	18.1	15.6	35.1	49.7	38.0	6.89	5.88	5.06	3.66	2.01	5.70	1.56	163
Annual	26.3	25.5	29.7	34.9	69.6	13.1	14.5	8.52	8.26	1.95	7.37	5.13	2.03	3132
Max.	126	117	199	891	320	148	465	108	106	78.6	97.7	7.22	13.9	
Min.	2.56	2.22	3.25	4.50	11.5	<0.3	<0.3	<0.2	<0.2	<0.3	0.0603	4.01	0.458	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	8.04	7.45	6.77	10.2	16.1	9.73	2.94	2.15	1.99	0.671	2.28
Feb	5.15	4.96	4.49	6.21	17.7	3.10	0.949	1.23	1.17	0.190	0.597
Mar	10.8	10.7	9.00	5.74	21.1	1.65	0.826	1.94	1.90	0.404	7.83
Apr	6.57	6.51	7.30	4.94	21.1	0.944	0.415	1.62	1.60	0.239	1.50
May	4.07	4.02	4.93	7.84	18.2	0.857	3.96	1.38	1.36	0.176	0.254
June	5.58	5.45	6.54	35.3	20.9	2.15	27.7	1.89	1.84	0.401	0.178
July	3.16	3.06	3.84	2.88	7.93	1.54	0.272	1.64	1.61	0.254	0.0773
Aug	3.56	3.43	3.72	4.83	10.9	2.21	1.67	1.79	1.74	0.341	0.0226
Sept	11.7	11.4	13.8	9.75	27.5	4.69	2.36	4.85	4.75	1.17	1.21
Oct	11.5	11.3	16.2	7.98	25.5	3.85	0.939	3.87	3.78	0.806	7.25
Nov	8.96	8.72	14.0	7.96	23.0	3.99	2.29	3.38	3.29	0.864	1.55
Dec	3.32	2.94	2.53	5.71	8.09	6.20	1.12	0.959	0.825	0.597	0.328
Annual	82.4	80.0	93.1	109	218	40.9	45.5	26.7	25.9	6.11	23.1

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	5.64	5.48	5.35	3.54	2.83	2.58	1.17	1.10	1.04	0.389	5.81	5.24	0.577	236
Feb	7.90	7.64	7.68	6.46	9.71	4.44	3.36	3.43	3.33	0.529	4.85	5.31	0.677	193
Mar	4.78	4.54	4.23	4.98	2.61	4.03	2.22	7.10	7.01	0.898	9.26	5.03	0.553	188
Apr	4.25	4.15	2.97	2.42	6.02	1.69	0.774	6.15	6.11	0.462	3.82	5.42	0.413	416
May	3.51	3.26	4.33	6.34	5.89	4.05	3.40	4.24	4.15	0.670	2.90	5.54	0.373	270
June	3.97	3.89	5.52	8.70	9.30	1.43	8.09	3.86	3.83	0.483	2.19	5.66	0.376	240
July	3.95	3.79	5.91	8.22	15.6	2.56	6.61	4.41	4.36	1.19	1.67	5.78	0.538	152
Aug	5.20	5.03	6.30	7.10	16.2	3.37	8.94	4.59	4.51	1.73	4.63	5.33	0.509	166
Sept	3.60	3.42	2.93	3.49	<0.8	3.00	2.24	2.78	2.71	0.912	8.14	5.09	0.666	161
Oct	3.94	2.88	3.82	5.14	7.75	57.7	5.77	19.4	18.2	6.43	4.98	5.30	0.570	248
Nov	3.30	3.24	4.76	1.53	3.62	0.995	2.23	1.88	1.86	0.650	5.50	5.26	0.426	372
Dec	2.98	2.83	3.25	8.72	9.31	2.51	7.16	2.82	2.77	0.838	4.64	5.33	0.561	168
Annual	4.33	4.10	4.61	5.03	6.87	7.43	3.86	5.25	5.09	1.22	4.75	5.32	0.499	2808
Max.	9.61	9.25	9.45	24.3	32.2	212	125	63.4	58.8	21.3	19.5	6.28	2.83	
Min.	1.39	<0.3	1.56	<0.5	<0.8	<0.3	<0.3	0.761	0.697	<0.3	0.525	4.71	0.210	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.33	1.29	1.26	0.834	0.666	0.608	0.276	0.258	0.245	0.0915	1.37
Feb	1.53	1.47	1.48	1.25	1.87	0.857	0.649	0.662	0.643	0.102	0.936
Mar	0.898	0.852	0.794	0.936	0.491	0.757	0.416	1.33	1.32	0.169	1.74
Apr	1.77	1.72	1.24	1.01	2.50	0.704	0.322	2.56	2.54	0.192	1.59
May	0.947	0.881	1.17	1.71	1.59	1.09	0.920	1.15	1.12	0.181	0.782
June	0.954	0.933	1.33	2.09	2.23	0.344	1.94	0.927	0.920	0.116	0.526
July	0.598	0.575	0.896	1.25	2.36	0.387	1.00	0.669	0.660	0.180	0.253
Aug	0.862	0.834	1.05	1.18	2.68	0.559	1.48	0.760	0.748	0.286	0.767
Sept	0.581	0.552	0.473	0.563	0.0678	0.483	0.361	0.448	0.438	0.147	1.31
Oct	0.976	0.714	0.944	1.27	1.92	14.3	1.43	4.81	4.50	1.59	1.23
Nov	1.23	1.20	1.77	0.567	1.35	0.370	0.827	0.697	0.689	0.241	2.04
Dec	0.500	0.474	0.545	1.46	1.56	0.421	1.20	0.473	0.464	0.141	0.778
Annual	12.2	11.5	12.9	14.1	19.3	20.9	10.8	14.7	14.3	3.44	13.3

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	29.2	28.3	34.8	7.33	60.6	13.6	3.98	17.3	17.1	2.96	0.906	6.04	1.74	188
Feb	47.5	45.9	36.9	21.4	57.4	26.0	8.62	42.5	41.9	11.3	3.35	5.47	2.47	296
Mar	7.14	6.72	3.71	7.34	12.2	6.90	4.02	18.1	18.0	2.02	0.132	6.88	0.720	16.5
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	--	--	--	--	--	--	--	--	--	--	--	--	--	0
July	48.1	46.2	45.1	31.8	146	31.4	10.7	40.8	40.1	8.75	0.0724	7.14	3.30	50.4
Aug	40.4	39.2	37.9	18.5	129	19.8	8.34	35.6	35.2	5.78	0.547	6.26	2.83	29.5
Sept	45.3	44.1	35.1	20.4	129	20.1	7.16	24.2	23.7	4.66	0.102	6.99	2.85	57.9
Oct	26.3	25.8	23.1	9.66	72.2	8.91	3.30	14.7	14.5	2.53	0.318	6.50	1.69	291
Nov	28.4	27.9	27.2	10.9	73.1	9.41	2.82	15.1	14.9	2.41	0.430	6.37	1.85	185
Dec	25.4	25.0	10.5	6.45	45.6	6.49	3.10	22.4	22.3	3.49	0.205	6.69	1.34	206
Annual	33.3	32.5	27.9	13.1	69.1	14.7	5.06	24.5	24.2	5.09	1.06	5.97	1.96	1320
Max.	348	343	240	119	653	91.0	38.1	133	131	37.9	9.12	7.21	15.9	
Min.	7.14	6.72	3.71	2.92	12.2	2.85	1.61	8.87	8.75	1.43	0.0617	5.04	0.720	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	5.48	5.33	6.54	1.38	11.4	2.55	0.747	3.26	3.21	0.556	0.170
Feb	14.0	13.6	10.9	6.31	17.0	7.70	2.55	12.6	12.4	3.34	0.991
Mar	0.118	0.111	0.0613	0.121	0.201	0.114	0.0664	0.299	0.296	0.0333	<0.01
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.00	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	2.42	2.33	2.27	1.60	7.37	1.58	0.538	2.06	2.02	0.441	<0.01
Aug	1.19	1.16	1.12	0.546	3.81	0.585	0.246	1.05	1.04	0.171	0.0161
Sept	2.62	2.55	2.03	1.18	7.44	1.17	0.414	1.40	1.37	0.270	<0.01
Oct	7.66	7.50	6.74	2.82	21.1	2.60	0.963	4.29	4.23	0.738	0.0927
Nov	5.27	5.16	5.04	2.02	13.5	1.74	0.521	2.79	2.76	0.446	0.0796
Dec	5.22	5.14	2.17	1.33	9.39	1.34	0.638	4.61	4.58	0.719	0.0422
Annual	44.0	42.9	36.9	17.3	91.2	19.4	6.68	32.3	31.9	6.71	1.40

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	--	--	--	--	--	--	--	--	--	--	--	--	--	100
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	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	5.53	4.21	2.79	25.4	<0.8	21.8	1.81	9.41	8.94	2.88	3.14	5.50	0.577	549
Feb	5.82	4.68	3.77	60.6	3.87	18.9	36.4	8.03	7.62	2.35	4.14	5.38	1.11	448
Mar	4.44	3.69	2.81	13.4	1.84	12.5	1.99	5.64	5.37	1.21	3.47	5.46	0.450	239
Apr	4.11	3.49	2.95	10.4	<0.8	10.4	2.84	6.26	6.04	2.00	1.74	5.76	0.420	137
May	3.03	2.86	2.88	4.22	<0.8	2.90	2.00	5.62	5.56	0.915	7.56	5.12	0.619	241
June	2.54	2.38	2.95	7.18	<0.8	2.64	5.46	7.56	7.50	0.918	4.55	5.34	0.426	44.0
July	5.52	4.93	2.95	11.4	<0.8	9.84	5.02	35.4	35.1	3.28	2.82	5.55	0.720	26.8
Aug	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Sept	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Oct	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Nov	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Dec	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Annual	4.90	3.97	3.08	28.1	1.61	15.4	11.3	8.08	7.75	2.10	4.00	5.40	0.692	1685
Max.	8.83	8.40	9.60	124	22.8	31.9	95.0	40.7	40.6	3.33	8.71	6.81	1.91	
Min.	2.21	2.01	2.27	3.19	<0.8	2.24	0.746	3.71	3.66	0.725	0.155	5.06	0.250	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	3.04	2.31	1.53	14.0	0.259	12.0	0.993	5.17	4.91	1.58	1.72
Feb	2.61	2.10	1.69	27.2	1.74	8.48	16.3	3.60	3.42	1.06	1.86
Mar	1.06	0.882	0.671	3.20	0.439	3.00	0.475	1.35	1.28	0.288	0.829
Apr	0.561	0.476	0.402	1.43	0.0928	1.41	0.388	0.855	0.824	0.273	0.237
May	0.731	0.689	0.695	1.02	0.145	0.699	0.482	1.36	1.34	0.221	1.82
June	0.112	0.105	0.130	0.316	0.0226	0.116	0.240	0.333	0.330	0.0404	0.200
July	0.148	0.132	0.0790	0.306	0.0182	0.264	0.134	0.947	0.942	0.0880	0.0755
Aug	**	**	**	**	**	**	**	**	**	**	**
Sept	**	**	**	**	**	**	**	**	**	**	**
Oct	**	**	**	**	**	**	**	**	**	**	**
Nov	**	**	**	**	**	**	**	**	**	**	**
Dec	**	**	**	**	**	**	**	**	**	**	**
Annual	8.26	6.69	5.20	47.4	2.71	26.0	19.0	13.6	13.1	3.55	6.75

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Sept	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Oct	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Nov	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
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 3.24 Monthly results

Site: Jembrana

Country: Indonesia

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	9.25	8.11	8.00	65.3	33.0	19.0	36.4	4.08	3.67	3.88	5.68	5.25	1.57	137
Feb	11.5	10.7	7.00	27.8	16.0	12.9	9.46	2.45	2.17	2.39	11.1	4.96	1.42	280
Mar	11.4	10.6	6.82	58.2	1.19	13.0	41.6	4.57	4.29	3.18	10.1	5.00	1.67	235
Apr	6.61	5.81	7.14	39.9	30.2	13.2	23.7	3.07	2.79	2.79	15.6	4.81	2.05	150
May	6.18	4.69	4.66	79.8	25.2	24.8	13.8	9.40	8.87	4.08	5.52	5.26	1.33	262
June	16.7	8.73	20.9	420	45.6	133	192	22.7	19.9	16.7	5.45	5.26	6.06	41.3
July	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Aug	14.5	7.52	30.4	254	<0.8	116	94.4	31.0	28.5	14.4	10.0	5.00	3.54	46.4
Sept	9.62	5.61	21.6	86.1	<0.8	66.4	13.9	30.6	29.2	9.11	3.59	5.45	1.79	94.7
Oct	6.85	4.37	15.5	53.5	0.903	41.2	7.26	19.2	18.3	5.19	4.50	5.35	1.15	457
Nov	7.71	6.21	58.1	27.2	21.1	24.9	3.20	32.5	32.0	4.47	4.94	5.31	2.09	442
Dec	17.0	15.4	102	50.3	1.48	26.4	10.7	133	132	6.53	1.42	5.85	3.17	88.5
Annual	8.99	7.18	23.8	60.7	14.4	30.0	19.7	20.3	19.7	4.74	6.91	5.16	1.78	2234
Max.	34.3	20.1	125	1303	87.0	246	439	144	144	28.7	23.4	6.17	13.7	
Min.	4.03	2.75	2.20	9.24	<0.8	2.66	<0.3	1.69	1.35	1.47	0.676	4.63	0.620	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.26	1.11	1.09	8.93	4.51	2.59	4.97	0.557	0.501	0.530	0.776
Feb	3.21	2.99	1.96	7.79	4.47	3.62	2.65	0.687	0.609	0.669	3.10
Mar	2.67	2.49	1.60	13.7	0.280	3.06	9.80	1.08	1.01	0.749	2.38
Apr	0.990	0.871	1.07	5.98	4.52	1.98	3.55	0.461	0.418	0.418	2.34
May	1.62	1.23	1.22	20.9	6.60	6.48	3.62	2.46	2.32	1.07	1.45
June	0.690	0.360	0.862	17.3	1.88	5.47	7.95	0.940	0.821	0.691	0.225
July	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	0.673	0.349	1.41	11.8	0.0316	5.38	4.38	1.44	1.32	0.670	0.465
Sept	0.911	0.532	2.05	8.16	0.0454	6.29	1.32	2.90	2.76	0.863	0.340
Oct	3.13	2.00	7.09	24.4	0.413	18.8	3.32	8.78	8.37	2.38	2.06
Nov	3.41	2.75	25.7	12.0	9.31	11.0	1.41	14.4	14.1	1.98	2.18
Dec	1.50	1.36	9.03	4.45	0.131	2.34	0.951	11.7	11.7	0.578	0.126
Annual	20.1	16.0	53.1	136	32.2	67.0	43.9	45.4	44.0	10.6	15.4

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	9.75	8.23	18.7	22.1	35.6	25.3	7.03	9.28	8.73	5.00	2.66	5.57	1.24	109
Feb	8.37	7.07	7.69	14.7	6.80	21.7	5.14	7.95	7.48	4.87	4.26	5.37	0.803	179
Mar	8.04	6.77	6.13	18.3	3.32	21.0	6.78	8.64	8.19	5.56	4.12	5.38	0.745	224
Apr	11.1	9.33	10.2	10.9	9.91	28.5	5.54	11.2	10.6	6.33	3.59	5.45	0.849	189
May	7.50	5.72	10.7	32.9	18.0	29.6	5.14	9.29	8.65	5.99	4.86	5.31	1.04	173
June	8.25	6.02	11.6	27.3	26.0	36.9	8.31	12.9	12.1	8.81	4.17	5.38	1.26	28.8
July	10.8	5.58	16.2	97.3	35.8	86.6	12.2	18.6	16.8	13.3	6.03	5.22	2.17	5.5
Aug	13.1	10.2	15.1	53.5	19.1	48.3	4.88	12.8	11.8	8.44	2.24	5.65	1.28	57.5
Sept	14.2	8.80	12.6	82.4	<0.8	90.1	12.0	13.6	11.7	12.2	1.78	5.75	2.16	43.2
Oct	8.77	7.11	7.21	29.6	4.36	27.6	3.72	7.89	7.29	5.35	4.65	5.33	1.43	210
Nov	11.0	9.94	4.11	18.8	82.9	17.7	15.4	3.96	3.58	10.6	3.18	5.50	1.18	243
Dec	6.14	5.38	2.78	14.5	1.59	12.5	1.68	3.17	2.90	7.16	5.82	5.23	0.576	174
Annual	9.17	7.61	8.19	23.3	20.9	25.9	6.77	7.98	7.43	6.84	4.04	5.39	1.03	1635
Max.	44.3	26.5	21.2	221	221	295	93.1	65.7	59.4	42.9	20.0	6.48	6.38	
Min.	4.34	3.51	1.88	5.61	<0.8	4.79	0.769	1.51	1.38	1.27	0.331	4.70	0.420	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.06	0.896	2.04	2.41	3.88	2.75	0.766	1.01	0.951	0.544	0.290
Feb	1.50	1.26	1.38	2.64	1.22	3.87	0.920	1.42	1.34	0.871	0.762
Mar	1.80	1.51	1.37	4.08	0.743	4.70	1.52	1.93	1.83	1.24	0.923
Apr	2.08	1.76	1.93	2.05	1.87	5.38	1.05	2.12	2.00	1.19	0.677
May	1.30	0.989	1.85	5.69	3.11	5.11	0.889	1.61	1.50	1.04	0.840
June	0.237	0.173	0.334	0.785	0.750	1.06	0.239	0.370	0.347	0.254	0.120
July	0.0594	0.0307	0.0893	0.535	0.197	0.476	0.0672	0.102	0.0922	0.0729	0.0331
Aug	0.756	0.589	0.870	3.08	1.10	2.78	0.281	0.736	0.676	0.485	0.129
Sept	0.615	0.380	0.544	3.56	0.0294	3.89	0.520	0.588	0.503	0.526	0.0768
Oct	1.84	1.49	1.51	6.22	0.916	5.80	0.780	1.66	1.53	1.12	0.976
Nov	2.68	2.42	1.00	4.58	20.2	4.30	3.75	0.964	0.871	2.59	0.773
Dec	1.07	0.937	0.484	2.53	0.276	2.18	0.293	0.552	0.505	1.25	1.01
Annual	15.0	12.4	13.4	38.2	34.3	42.3	11.1	13.1	12.1	11.2	6.61

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	34.3	19.5	14.2	275	20.1	247	7.19	7.96	2.63	29.9	24.8	4.60	5.39	29.6
Feb	32.3	22.7	22.3	175	29.9	161	5.34	11.2	7.77	19.6	18.8	4.72	4.08	35.2
Mar	17.2	10.1	12.0	129	20.1	117	4.83	6.66	4.14	14.5	10.8	4.97	2.75	62.6
Apr	34.2	7.47	12.6	501	16.5	444	9.79	12.9	3.29	48.8	9.33	5.03	7.81	25.7
May	22.7	21.6	26.5	20.2	39.5	18.0	1.44	7.55	7.16	3.05	16.7	4.78	2.13	62.5
June	12.5	11.7	22.3	16.2	30.4	13.9	1.21	6.37	6.07	2.48	7.48	5.13	1.28	127
July	*	*	*	*	*	*	*	*	*	*	*	*	*	90.5
Aug	21.2	19.8	17.6	29.9	44.5	23.8	1.50	2.30	1.79	3.10	11.7	4.93	1.78	262
Sept	5.67	3.08	6.19	51.4	4.74	43.0	1.30	1.73	0.804	4.65	7.20	5.14	1.18	88.1
Oct	17.1	4.63	8.23	234	6.98	206	5.46	6.75	2.29	22.8	7.86	5.10	3.85	223
Nov	12.5	3.61	7.09	169	10.7	148	4.27	4.78	1.61	15.9	5.57	5.25	2.87	183
Dec	30.6	11.6	17.6	353	16.3	315	9.91	9.92	3.12	35.4	16.4	4.78	6.07	59.6
Annual	18.2	9.83	14.1	157	19.1	139	4.30	6.66	3.65	15.9	10.2	4.99	3.13	1248
Max.	139	84.6	232	2512	517	2230	70.4	61.6	60.1	248	66.1	6.45	35.4	
Min.	0.500	0.365	0.900	0.700	<0.8	0.600	<0.3	0.200	<0.2	<0.3	0.355	4.18	0.220	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.02	0.576	0.421	8.14	0.596	7.31	0.213	0.236	0.0779	0.887	0.735
Feb	1.14	0.798	0.786	6.17	1.05	5.65	0.188	0.395	0.273	0.688	0.663
Mar	1.07	0.634	0.749	8.11	1.26	7.30	0.302	0.417	0.259	0.908	0.676
Apr	0.879	0.192	0.322	12.8	0.424	11.4	0.251	0.331	0.0844	1.25	0.239
May	1.42	1.35	1.66	1.26	2.47	1.13	0.0901	0.472	0.447	0.191	1.05
June	1.58	1.48	2.81	2.05	3.85	1.76	0.153	0.806	0.768	0.314	0.946
July	*	*	*	*	*	*	*	*	*	*	*
Aug	5.54	5.17	4.60	7.82	11.6	6.22	0.392	0.601	0.467	0.811	3.07
Sept	0.500	0.271	0.545	4.53	0.417	3.79	0.115	0.153	0.0708	0.409	0.634
Oct	3.81	1.03	1.84	52.2	1.56	46.0	1.22	1.51	0.511	5.09	1.75
Nov	2.29	0.661	1.30	31.0	1.96	27.0	0.780	0.874	0.294	2.90	1.02
Dec	1.82	0.693	1.05	21.1	0.974	18.8	0.590	0.591	0.186	2.11	0.979
Annual	22.7	12.3	17.6	196	23.8	174	5.37	8.31	4.56	19.9	12.7

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	100
Feb	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
Mar	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	96.8
Apr	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	100
May	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	95.2	100
June	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
July	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Aug	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	100
Sept	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	100
Oct	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	100
Nov	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	100
Dec	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	100
Annual	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	99.7

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	*	*	*	16.0
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	19.0
Mar	18.2	13.2	14.2	93.1	19.5	81.7	4.57	4.59	2.83	11.6	6.82	5.17	2.22	50.0
Apr	12.8	6.79	10.6	114	8.16	100	3.24	4.83	2.67	11.9	7.82	5.11	2.12	52.4
May	17.6	14.0	29.0	68.4	23.4	58.5	1.75	7.21	5.95	7.79	22.5	4.65	2.48	30.4
June	8.31	7.21	9.42	21.3	9.94	18.2	0.577	2.36	1.97	2.55	9.18	5.04	0.994	182
July	7.44	6.60	12.0	16.8	7.70	13.9	0.456	1.92	1.62	2.29	14.5	4.84	1.17	25.1
Aug	10.1	3.34	6.98	130	8.52	112	3.25	2.83	0.403	12.3	6.11	5.21	2.39	16.7
Sept	17.6	1.89	3.36	297	6.35	261	6.32	6.23	0.602	29.2	3.30	5.48	4.46	117
Oct	15.7	4.60	7.08	211	18.9	184	4.70	5.55	1.56	20.9	3.41	5.47	3.44	63.0
Nov	21.1	7.11	8.20	261	5.61	233	5.12	6.34	1.31	26.1	9.52	5.02	4.36	57.6
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	8.5
Annual	13.0	5.92	9.05	134	10.6	117	3.05	4.37	1.84	13.6	7.77	5.11	2.52	638
Max.	53.6	35.1	120	733	99.3	645	26.1	50.0	41.8	72.6	38.9	6.14	10.6	
Min.	3.50	<0.3	0.700	5.80	<0.8	4.90	<0.3	0.600	<0.2	0.800	0.724	4.41	0.520	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	*
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	0.909	0.662	0.708	4.66	0.977	4.09	0.228	0.230	0.141	0.581	0.341
Apr	0.672	0.356	0.553	5.97	0.428	5.25	0.170	0.253	0.140	0.623	0.410
May	0.534	0.427	0.881	2.08	0.713	1.78	0.0531	0.219	0.181	0.237	0.683
June	1.51	1.31	1.72	3.88	1.81	3.30	0.105	0.429	0.358	0.464	1.67
July	0.187	0.166	0.302	0.423	0.194	0.350	0.0115	0.0483	0.0408	0.0576	0.364
Aug	0.168	0.0557	0.116	2.16	0.142	1.87	0.0542	0.0471	<0.01	0.205	0.102
Sept	2.06	0.221	0.394	34.7	0.742	30.5	0.740	0.729	0.0705	3.42	0.386
Oct	0.990	0.290	0.446	13.3	1.19	11.6	0.296	0.349	0.0984	1.32	0.215
Nov	1.22	0.409	0.472	15.0	0.323	13.4	0.295	0.365	0.0753	1.50	0.549
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	8.29	3.77	5.77	85.6	6.77	74.9	1.94	2.79	1.17	8.65	4.95

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Mar	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	100
Apr	100	100	100	100	100	100	100	100	100	100	95.4	95.4	95.4	100
May	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	88.8	88.8	88.8	100
June	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	96.7	96.7	96.7	100
July	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	75.6	75.6	75.6	100
Aug	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	62.9	62.9	62.9	100
Sept	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.1	99.1	99.1	100
Oct	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	98.4	98.4	98.4	100
Nov	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	75.7	75.7	75.7	100

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	25.8	9.16	10.3	315	8.32	277	6.11	6.82	0.876	30.6	14.3	4.84	5.26	83.8
Feb	45.1	12.3	11.7	621	8.58	546	12.0	14.6	2.82	61.7	14.8	4.83	5.28	55.9
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	74.5
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	66.5
May	*	*	*	*	*	*	*	*	*	*	*	*	*	73.0
June	*	*	*	*	*	*	*	*	*	*	*	*	*	82.1
July	6.40	1.73	15.9	75.1	6.30	77.4	2.50	2.80	1.13	6.60	13.2	4.88	1.99	360
Aug	12.4	9.54	8.91	54.2	7.20	47.6	1.45	2.59	1.57	5.57	17.1	4.77	1.73	94.3
Sept	4.31	2.87	5.15	25.7	3.06	23.8	0.937	1.09	0.578	2.94	6.93	5.16	0.800	184
Oct	17.5	11.9	22.1	104	26.1	93.2	2.96	5.50	3.49	11.1	12.5	4.90	2.69	58.7
Nov	19.8	7.87	14.2	224	9.10	197	4.86	7.07	2.80	22.0	13.6	4.87	3.75	107
Dec	28.8	11.6	26.5	311	25.5	285	6.88	8.79	2.66	31.8	20.5	4.69	5.28	107
Annual	18.8	8.30	13.2	196	11.3	175	4.27	5.63	1.87	19.7	13.6	4.87	3.17	1346
Max.	495	81.3	145	8513	141	7264	157	197	40.2	825	97.7	5.44	29.2	
Min.	2.50	<0.3	1.50	7.60	<0.8	6.10	0.300	0.600	<0.2	1.00	3.63	4.01	0.460	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	2.17	0.768	0.861	26.4	0.697	23.2	0.512	0.572	0.0734	2.57	1.20
Feb	2.52	0.687	0.652	34.7	0.480	30.5	0.672	0.813	0.158	3.45	0.830
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	2.30	0.624	5.72	27.0	2.27	27.8	0.899	1.01	0.405	2.37	4.74
Aug	1.17	0.899	0.840	5.11	0.679	4.49	0.136	0.245	0.148	0.525	1.61
Sept	0.791	0.528	0.946	4.73	0.563	4.37	0.172	0.201	0.106	0.540	1.27
Oct	1.03	0.697	1.29	6.13	1.53	5.47	0.174	0.323	0.205	0.649	0.736
Nov	2.12	0.844	1.53	24.0	0.977	21.2	0.521	0.758	0.301	2.36	1.46
Dec	3.07	1.24	2.83	33.2	2.72	30.4	0.733	0.937	0.284	3.39	2.18
Annual	25.3	11.2	17.7	264	15.2	235	5.74	7.58	2.52	26.5	18.3

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	97.9	97.9	97.9	100
Feb	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	84.8	84.8	84.8	100
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	96.8
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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	100
Aug	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	97.6	97.6	97.6	100
Sept	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	89.2	89.2	89.2	100
Oct	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	97.9	97.9	97.9	100
Nov	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	92.7	92.7	92.7	100
Dec	100	100	100	100	100	100	100	100	100	100	98.0	98.0	98.0	100
Annual	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	48.2	48.2	48.2	99.7

Terms and abbreviations are given in Table 3.5.

Table 3.29 Monthly results

Site: Happo

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	*	*	*	165
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	154
Mar	11.6	10.6	18.8	19.1	27.3	16.4	0.993	7.39	7.04	2.60	3.52	5.45	1.03	226
Apr	1.20	1.13	2.40	0.600	1.10	1.10	0.300	1.50	1.48	0.600	3.24	5.49	0.259	63.0
May	9.79	9.62	16.9	3.93	19.1	2.85	1.55	6.48	6.42	1.99	2.34	5.63	0.650	104
June	1.64	1.59	2.95	0.881	2.09	0.851	<0.3	1.24	1.22	0.473	2.90	5.54	0.244	421
July	1.88	1.83	3.04	0.927	1.87	0.713	<0.3	0.893	0.877	0.428	4.03	5.39	0.306	647
Aug	16.8	16.6	6.79	4.33	7.67	2.26	<0.3	1.33	1.28	0.802	29.1	4.54	1.60	50.5
Sept	4.06	3.89	3.56	3.15	3.27	2.83	1.10	1.16	1.09	0.533	7.40	5.13	0.517	245
Oct	3.10	2.91	5.20	3.72	4.38	3.14	0.407	1.38	1.31	0.694	5.30	5.28	0.431	134
Nov	4.27	3.81	6.30	8.98	4.93	7.63	0.509	2.53	2.37	1.22	5.23	5.28	0.528	200
Dec	4.97	4.38	5.77	11.8	5.04	9.79	0.508	1.50	1.29	1.26	8.74	5.06	0.694	200
Annual	4.12	3.86	5.54	5.00	5.58	4.21	0.509	1.92	1.83	0.853	5.50	5.26	0.494	2608
Max.	71.3	70.9	75.2	137	105	111	6.30	38.1	37.6	11.2	115	6.20	5.70	
Min.	0.300	<0.3	<0.5	<0.5	<0.8	0.500	<0.3	0.400	0.387	0.300	0.631	3.94	0.139	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	*
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	2.63	2.41	4.25	4.32	6.17	3.71	0.225	1.67	1.59	0.589	0.797
Apr	0.0756	0.0714	0.151	0.0378	0.0693	0.0693	0.0189	0.0945	0.0930	0.0378	0.204
May	1.02	1.00	1.76	0.409	1.98	0.296	0.161	0.674	0.668	0.207	0.243
June	0.690	0.668	1.24	0.370	0.880	0.358	0.114	0.520	0.512	0.199	1.22
July	1.21	1.18	1.97	0.600	1.21	0.461	0.153	0.577	0.567	0.277	2.61
Aug	0.847	0.841	0.343	0.219	0.387	0.114	0.0148	0.0669	0.0644	0.0405	1.47
Sept	0.994	0.953	0.873	0.773	0.800	0.693	0.269	0.283	0.268	0.131	1.81
Oct	0.415	0.389	0.695	0.497	0.586	0.420	0.0545	0.185	0.176	0.0928	0.709
Nov	0.853	0.761	1.26	1.80	0.986	1.53	0.102	0.506	0.473	0.244	1.05
Dec	0.992	0.874	1.15	2.36	1.01	1.95	0.101	0.299	0.257	0.250	1.74
Annual	10.7	10.1	14.4	13.0	14.5	11.0	1.33	5.00	4.76	2.22	14.3

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Mar	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	74.5	74.5	74.5	100
Apr	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	100
May	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	22.1	22.1	22.1	100
June	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	77.6	77.6	77.6	100
July	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.1	83.1	83.1	100
Aug	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	91.1	91.1	91.1	100
Sept	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.2	99.2	99.2	100
Oct	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	98.4	98.4	98.4	100
Nov	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	79.3	79.3	79.3	100
Dec	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	90.5	100
Annual	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.0	70.0	70.0	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	14.2	12.9	17.0	27.7	9.89	21.8	0.681	1.27	0.794	2.48	31.6	4.50	2.02	121
Feb	12.9	10.9	12.7	37.6	10.4	32.4	1.18	5.00	4.30	4.37	14.1	4.85	1.52	145
Mar	11.1	9.66	18.8	27.4	16.9	23.2	1.33	2.42	1.92	2.94	18.4	4.74	1.55	223
Apr	7.29	6.34	11.1	17.7	12.0	15.7	0.862	2.78	2.44	2.17	7.24	5.14	0.882	248
May	10.5	9.49	17.3	17.9	18.4	16.2	0.746	3.68	3.33	2.19	12.1	4.92	1.23	203
June	4.43	4.17	9.08	4.13	8.11	4.19	<0.3	0.660	0.570	0.438	9.63	5.02	0.699	399
July	5.72	5.43	8.71	4.92	9.83	4.75	<0.3	0.677	0.574	0.491	10.1	5.00	0.752	1219
Aug	9.07	8.80	13.9	5.20	17.0	4.49	<0.3	2.23	2.13	0.526	13.2	4.88	1.04	163
Sept	6.36	5.52	10.8	16.7	9.23	14.0	0.429	1.40	1.10	1.77	10.3	4.99	0.951	348
Oct	4.05	2.76	8.25	25.3	4.09	21.5	0.585	1.68	1.22	2.76	6.81	5.17	0.867	215
Nov	13.8	10.2	21.2	71.8	19.0	59.9	1.84	3.25	1.96	7.42	16.7	4.78	2.28	52.0
Dec	7.15	4.20	8.86	58.0	7.40	48.9	1.13	2.02	0.962	5.81	8.64	5.06	1.40	152
Annual	7.18	6.36	11.1	15.8	10.7	13.7	0.490	1.61	1.31	1.69	11.4	4.94	1.00	3486
Max.	50.0	45.1	127	249	108	222	9.60	23.4	22.5	25.6	75.3	5.45	6.84	
Min.	1.10	1.01	3.20	0.900	1.10	1.10	<0.3	0.200	<0.2	<0.3	3.59	4.12	0.290	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.72	1.56	2.06	3.36	1.20	2.64	0.0824	0.153	0.0961	0.300	3.82
Feb	1.86	1.58	1.84	5.44	1.50	4.68	0.171	0.722	0.621	0.632	2.03
Mar	2.47	2.16	4.21	6.12	3.77	5.19	0.298	0.542	0.429	0.657	4.10
Apr	1.80	1.57	2.74	4.39	2.98	3.89	0.213	0.688	0.604	0.538	1.79
May	2.12	1.93	3.51	3.63	3.74	3.28	0.151	0.747	0.676	0.444	2.47
June	1.76	1.66	3.62	1.65	3.23	1.67	0.0347	0.263	0.227	0.174	3.84
July	6.97	6.62	10.6	5.99	12.0	5.79	0.182	0.825	0.700	0.598	12.2
Aug	1.48	1.43	2.27	0.847	2.77	0.731	0.0376	0.363	0.347	0.0857	2.15
Sept	2.21	1.92	3.76	5.79	3.21	4.88	0.149	0.487	0.382	0.615	3.59
Oct	0.872	0.592	1.77	5.44	0.880	4.63	0.126	0.362	0.262	0.592	1.47
Nov	0.717	0.529	1.10	3.73	0.990	3.11	0.0955	0.169	0.102	0.386	0.869
Dec	1.09	0.639	1.35	8.82	1.13	7.44	0.172	0.307	0.146	0.883	1.31
Annual	25.0	22.2	38.8	55.1	37.4	47.8	1.71	5.61	4.58	5.89	39.7

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	100
Feb	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	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	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100

Terms and abbreviations are given in Table 3.5.

Table 3.31 Monthly results

Site: Oki

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	30.8	9.15	14.6	413	9.00	360	8.28	9.91	2.13	40.0	13.5	4.87	6.04	125
Feb	30.2	16.2	30.0	265	26.6	232	6.08	11.9	6.85	27.1	17.5	4.76	5.19	55.5
Mar	17.9	8.93	13.9	174	11.3	149	3.60	9.02	5.80	18.2	8.63	5.06	2.83	122
Apr	51.5	9.78	19.9	828	17.2	702	14.6	22.3	7.11	77.9	7.27	5.14	11.9	80.3
May	28.1	18.4	34.3	175	29.5	161	4.93	13.8	10.4	20.1	18.2	4.74	4.40	32.3
June	4.99	3.41	5.73	29.8	4.52	26.2	0.952	1.25	0.687	3.20	6.36	5.20	0.892	153
July	4.16	2.60	5.99	28.6	3.41	25.8	0.949	1.27	0.713	3.16	6.66	5.18	0.853	275
Aug	20.2	18.1	7.11	39.5	9.11	34.6	1.24	1.34	0.591	3.76	27.3	4.56	2.06	326
Sept	8.49	5.35	9.76	58.2	4.81	52.0	1.43	2.24	1.12	5.93	10.7	4.97	1.49	168
Oct	18.7	6.48	21.4	230	9.33	202	5.00	8.37	4.00	23.1	11.1	4.96	3.86	25.6
Nov	34.8	16.5	34.1	342	21.8	303	7.28	14.1	7.59	34.8	25.6	4.59	6.48	51.1
Dec	124	14.1	39.8	2111	23.9	1825	40.1	46.4	6.94	204	18.1	4.74	28.8	89.6
Annual	23.7	9.94	13.2	264	10.0	229	5.39	7.56	2.61	25.9	14.6	4.84	4.37	1503
Max.	690	178	458	13009	503	11211	242	255	180	1249	132	6.55	164	
Min.	1.10	<0.3	1.50	2.60	<0.8	2.40	<0.3	0.300	<0.2	0.700	0.282	3.88	0.300	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	3.86	1.15	1.83	51.8	1.13	45.1	1.04	1.24	0.267	5.01	1.70
Feb	1.68	0.902	1.67	14.7	1.48	12.9	0.338	0.659	0.380	1.51	0.973
Mar	2.18	1.09	1.70	21.2	1.38	18.2	0.439	1.10	0.707	2.22	1.05
Apr	4.13	0.785	1.60	66.5	1.38	56.4	1.17	1.79	0.570	6.25	0.583
May	0.909	0.594	1.11	5.66	0.953	5.22	0.159	0.448	0.335	0.649	0.590
June	0.763	0.522	0.877	4.56	0.692	4.00	0.146	0.192	0.105	0.490	0.973
July	1.14	0.715	1.65	7.86	0.937	7.08	0.260	0.349	0.196	0.868	1.83
Aug	6.59	5.91	2.32	12.9	2.97	11.3	0.405	0.436	0.193	1.22	8.91
Sept	1.42	0.897	1.64	9.75	0.805	8.72	0.240	0.376	0.187	0.993	1.79
Oct	0.478	0.166	0.547	5.89	0.239	5.18	0.128	0.214	0.102	0.593	0.284
Nov	1.78	0.846	1.75	17.5	1.11	15.5	0.372	0.723	0.388	1.78	1.31
Dec	11.1	1.26	3.57	189	2.14	163	3.59	4.16	0.622	18.3	1.62
Annual	35.6	14.9	19.9	397	15.0	344	8.09	11.4	3.92	38.9	21.9

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH	EC	Precip. %PCL
Jan	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	84.4	84.4	84.4	87.1
Feb	79.9	79.9	79.9	79.9	79.9	79.9	79.9	79.9	79.9	79.9	79.6	79.6	79.6	96.6
Mar	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.0	74.0	74.0	93.5
Apr	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	98.6	98.6	98.6	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	100	100	100	100	100	100	100	100	100	100	99.6	99.6	99.6	100
July	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.0	96.0	96.0	93.5
Aug	100	100	100	100	100	100	100	100	100	100	99.8	99.8	99.8	93.5
Sept	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.3	86.3	86.3	93.3
Oct	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	98.4	98.4	98.4	100
Nov	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	97.0	97.0	97.0	100
Dec	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	84.5	84.5	84.5	96.8
Annual	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	92.4	92.4	92.4	96.2

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	9.64	8.74	6.75	17.8	6.36	14.9	1.25	0.798	0.534	1.76	18.2	4.74	1.23	172
Feb	13.5	12.6	7.75	19.2	10.5	15.4	1.03	1.47	1.14	1.61	20.0	4.70	1.47	132
Mar	13.6	12.4	11.6	24.6	12.9	20.6	1.14	2.75	2.30	2.43	19.5	4.71	1.59	198
Apr	9.51	9.26	7.89	5.74	8.90	4.15	0.534	2.93	2.84	<0.3	14.6	4.84	0.978	146
May	7.99	7.64	8.35	6.86	12.4	5.73	0.587	1.78	1.66	0.646	11.0	4.96	0.828	268
June	3.80	3.70	3.72	2.02	3.57	1.65	0.455	0.258	0.243	<0.3	7.58	5.12	0.506	418
July	3.71	3.56	3.27	3.07	2.79	2.51	0.462	0.221	<0.2	<0.3	7.95	5.10	0.475	661
Aug	6.02	4.91	5.76	21.5	4.57	18.4	0.784	1.53	1.15	2.39	11.1	4.95	0.949	72.4
Sept	8.45	5.42	5.55	57.8	2.70	50.3	1.79	1.32	0.231	6.00	11.2	4.95	1.49	494
Oct	2.95	2.24	2.67	13.1	1.54	11.7	0.795	1.19	0.938	2.00	6.05	5.22	0.548	167
Nov	7.04	5.71	5.82	26.2	2.01	22.1	0.965	1.26	0.777	2.66	13.5	4.87	1.10	86.9
Dec	19.2	14.8	20.2	87.8	11.7	73.2	2.33	4.70	3.11	8.34	28.5	4.55	2.86	28.7
Annual	6.75	6.19	5.75	11.2	5.94	9.34	0.719	1.10	0.909	1.05	11.4	4.94	0.839	2842
Max.	124	121	119	735	122	644	24.1	39.0	35.8	71.2	355	6.16	17.3	
Min.	<0.3	<0.3	0.600	<0.5	<0.8	0.500	<0.3	<0.2	<0.2	<0.3	0.692	3.45	0.150	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.65	1.50	1.16	3.05	1.09	2.56	0.215	0.137	0.0915	0.302	3.12
Feb	1.78	1.66	1.02	2.53	1.39	2.04	0.136	0.194	0.150	0.212	2.63
Mar	2.70	2.45	2.29	4.85	2.54	4.08	0.225	0.542	0.454	0.479	3.85
Apr	1.38	1.35	1.15	0.836	1.29	0.604	0.0777	0.426	0.413	0.0413	2.12
May	2.14	2.04	2.23	1.83	3.30	1.53	0.157	0.476	0.444	0.173	2.93
June	1.59	1.55	1.56	0.843	1.49	0.689	0.190	0.108	0.102	0.0498	3.17
July	2.45	2.35	2.16	2.03	1.85	1.66	0.306	0.146	0.115	0.0567	5.25
Aug	0.436	0.356	0.417	1.56	0.331	1.33	0.0568	0.111	0.0831	0.173	0.806
Sept	4.17	2.67	2.74	28.5	1.33	24.8	0.881	0.651	0.114	2.96	5.53
Oct	0.493	0.375	0.448	2.20	0.258	1.95	0.133	0.199	0.157	0.335	1.01
Nov	0.612	0.496	0.506	2.28	0.175	1.92	0.0839	0.109	0.0676	0.232	1.18
Dec	0.551	0.424	0.579	2.52	0.335	2.10	0.0669	0.135	0.0893	0.239	0.817
Annual	19.2	17.6	16.4	31.7	16.9	26.5	2.04	3.12	2.58	2.98	32.5

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	100	100	100	100	100	100	100	100	100	99.7	99.7	99.7	100
Feb	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.4	99.4	99.4	100
Mar	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
Apr	100	100	100	100	100	100	100	100	100	100	100	100	100	100
May	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
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	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	100
Sept	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	6.7
Oct	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	98.8	98.8	98.8	80.6
Nov	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
Dec	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	90.7

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	17.4	6.59	9.29	211	7.01	180	4.15	5.48	1.65	23.3	12.7	4.90	3.65	45.5
Feb	23.7	6.78	6.33	338	7.72	280	6.52	7.69	1.63	35.8	8.39	5.08	5.31	42.0
Mar	13.7	6.25	12.7	145	16.5	124	3.47	4.74	2.11	16.4	10.0	5.00	2.79	152
Apr	19.0	13.0	25.3	115	27.8	99.1	3.33	8.44	6.32	12.6	15.7	4.81	2.89	75.4
May	6.03	2.85	5.95	61.0	5.16	52.8	1.19	2.17	1.03	7.75	6.13	5.21	1.20	362
June	4.58	1.79	5.59	58.0	2.71	46.2	0.703	1.66	0.679	5.44	6.98	5.16	1.12	232
July	5.86	2.23	4.88	72.3	2.02	60.2	1.44	1.75	0.455	7.15	7.63	5.12	1.34	234
Aug	15.8	2.65	2.64	257	1.55	218	4.81	5.67	0.967	25.8	7.49	5.13	3.89	320
Sept	73.8	14.6	3.47	1181	21.2	986	21.7	24.1	2.76	114	5.01	5.30	16.0	220
Oct	24.2	13.4	12.1	213	6.52	180	4.09	5.12	1.23	21.3	26.4	4.58	4.25	62.0
Nov	40.9	12.5	20.6	556	12.4	470	11.9	12.8	2.59	54.9	22.1	4.66	8.55	27.6
Dec	26.7	9.63	7.86	333	9.33	284	6.37	7.02	0.889	33.0	13.3	4.87	5.44	172
Annual	19.3	5.60	6.83	271	8.05	228	5.15	6.38	1.47	27.2	8.57	5.07	4.16	1943
Max.	476	206	163	5405	325	4484	97.6	104	58.9	520	198	6.24	70.5	
Min.	0.958	<0.3	<0.5	4.80	<0.8	4.04	<0.3	<0.2	<0.2	0.494	0.577	3.70	0.258	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.794	0.300	0.423	9.58	0.319	8.19	0.189	0.249	0.0751	1.06	0.577
Feb	0.995	0.285	0.266	14.2	0.324	11.8	0.274	0.323	0.0685	1.51	0.352
Mar	2.08	0.946	1.93	21.9	2.50	18.8	0.526	0.718	0.319	2.49	1.52
Apr	1.43	0.983	1.91	8.70	2.10	7.48	0.252	0.637	0.477	0.952	1.18
May	2.18	1.03	2.15	22.1	1.86	19.1	0.428	0.783	0.371	2.80	2.22
June	1.06	0.415	1.29	13.4	0.627	10.7	0.163	0.384	0.157	1.26	1.62
July	1.37	0.521	1.14	16.9	0.472	14.1	0.338	0.410	0.107	1.67	1.78
Aug	5.04	0.849	0.846	82.3	0.497	69.6	1.54	1.81	0.309	8.24	2.40
Sept	16.2	3.20	0.762	260	4.65	217	4.78	5.29	0.605	25.1	1.10
Oct	1.50	0.830	0.749	13.2	0.404	11.2	0.253	0.318	0.0764	1.32	1.64
Nov	1.13	0.346	0.568	15.3	0.341	13.0	0.328	0.352	0.0715	1.51	0.611
Dec	4.60	1.66	1.35	57.2	1.60	48.8	1.10	1.21	0.153	5.68	2.29
Annual	37.5	10.9	13.3	527	15.6	442	10.0	12.4	2.86	52.9	16.6

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	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
Feb	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
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	100
May	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.6	99.6	99.6	100
June	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.6	99.6	99.6	100
July	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
Aug	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.4	94.4	94.4	100
Sept	100	100	100	100	100	100	100	100	100	100	99.8	99.8	99.8	100
Oct	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	100
Nov	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	85.2	85.2	85.2	100
Dec	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	100
Annual	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.2	92.2	92.2	100

Terms and abbreviations are given in Table 3.5.

Table 3.34 Monthly results

Site: Ogasawara

Country: Japan

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	20.3	13.2	6.34	155	7.45	117	3.02	3.77	1.24	14.0	38.1	4.42	3.79	58.0
Feb	22.3	13.7	4.55	175	4.54	142	4.67	4.67	1.61	17.1	25.7	4.59	3.68	31.2
Mar	7.58	4.56	5.39	56.3	6.81	50.2	1.55	1.71	0.628	5.70	8.55	5.07	1.31	161
Apr	15.8	12.6	10.6	61.1	18.8	52.3	2.29	2.79	1.66	6.57	19.0	4.72	2.05	98.5
May	4.24	2.66	1.73	32.7	2.27	26.2	0.804	1.06	0.497	3.50	8.61	5.06	0.906	217
June	20.7	18.7	3.19	43.9	3.09	33.0	1.88	2.31	1.60	4.33	43.4	4.36	2.57	17.7
July	17.4	15.9	1.49	37.8	1.84	24.9	1.50	1.48	0.941	2.83	36.2	4.44	2.12	83.2
Aug	14.2	12.9	1.86	26.1	1.70	21.7	0.776	1.03	0.564	2.91	22.8	4.64	1.54	78.0
Sept	2.63	0.558	0.791	41.6	0.903	35.4	0.858	0.949	<0.2	4.12	4.30	5.37	0.794	159
Oct	4.27	1.10	1.13	61.6	1.91	53.0	1.31	1.19	<0.2	5.67	4.21	5.38	1.09	246
Nov	4.16	1.54	1.94	49.6	2.14	43.4	1.07	1.27	0.336	5.04	4.55	5.34	0.962	258
Dec	5.92	0.864	1.55	97.3	0.978	84.3	1.81	1.90	<0.2	9.10	4.28	5.37	1.56	254
Annual	7.55	4.48	2.68	60.8	3.51	51.1	1.43	1.59	0.504	5.89	10.6	4.97	1.39	1662
Max.	61.1	57.6	65.6	582	106	488	27.9	13.9	10.6	55.7	166	5.57	9.89	
Min.	0.700	<0.3	<0.5	4.90	<0.8	4.70	<0.3	0.200	<0.2	0.500	2.69	3.78	0.230	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.18	0.765	0.368	8.97	0.432	6.80	0.175	0.219	0.0718	0.813	2.21
Feb	0.695	0.428	0.142	5.47	0.142	4.43	0.146	0.146	0.0503	0.535	0.802
Mar	1.22	0.733	0.868	9.07	1.10	8.09	0.249	0.276	0.101	0.918	1.38
Apr	1.55	1.24	1.05	6.02	1.85	5.15	0.226	0.275	0.163	0.648	1.87
May	0.917	0.576	0.374	7.09	0.490	5.67	0.174	0.230	0.108	0.757	1.87
June	0.368	0.333	0.0565	0.778	0.0547	0.585	0.0333	0.0411	0.0284	0.0769	0.769
July	1.45	1.32	0.124	3.14	0.153	2.07	0.125	0.123	0.0783	0.235	3.01
Aug	1.11	1.00	0.145	2.04	0.133	1.69	0.0605	0.0806	0.0440	0.227	1.78
Sept	0.419	0.0887	0.126	6.61	0.143	5.63	0.136	0.151	0.0308	0.655	0.683
Oct	1.05	0.271	0.278	15.2	0.471	13.1	0.322	0.292	0.0271	1.40	1.04
Nov	1.07	0.399	0.501	12.8	0.552	11.2	0.277	0.328	0.0868	1.30	1.18
Dec	1.50	0.220	0.395	24.7	0.248	21.4	0.460	0.484	0.0416	2.31	1.09
Annual	12.6	7.45	4.46	101	5.84	85.0	2.37	2.64	0.838	9.80	17.7

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	96.5	96.5	96.5	100
Feb	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	97.6	92.8	92.8	92.8	100
Mar	100	100	100	100	100	100	100	100	100	100	99.4	99.4	99.4	100
Apr	100	100	100	100	100	100	100	100	100	100	99.5	99.5	99.5	100
May	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	98.8	98.8	98.8	100
June	95.8	95.8	95.8	95.8	95.8	95.8	95.8	95.8	95.8	95.8	87.4	87.4	87.4	100
July	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	98.0	98.0	98.0	100
Aug	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	97.4	97.4	97.4	100
Sept	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	98.1	98.1	98.1	100
Oct	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	98.6	98.6	98.6	100
Nov	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	97.9	97.9	97.9	100
Dec	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	89.9	89.9	89.9	100
Annual	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	96.9	96.9	96.9	100

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	6.10	5.31	12.4	15.9	21.2	13.2	0.436	2.52	2.23	1.64	5.95	5.23	0.850	124
Feb	18.8	16.8	43.9	38.8	47.0	32.1	1.09	8.72	8.03	4.97	17.4	4.76	2.21	14.4
Mar	7.99	6.53	11.7	27.7	18.9	24.2	0.772	3.62	3.10	3.11	6.18	5.21	1.02	119
Apr	7.40	6.49	10.3	17.0	19.1	15.0	0.674	2.88	2.56	2.22	5.97	5.22	0.805	261
May	11.8	11.2	19.9	13.4	29.4	10.4	0.601	6.15	5.92	2.13	8.17	5.09	1.14	102
June	10.7	10.1	20.6	10.8	28.9	8.78	0.389	3.54	3.35	1.54	11.6	4.93	1.22	189
July	4.97	4.68	11.2	6.46	14.3	4.78	<0.3	1.97	1.86	0.896	8.19	5.09	0.706	237
Aug	11.7	11.5	21.4	4.09	25.4	2.26	<0.3	2.58	2.53	0.575	23.0	4.64	1.51	55.7
Sept	17.2	13.0	15.2	84.0	39.9	70.4	1.67	4.99	3.47	8.36	4.32	5.36	1.99	95.2
Oct	4.72	4.25	7.99	9.84	12.9	7.84	<0.3	1.94	1.77	1.18	5.82	5.24	0.631	180
Nov	12.5	11.1	29.6	25.5	38.6	22.1	0.588	5.88	5.40	2.95	8.75	5.06	1.50	12.3
Dec	7.47	6.66	19.3	14.4	24.9	13.4	0.383	5.43	5.14	1.91	5.13	5.29	0.951	11.5
Annual	8.34	7.41	13.9	18.4	21.8	15.3	0.541	3.20	2.87	2.18	7.95	5.10	0.997	1401
Max.	97.0	91.2	296	836	270	714	15.8	61.4	56.9	79.2	72.4	6.18	13.3	
Min.	0.900	0.303	1.10	0.700	4.00	<0.3	<0.3	0.300	0.222	<0.3	0.661	4.14	0.270	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.757	0.658	1.54	1.97	2.62	1.63	0.0541	0.312	0.277	0.204	0.738
Feb	0.270	0.242	0.631	0.558	0.676	0.461	0.0156	0.125	0.115	0.0715	0.251
Mar	0.951	0.778	1.39	3.30	2.25	2.88	0.0919	0.431	0.369	0.370	0.735
Apr	1.93	1.69	2.70	4.45	4.98	3.92	0.176	0.752	0.668	0.580	1.56
May	1.20	1.14	2.03	1.37	2.99	1.06	0.0612	0.626	0.603	0.217	0.832
June	2.01	1.91	3.89	2.05	5.45	1.66	0.0736	0.670	0.634	0.292	2.20
July	1.18	1.11	2.66	1.53	3.38	1.13	0.0475	0.467	0.442	0.213	1.94
Aug	0.651	0.643	1.19	0.228	1.41	0.126	0.0156	0.144	0.141	0.0321	1.28
Sept	1.64	1.24	1.44	8.00	3.80	6.71	0.159	0.476	0.331	0.796	0.411
Oct	0.848	0.763	1.43	1.77	2.32	1.41	0.0498	0.348	0.317	0.211	1.04
Nov	0.153	0.137	0.363	0.312	0.473	0.271	<0.01	0.0721	0.0662	0.0362	0.107
Dec	0.0859	0.0766	0.223	0.165	0.287	0.155	<0.01	0.0625	0.0591	0.0220	0.0590
Annual	11.7	10.4	19.4	25.8	30.6	21.5	0.758	4.48	4.02	3.05	11.1

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH	EC	Precip. %PCL
Jan	91.9	91.9	91.9	91.9	91.9	91.9	91.9	91.9	91.9	91.9	91.5	91.5	91.5	96.8
Feb	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	93.9	93.9	93.9	96.6
Mar	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	98.7	98.7	98.7	100
Apr	100	100	100	100	100	100	100	100	100	100	99.2	99.2	99.2	100
May	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.2	97.2	97.2	100
June	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	100
July	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.1	99.1	99.1	100
Aug	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
Sept	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	98.2	98.2	98.2	100
Oct	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.4	99.4	99.4	100
Nov	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	100
Dec	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	95.5	95.5	95.5	100
Annual	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	97.7	97.7	97.7	99.5

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	16.2	7.45	9.91	172	8.83	145	3.38	4.56	1.43	16.9	14.0	4.85	3.19	166
Feb	40.0	18.1	24.1	434	29.2	365	8.88	13.8	5.97	42.2	17.5	4.76	7.28	118
Mar	29.3	15.7	33.2	258	41.7	225	5.62	17.2	12.4	26.6	6.08	5.22	4.79	111
Apr	18.4	9.73	21.3	166	22.0	143	3.58	12.2	9.08	17.0	5.20	5.28	3.10	119
May	6.40	5.82	13.8	11.5	10.6	9.58	0.718	3.67	3.46	1.90	8.95	5.05	0.871	115
June	3.35	3.15	5.91	4.23	3.77	3.27	0.320	1.11	1.04	0.801	6.03	5.22	0.431	119
July	2.83	2.30	5.68	10.7	3.10	8.76	0.342	0.703	0.513	1.01	6.81	5.17	0.525	533
Aug	7.60	6.23	11.8	26.0	9.50	22.8	0.500	0.800	0.307	2.30	21.9	4.66	1.35	122
Sept	7.71	6.34	6.71	27.3	5.03	22.7	0.486	0.987	0.500	2.57	14.3	4.84	1.15	261
Oct	18.1	7.26	12.8	209	9.33	180	4.20	6.66	2.78	20.4	12.2	4.92	3.60	76.9
Nov	16.1	7.97	14.9	153	10.2	134	2.68	6.12	3.22	15.6	12.4	4.91	2.94	139
Dec	26.2	10.8	23.1	293	20.6	256	5.76	8.05	2.50	28.7	18.5	4.73	5.17	225
Annual	14.3	7.51	13.7	131	12.5	113	2.70	5.36	2.93	13.0	11.3	4.95	2.58	2103
Max.	191	97.2	364	2635	172	2283	51.6	99.1	95.8	258	182	7.02	35.2	
Min.	0.500	0.458	0.900	1.10	<0.8	0.300	<0.3	0.300	<0.2	<0.3	0.0955	3.74	0.160	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	2.68	1.23	1.64	28.4	1.46	23.9	0.559	0.754	0.237	2.80	2.32
Feb	4.74	2.14	2.85	51.3	3.45	43.1	1.05	1.64	0.706	4.99	2.07
Mar	3.24	1.74	3.68	28.5	4.62	24.9	0.622	1.91	1.37	2.94	0.673
Apr	2.18	1.16	2.53	19.8	2.62	17.0	0.425	1.45	1.08	2.02	0.618
May	0.732	0.666	1.58	1.32	1.21	1.10	0.0823	0.420	0.396	0.217	1.02
June	0.397	0.374	0.701	0.501	0.447	0.387	0.0380	0.132	0.124	0.0950	0.715
July	1.51	1.23	3.03	5.69	1.65	4.67	0.182	0.375	0.274	0.537	3.63
Aug	0.927	0.760	1.44	3.17	1.16	2.78	0.0610	0.0976	0.0375	0.281	2.67
Sept	2.01	1.65	1.75	7.11	1.31	5.94	0.127	0.258	0.131	0.672	3.74
Oct	1.39	0.558	0.988	16.1	0.718	13.8	0.323	0.512	0.214	1.57	0.935
Nov	2.22	1.10	2.07	21.2	1.41	18.6	0.371	0.848	0.447	2.16	1.71
Dec	5.90	2.42	5.19	65.9	4.63	57.6	1.30	1.81	0.563	6.46	4.15
Annual	30.1	15.8	28.7	276	26.3	237	5.67	11.3	6.16	27.4	23.8

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	98.9	98.9	98.9	100
Apr	100	100	100	100	100	100	100	100	100	100	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	99.6	99.6	99.6	100
July	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.7	77.7	77.7	93.5
Aug	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	100
Sept	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
Oct	100	100	100	100	100	100	100	100	100	100	98.1	98.1	98.1	100
Nov	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
Dec	100	100	100	100	100	100	100	100	100	100	99.8	99.8	99.8	100
Annual	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.5	88.5	88.5	99.5

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	14.9	10.4	12.9	88.4	11.5	75.8	1.89	2.19	0.573	8.23	16.1	4.79	2.34	183
Feb	23.7	21.2	16.6	48.1	32.3	41.1	2.12	2.87	2.08	4.33	21.5	4.67	2.45	97.0
Mar	16.3	14.8	14.0	29.4	18.8	25.8	0.484	1.28	0.762	1.47	16.3	4.79	1.76	136
Apr	26.0	21.2	17.3	95.2	23.6	79.7	2.62	5.13	3.41	9.57	23.3	4.63	3.02	90.0
May	18.7	17.5	12.6	24.2	19.0	20.8	1.21	2.28	1.83	2.71	18.8	4.73	1.78	127
June	7.65	6.93	7.45	12.8	10.8	12.0	0.816	0.728	0.469	1.41	10.1	5.00	0.924	472
July	6.11	5.04	11.7	19.7	11.4	17.6	0.595	0.904	0.524	1.91	8.76	5.06	0.954	822
Aug	8.32	4.74	5.92	68.3	4.04	59.3	1.47	1.74	0.462	6.67	9.75	5.01	1.54	153
Sept	8.32	5.01	6.92	64.6	5.00	54.8	2.24	2.80	1.62	6.95	6.30	5.20	1.39	196
Oct	9.04	7.68	7.74	26.3	4.77	22.6	0.777	1.43	0.946	2.96	12.7	4.90	1.14	48.5
Nov	15.4	9.11	12.9	121	6.72	104	2.28	3.32	1.06	11.9	9.16	5.04	2.67	40.5
Dec	21.3	18.5	50.0	53.3	43.2	46.2	1.78	4.01	3.02	5.54	35.3	4.45	3.18	35.5
Annual	10.5	8.59	11.4	35.9	12.8	31.2	1.10	1.58	0.912	3.50	11.9	4.92	1.40	2399
Max.	112	108	108	803	195	662	22.4	23.3	10.6	74.0	153	6.07	11.1	
Min.	1.00	0.910	1.30	1.20	<0.8	1.00	<0.3	<0.2	<0.2	<0.3	0.859	3.81	0.280	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	2.73	1.90	2.36	16.2	2.10	13.9	0.345	0.400	0.105	1.51	2.95
Feb	2.30	2.06	1.61	4.66	3.13	3.98	0.205	0.279	0.202	0.420	2.08
Mar	2.21	2.00	1.90	3.98	2.55	3.49	0.0656	0.173	0.103	0.200	2.20
Apr	2.34	1.91	1.55	8.56	2.12	7.17	0.236	0.462	0.307	0.861	2.10
May	2.37	2.21	1.59	3.06	2.40	2.63	0.153	0.288	0.231	0.343	2.38
June	3.61	3.27	3.52	6.05	5.08	5.64	0.385	0.344	0.222	0.664	4.76
July	5.02	4.15	9.61	16.2	9.37	14.5	0.489	0.743	0.431	1.57	7.20
Aug	1.27	0.725	0.907	10.5	0.619	9.08	0.225	0.267	0.0707	1.02	1.49
Sept	1.63	0.981	1.36	12.6	0.979	10.7	0.440	0.549	0.317	1.36	1.23
Oct	0.438	0.372	0.375	1.28	0.231	1.10	0.0377	0.0696	0.0459	0.143	0.615
Nov	0.623	0.369	0.523	4.91	0.272	4.22	0.0924	0.134	0.0431	0.481	0.371
Dec	0.757	0.658	1.78	1.89	1.53	1.64	0.0633	0.143	0.107	0.197	1.25
Annual	25.1	20.6	27.3	86.1	30.8	74.9	2.65	3.79	2.19	8.39	28.6

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	93.5
Feb	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	100
Mar	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
Apr	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
May	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
June	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.2	91.2	91.2	100
July	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.6	99.6	99.6	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	79.8	79.8	79.8	93.3
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	100
Dec	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	100
Annual	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.4	93.4	93.4	98.9

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	20.9	20.4	41.7	12.7	27.5	8.00	8.18	7.23	7.05	2.15	38.8	4.41	2.70	258
Feb	15.4	14.8	35.8	12.4	29.3	10.8	2.26	7.33	7.09	2.02	20.6	4.69	1.90	218
Mar	14.3	13.8	39.3	13.6	33.5	8.18	2.75	7.74	7.56	1.64	20.0	4.70	1.80	369
Apr	8.68	8.37	19.7	7.79	32.3	5.17	2.24	3.09	2.98	0.856	13.8	4.86	1.29	517
May	14.9	14.6	33.7	10.2	23.0	4.48	1.58	4.15	4.06	0.918	36.5	4.44	2.25	246
June	7.30	7.14	22.4	5.87	10.7	2.62	0.876	2.79	2.74	<0.3	23.0	4.64	1.38	271
July	9.04	8.81	24.9	8.13	14.9	3.73	1.14	4.64	4.56	0.532	27.6	4.56	1.73	374
Aug	13.4	12.7	25.6	10.6	15.1	12.4	3.33	5.75	5.48	1.04	28.8	4.54	1.75	141
Sept	9.56	9.30	17.6	6.39	11.1	4.32	0.974	2.35	2.26	0.432	21.3	4.67	1.27	388
Oct	9.58	9.31	20.7	8.91	12.8	4.50	0.661	2.74	2.64	0.567	21.9	4.66	1.33	292
Nov	6.18	6.01	16.8	6.62	11.6	2.79	0.471	2.80	2.74	0.423	12.7	4.89	0.917	441
Dec	10.7	10.3	25.3	9.63	15.8	6.09	1.32	4.23	4.10	0.618	22.1	4.66	1.57	208
Annual	11.0	10.6	25.8	9.04	20.2	5.51	1.97	4.32	4.20	0.889	22.4	4.65	1.58	3722
Max.	31.3	30.6	91.8	44.3	83.7	32.4	17.9	22.9	22.7	3.95	75.9	5.86	4.20	
Min.	1.92	1.83	<0.5	1.37	<0.8	0.720	<0.3	1.47	1.39	<0.3	1.38	4.12	0.600	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	5.39	5.27	10.8	3.29	7.10	2.06	2.11	1.86	1.82	0.555	10.0
Feb	3.36	3.22	7.80	2.70	6.40	2.34	0.493	1.60	1.55	0.441	4.49
Mar	5.28	5.10	14.5	5.01	12.4	3.02	1.01	2.86	2.79	0.604	7.37
Apr	4.49	4.33	10.2	4.03	16.7	2.67	1.16	1.60	1.54	0.443	7.11
May	3.68	3.61	8.31	2.51	5.68	1.10	0.390	1.02	1.00	0.226	8.99
June	1.97	1.93	6.06	1.59	2.88	0.708	0.237	0.756	0.740	0.0480	6.22
July	3.38	3.29	9.32	3.04	5.56	1.39	0.425	1.73	1.70	0.199	10.3
Aug	1.89	1.79	3.60	1.49	2.12	1.75	0.468	0.810	0.772	0.146	4.05
Sept	3.71	3.61	6.83	2.48	4.29	1.67	0.377	0.912	0.876	0.167	8.26
Oct	2.79	2.71	6.03	2.60	3.74	1.31	0.193	0.799	0.771	0.165	6.39
Nov	2.72	2.65	7.41	2.92	5.12	1.23	0.208	1.24	1.21	0.187	5.62
Dec	2.22	2.15	5.26	2.00	3.29	1.27	0.275	0.880	0.852	0.129	4.59
Annual	40.9	39.6	96.1	33.6	75.3	20.5	7.34	16.1	15.6	3.31	83.4

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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	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
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	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
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 3.40 Monthly results

Site: Tanah Rata

Country: Malaysia

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	8.65	8.19	14.5	10.8	4.31	7.54	2.17	7.24	7.08	1.09	17.8	4.75	1.35	65.2
Feb	9.83	8.37	6.77	13.2	3.63	24.3	6.30	4.27	3.74	3.10	13.5	4.87	1.29	70.0
Mar	9.74	9.30	15.5	6.76	104	7.41	11.3	3.01	2.85	0.623	9.61	5.02	2.02	154
Apr	3.51	3.34	3.08	3.73	1.17	2.80	5.72	2.33	2.27	0.841	14.9	4.83	0.911	309
May	4.14	3.99	2.92	2.45	1.45	2.86	6.16	5.11	5.04	1.47	20.0	4.70	1.13	414
June	4.90	4.37	3.31	5.31	<0.8	8.69	2.36	13.8	13.6	1.88	5.83	5.23	0.780	186
July	3.82	3.69	9.87	3.10	2.32	2.16	1.24	6.44	6.39	0.669	7.15	5.15	0.607	365
Aug	7.66	7.27	12.0	4.27	5.68	6.47	2.89	9.27	9.13	0.740	9.04	5.04	0.939	143
Sept	*	*	*	*	*	*	*	*	*	*	*	*	*	393
Oct	*	*	*	*	*	*	*	*	*	*	*	*	*	257
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	326
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	194
Annual	5.10	4.80	6.67	4.36	10.9	5.02	4.70	5.94	5.83	1.16	12.7	4.90	1.01	2875
Max.	50.5	42.6	32.6	57.1	1015	130	103	45.7	45.3	19.1	32.4	6.41	13.8	
Min.	<0.3	<0.3	<0.5	0.800	<0.8	1.26	<0.3	0.950	0.920	<0.3	0.389	4.49	0.290	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.564	0.534	0.944	0.706	0.281	0.492	0.142	0.472	0.461	0.0712	1.16
Feb	0.688	0.586	0.474	0.927	0.254	1.70	0.441	0.299	0.262	0.217	0.946
Mar	1.50	1.43	2.38	1.04	16.1	1.14	1.74	0.463	0.438	0.0959	1.48
Apr	1.08	1.03	0.951	1.15	0.363	0.865	1.77	0.719	0.700	0.260	4.61
May	1.72	1.65	1.21	1.02	0.601	1.19	2.55	2.11	2.09	0.607	8.29
June	0.910	0.813	0.615	0.986	0.0539	1.62	0.439	2.56	2.52	0.349	1.08
July	1.40	1.35	3.60	1.13	0.846	0.790	0.454	2.35	2.33	0.244	2.61
Aug	1.09	1.04	1.71	0.609	0.809	0.923	0.413	1.32	1.30	0.106	1.29
Sept	*	*	*	*	*	*	*	*	*	*	*
Oct	*	*	*	*	*	*	*	*	*	*	*
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	14.7	13.8	19.2	12.5	31.3	14.4	13.5	17.1	16.8	3.34	36.4

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	100
Feb	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
Mar	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
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	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	100
Sept	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	100

Terms and abbreviations are given in Table 3.5.

Table 3.41 Monthly results

Site: Danum Valley

Country: Malaysia

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	3.52	1.98	<0.5	34.3	<0.8	25.5	3.84	3.49	2.94	2.31	9.77	5.01	0.960	409
Feb	31.1	29.0	<0.5	34.2	<0.8	34.8	7.07	33.4	32.6	9.59	4.33	5.36	1.81	111
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	159
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	58.1
May	*	*	*	*	*	*	*	*	*	*	*	*	*	122
June	*	*	*	*	*	*	*	*	*	*	*	*	*	139
July	2.86	2.69	<0.5	4.19	<0.8	2.71	1.41	2.87	2.81	<0.3	4.65	5.33	0.354	229
Aug	2.17	1.76	<0.5	3.68	<0.8	6.86	2.41	1.24	1.09	<0.3	5.01	5.30	0.320	177
Sept	5.02	4.63	<0.5	7.68	<0.8	6.55	2.30	2.41	2.27	1.00	7.28	5.14	0.557	213
Oct	*	*	*	*	*	*	*	*	*	*	*	*	*	309
Nov	*	*	*	*	*	*	*	*	*	*	*	*	*	190
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	174
Annual	7.38	6.61	<0.5	14.6	<0.8	12.7	2.95	7.13	6.86	2.10	6.04	5.22	0.707	2290
Max.	143	138	*	68.1	<0.8	91.3	30.5	155	153	40.8	9.77	6.69	6.27	
Min.	1.32	1.12	*	3.33	<0.8	2.13	<0.3	1.24	1.09	<0.3	0.204	5.01	0.260	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.44	0.810	<0.01	14.0	<0.01	10.4	1.57	1.43	1.20	0.945	4.00
Feb	3.45	3.21	<0.01	3.79	<0.01	3.86	0.784	3.70	3.61	1.06	0.480
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	0.654	0.617	<0.01	0.958	<0.01	0.621	0.323	0.656	0.643	0.0501	1.06
Aug	0.384	0.311	<0.01	0.651	0.0212	1.21	0.426	0.219	0.193	0.0371	0.887
Sept	1.07	0.987	<0.01	1.64	<0.01	1.40	0.491	0.514	0.484	0.214	1.55
Oct	*	*	*	*	*	*	*	*	*	*	*
Nov	*	*	*	*	*	*	*	*	*	*	*
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	16.9	15.1	<0.01	33.3	0.0532	29.1	6.77	16.3	15.7	4.80	13.8

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	100
Feb	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	100
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	100
May	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	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
Aug	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	100
Sept	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	100
Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100

Terms and abbreviations are given in Table 3.5.

Table 3.42 Monthly results

Site: Kuching

Country: Malaysia

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	*	*	*	*	*	*	*	*	*	*	*	*	*	553
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	493
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	389
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	316
May	*	*	*	*	*	*	*	*	*	*	*	*	*	329
June	*	*	*	*	*	*	*	*	*	*	*	*	*	241
July	*	*	*	*	*	*	*	*	*	*	*	*	*	146
Aug	3.58	3.12	9.92	9.76	14.7	7.71	2.18	6.90	6.73	0.740	1.02	5.99	0.500	248
Sept	1.60	1.51	1.77	3.04	7.72	1.56	0.630	3.75	3.72	<0.3	1.05	5.98	0.340	334
Oct	2.90	2.43	1.65	13.6	2.56	7.88	2.08	4.12	3.95	<0.3	2.52	5.60	0.365	417
Nov	1.19	0.994	1.29	6.24	1.22	3.18	0.922	0.900	0.833	<0.3	3.65	5.44	0.247	275
Dec	17.1	15.9	5.37	23.1	<0.8	19.6	2.74	45.8	45.3	3.73	2.06	5.69	1.45	379
Annual	7.79	7.15	3.37	14.4	2.20	10.7	1.94	19.2	19.0	1.55	2.50	5.60	0.750	4121
Max.	45.4	43.6	15.0	42.5	14.7	30.0	4.67	125	124	9.46	4.68	7.05	3.41	
Min.	0.780	0.453	<0.5	1.96	<0.8	0.650	<0.3	<0.2	<0.2	<0.3	0.0891	5.33	0.190	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	*	*	*	*	*	*	*	*	*	*	*
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	*	*	*	*	*	*	*	*	*	*	*
June	*	*	*	*	*	*	*	*	*	*	*
July	*	*	*	*	*	*	*	*	*	*	*
Aug	0.889	0.773	2.46	2.42	3.64	1.91	0.541	1.71	1.67	0.184	0.254
Sept	0.535	0.504	0.592	1.02	2.58	0.522	0.211	1.25	1.24	0.0702	0.350
Oct	1.21	1.01	0.686	5.67	1.07	3.29	0.866	1.72	1.65	0.0968	1.05
Nov	0.327	0.274	0.355	1.72	0.336	0.875	0.254	0.248	0.229	0.0210	1.01
Dec	6.48	6.03	2.04	8.76	0.139	7.45	1.04	17.4	17.2	1.42	0.780
Annual	32.1	29.5	13.9	59.5	9.09	44.1	7.98	79.2	78.3	6.38	10.3

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	100
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	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	100
Sept	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	100
Oct	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	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	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	29.9	28.7	35.7	7.16	76.1	20.2	1.74	49.3	48.9	3.70	0.359	6.45	2.05	30.4
July	43.1	35.3	67.8	4.61	44.1	167	1.99	46.3	43.4	3.26	0.364	6.44	2.28	62.6
Aug	27.5	26.7	19.5	2.63	41.4	13.2	1.18	35.9	35.6	2.30	1.18	5.93	1.52	59.3
Sept	113	108	61.0	8.73	50.6	80.4	1.83	95.8	94.0	7.81	8.49	5.07	4.53	9.2
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	38.8	35.0	43.5	4.60	49.6	77.7	1.64	45.9	44.4	3.25	1.12	5.95	2.09	161
Max.	125	119	254	24.0	126	498	11.8	332	331	15.6	12.9	6.91	7.76	
Min.	12.1	<0.3	2.74	0.560	<0.8	0.870	<0.3	8.48	<0.2	0.410	0.123	4.89	0.810	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	0.909	0.872	1.09	0.218	2.32	0.615	0.0531	1.50	1.49	0.113	0.0109
July	2.70	2.21	4.24	0.289	2.76	10.5	0.124	2.90	2.71	0.204	0.0227
Aug	1.63	1.58	1.16	0.156	2.46	0.781	0.0700	2.13	2.11	0.136	0.0701
Sept	1.04	0.993	0.559	0.0801	0.464	0.737	0.0168	0.878	0.862	0.0716	0.0779
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	6.27	5.65	7.03	0.743	8.00	12.5	0.264	7.40	7.17	0.524	0.182

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	--	--	--	--	--	--	--	--	--	--	--	--	--	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	100	100	100	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.44 Monthly results

Site: Terej

Country: Mongolia

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	16.6	15.5	8.26	5.85	18.0	18.0	2.46	27.4	27.0	2.59	0.945	6.02	1.41	5.8
June	44.0	41.3	64.0	5.69	20.8	44.1	3.59	51.1	50.2	2.75	0.513	6.29	2.11	28.3
July	43.6	40.0	48.9	6.56	19.8	59.1	4.58	79.2	77.9	14.8	0.196	6.71	2.76	44.6
Aug	60.9	55.9	16.3	4.36	27.6	82.0	2.26	56.6	55.1	7.78	0.973	6.01	2.24	38.2
Sept	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	47.9	44.3	40.0	5.60	22.5	60.8	3.48	62.5	61.3	9.00	0.564	6.25	2.37	117
Max.	261	238	749	42.9	198	382	51.0	859	851	190	3.55	7.36	20.6	
Min.	2.71	2.58	<0.5	1.13	<0.8	2.17	<0.3	1.50	<0.2	<0.3	0.0437	5.45	0.694	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.0958	0.0895	0.0478	0.0339	0.104	0.104	0.0142	0.159	0.156	0.0150	<0.01
June	1.24	1.17	1.81	0.161	0.588	1.25	0.102	1.45	1.42	0.0779	0.0145
July	1.95	1.79	2.18	0.293	0.886	2.64	0.205	3.53	3.48	0.662	<0.01
Aug	2.32	2.14	0.625	0.166	1.06	3.13	0.0862	2.16	2.10	0.297	0.0372
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	5.60	5.17	4.68	0.655	2.63	7.11	0.407	7.31	7.16	1.05	0.0659

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	100	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	98.4	98.4	98.4	98.4	98.4	98.4	98.4	98.4	98.4	98.4	100	100	100	100
Sept	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	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 3.45 Monthly results

Site: Yangon

Country: Myanmar

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Feb	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Mar	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	3.0
May	29.1	27.5	125	121	60.1	25.0	13.2	25.2	24.7	6.50	0.772	6.11	2.47	305
June	2.00	1.51	2.85	4.96	11.4	8.09	1.79	8.71	8.54	1.07	0.316	6.50	0.410	554
July	3.31	2.55	6.75	11.6	19.9	12.6	3.56	7.72	7.44	1.66	0.459	6.34	0.982	315
Aug	5.28	4.14	7.56	21.6	19.4	18.9	4.10	10.7	10.3	3.74	0.372	6.43	1.18	465
Sept	2.77	2.01	7.02	14.1	12.2	12.7	4.13	7.52	7.24	2.18	0.939	6.03	0.924	276
Oct	3.30	2.90	5.24	6.93	17.9	6.71	3.29	5.32	5.18	2.23	0.629	6.20	1.66	231
Nov	11.7	11.2	8.12	11.6	24.1	8.79	7.99	9.81	9.62	2.00	0.452	6.34	0.918	86.0
Dec	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Annual	6.24	5.40	16.5	22.7	21.0	14.0	4.64	9.86	9.56	2.78	0.550	6.26	1.19	2235
Max.	42.6	41.5	200	150	96.2	32.1	18.6	36.2	35.8	8.39	1.10	6.80	3.50	
Min.	1.81	1.39	<0.5	4.65	10.1	4.87	1.79	5.09	4.94	1.07	0.158	5.96	0.240	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	**	**	**	**	**	**	**	**	**	**	**
Feb	**	**	**	**	**	**	**	**	**	**	**
Mar	**	**	**	**	**	**	**	**	**	**	**
Apr	*	*	*	*	*	*	*	*	*	*	*
May	8.87	8.41	38.3	36.9	18.4	7.63	4.03	7.70	7.54	1.98	0.236
June	1.11	0.838	1.58	2.75	6.30	4.48	0.992	4.83	4.73	0.593	0.175
July	1.04	0.802	2.13	3.64	6.25	3.95	1.12	2.43	2.34	0.521	0.145
Aug	2.46	1.93	3.52	10.1	9.04	8.79	1.91	4.98	4.79	1.74	0.173
Sept	0.765	0.554	1.93	3.88	3.35	3.49	1.14	2.07	2.00	0.602	0.259
Oct	0.763	0.669	1.21	1.60	4.14	1.55	0.760	1.23	1.20	0.515	0.145
Nov	1.01	0.964	0.698	0.993	2.07	0.755	0.687	0.843	0.827	0.172	0.0389
Dec	**	**	**	**	**	**	**	**	**	**	**
Annual	14.0	12.1	36.8	50.8	47.0	31.2	10.4	22.0	21.4	6.20	1.23

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Feb	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Mar	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	100
May	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9	80.0
June	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	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	**	**	**	**	**	**	**	**	**	**	**	**	**	#DIV/0!
Annual	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	96.6

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	1.60	1.54	0.923	1.84	3.66	0.902	<0.3	14.5	14.4	6.35	1.08	5.97	0.225	77.3
Feb	7.69	7.43	5.70	4.47	21.0	4.29	<0.3	13.5	13.4	<0.3	0.191	6.72	2.28	64.3
Mar	*	*	*	*	*	*	*	*	*	*	*	*	*	0.8
Apr	*	*	*	*	*	*	*	*	*	*	*	*	*	40.9
May	<0.3	<0.3	<0.5	0.664	4.59	0.983	<0.3	10.1	10.1	<0.3	1.74	5.76	0.130	221
June	13.2	13.2	15.4	5.95	36.7	0.989	<0.3	17.1	17.1	<0.3	1.22	5.91	0.980	198
July	11.7	11.5	14.2	4.88	28.8	3.18	0.391	19.9	19.9	2.51	1.36	5.87	0.890	320
Aug	17.9	17.5	11.4	7.01	18.2	7.75	<0.3	26.4	26.2	0.774	2.67	5.57	0.987	398
Sept	18.2	17.5	25.8	6.63	14.8	12.5	4.13	37.1	36.8	15.6	3.27	5.48	1.91	344
Oct	11.1	10.4	11.0	7.59	24.4	12.1	2.77	6.85	6.59	0.764	4.59	5.34	1.06	410
Nov	7.49	5.63	3.46	43.5	37.3	30.8	0.956	1.31	1.26	<0.3	1.59	5.80	0.965	263
Dec	7.13	6.66	5.54	4.78	12.0	7.81	1.53	3.41	3.31	<0.3	0.931	6.03	0.575	183
Annual	11.4	10.8	11.3	10.3	21.4	10.4	1.47	16.3	16.1	3.26	2.50	5.60	1.01	2519
Max.	127	122	88.5	70.8	205	86.6	37.3	76.8	75.0	22.9	12.3	7.17	4.68	
Min.	<0.3	<0.3	<0.5	<0.5	<0.8	<0.3	<0.3	<0.2	<0.2	<0.3	0.0676	4.91	0.0976	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.123	0.119	0.0713	0.142	0.283	0.0698	<0.01	1.12	1.12	0.491	0.0832
Feb	0.494	0.478	0.366	0.288	1.35	0.276	<0.01	0.871	0.865	<0.01	0.0123
Mar	*	*	*	*	*	*	*	*	*	*	*
Apr	*	*	*	*	*	*	*	*	*	*	*
May	<0.01	<0.01	<0.01	0.146	1.01	0.217	<0.01	2.23	2.23	<0.01	0.383
June	2.62	2.61	3.05	1.18	7.27	0.196	<0.01	3.39	3.39	<0.01	0.242
July	3.73	3.67	4.54	1.56	9.19	1.02	0.125	6.37	6.35	0.802	0.435
Aug	7.13	6.96	4.52	2.79	7.24	3.08	<0.01	10.5	10.4	0.308	1.06
Sept	6.27	6.01	8.87	2.28	5.08	4.31	1.42	12.8	12.7	5.38	1.13
Oct	4.54	4.25	4.49	3.11	10.0	4.96	1.14	2.81	2.70	0.313	1.88
Nov	1.97	1.48	0.910	11.4	9.83	8.13	0.252	0.346	0.333	0.0481	0.419
Dec	1.31	1.22	1.01	0.876	2.20	1.43	0.281	0.625	0.607	0.0170	0.170
Annual	28.8	27.3	28.5	25.9	53.8	26.3	3.69	41.0	40.7	8.21	6.31

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Feb	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	9.0	9.0	9.0	100
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	100
May	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	100
June	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	100
July	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	100
Aug	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	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	99.1	99.1	99.1	100
Annual	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.7	86.7	86.7	100

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	9.16	8.37	9.50	9.60	1.90	13.0	4.30	18.7	18.4	2.90	0.977	6.01	0.840	3.3
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	--	--	--	--	--	--	--	--	--	--	--	--	--	0
July	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Aug	2.92	2.61	3.11	2.08	4.58	5.13	0.769	2.72	2.61	0.399	3.81	5.42	0.266	33.4
Sept	3.83	3.61	2.92	1.20	6.06	3.74	0.373	1.95	1.86	0.309	5.16	5.29	0.333	19.0
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	4.05	3.89	4.00	1.60	10.5	2.61	2.80	4.50	4.44	1.20	1.35	5.87	0.460	2.8
Annual	3.62	3.32	3.45	2.20	5.19	5.00	0.937	3.46	3.35	0.549	3.97	5.40	0.330	58.5
Max.	9.16	8.37	9.50	9.60	13.9	13.0	4.30	18.7	18.4	2.90	5.37	6.01	0.840	
Min.	2.50	2.18	2.30	0.900	1.70	2.61	0.300	1.70	1.61	<0.3	0.977	5.27	0.230	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.0302	0.0276	0.0314	0.0317	<0.01	0.0430	0.0142	0.0617	0.0608	<0.01	<0.01
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	0.0974	0.0870	0.104	0.0695	0.153	0.171	0.0257	0.0910	0.0873	0.0133	0.127
Sept	0.0728	0.0686	0.0554	0.0228	0.115	0.0710	<0.01	0.0370	0.0354	<0.01	0.0980
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	0.0113	0.0109	0.0112	<0.01	0.0294	<0.01	<0.01	0.0126	0.0124	<0.01	<0.01
Annual	0.212	0.194	0.202	0.128	0.304	0.293	0.0548	0.202	0.196	0.0321	0.232

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	--	--	--	--	--	--	--	--	--	--	--	--	--	100
June	--	--	--	--	--	--	--	--	--	--	--	--	--	100
July	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Aug	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	--	--	--	--	--	--	--	--	--	--	--	--	--	100
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	17.4	16.9	50.6	11.7	11.6	9.35	3.80	22.6	22.4	4.97	14.7	4.83	1.67	10.8
Feb	26.7	26.0	62.2	5.47	10.9	11.6	3.98	31.8	31.5	7.01	9.60	5.02	1.80	5.4
Mar	35.1	34.1	50.6	10.2	25.3	16.8	9.07	36.8	36.4	8.43	6.15	5.21	2.10	8.6
Apr	60.8	59.3	50.9	12.1	47.7	24.8	6.81	49.8	49.3	15.0	2.36	5.63	2.93	3.9
May	15.5	15.3	12.6	6.58	9.18	4.19	4.41	11.0	10.9	3.77	13.1	4.88	1.13	51.5
June	32.3	32.0	13.8	4.05	17.7	4.45	17.8	16.5	16.4	7.32	19.7	4.71	2.07	20.4
July	12.6	12.4	8.81	3.83	10.7	4.11	3.37	5.66	5.57	1.68	16.1	4.79	1.02	67.9
Aug	12.2	12.0	6.50	2.40	13.1	3.49	2.13	2.53	2.45	1.14	18.9	4.72	1.10	147
Sept	7.69	7.53	3.94	1.12	6.38	2.75	1.21	2.13	2.07	0.643	14.2	4.85	0.746	89.2
Oct	10.8	10.4	15.8	4.17	13.4	7.39	4.35	12.2	12.0	3.28	2.19	5.66	0.890	1.1
Nov	24.1	23.5	24.7	7.66	30.9	9.98	8.83	18.4	18.2	8.99	3.49	5.46	1.66	4.8
Dec	24.1	23.6	49.1	6.34	16.6	8.79	2.86	30.1	29.9	7.47	2.44	5.61	1.77	5.4
Annual	14.2	14.0	11.4	3.61	11.8	4.45	3.53	7.30	7.20	2.38	15.7	4.80	1.14	416
Max.	127	123	132	26.3	131	59.6	35.5	91.8	90.5	25.0	61.7	6.44	6.48	
Min.	2.93	2.80	1.52	<0.5	1.80	1.30	0.510	0.400	0.334	<0.3	0.363	4.21	0.410	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.188	0.182	0.546	0.127	0.126	0.101	0.0410	0.244	0.242	0.0537	0.159
Feb	0.144	0.140	0.336	0.0295	0.0589	0.0626	0.0215	0.172	0.170	0.0379	0.0518
Mar	0.302	0.293	0.435	0.0874	0.217	0.145	0.0780	0.316	0.313	0.0725	0.0529
Apr	0.237	0.231	0.198	0.0472	0.186	0.0968	0.0265	0.194	0.192	0.0587	<0.01
May	0.799	0.786	0.648	0.339	0.473	0.216	0.227	0.564	0.559	0.194	0.674
June	0.658	0.653	0.281	0.0826	0.361	0.0908	0.363	0.336	0.334	0.149	0.402
July	0.857	0.840	0.598	0.260	0.729	0.279	0.229	0.384	0.378	0.114	1.09
Aug	1.79	1.76	0.958	0.354	1.93	0.514	0.313	0.372	0.361	0.168	2.78
Sept	0.686	0.672	0.352	0.100	0.569	0.245	0.108	0.190	0.185	0.0573	1.27
Oct	0.0119	0.0114	0.0174	<0.01	0.0147	<0.01	<0.01	0.0134	0.0132	<0.01	<0.01
Nov	0.116	0.113	0.118	0.0368	0.149	0.0479	0.0424	0.0885	0.0874	0.0431	0.0167
Dec	0.130	0.127	0.265	0.0342	0.0896	0.0475	0.0154	0.163	0.162	0.0404	0.0132
Annual	5.92	5.81	4.75	1.50	4.91	1.85	1.47	3.04	3.00	0.992	6.52

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	39.2	37.8	36.9	24.7	43.4	24.1	3.97	54.4	53.9	10.2	0.712	6.15	2.76	7.6
Feb	60.1	56.9	30.0	49.6	35.6	52.5	3.74	81.0	79.9	12.4	0.431	6.37	3.38	10.1
Mar	69.0	62.4	34.4	88.5	56.3	108	5.66	65.1	62.8	9.36	0.645	6.19	4.09	13.6
Apr	150	144	52.8	74.9	123	110	31.4	121	119	32.6	12.4	4.91	7.26	3.3
May	31.3	30.9	13.0	16.3	39.5	5.57	3.05	15.5	15.4	6.22	17.2	4.77	1.79	48.0
June	25.8	25.5	13.6	4.91	31.1	4.35	2.97	15.5	15.4	6.18	9.61	5.02	1.47	22.8
July	15.8	15.6	9.76	2.41	17.7	2.95	1.39	8.27	8.21	1.97	12.7	4.89	1.16	97.1
Aug	15.6	15.4	7.74	1.54	20.4	4.15	0.820	3.76	3.67	1.22	19.5	4.71	1.23	132
Sept	14.4	14.2	6.57	2.97	12.6	4.39	4.30	5.00	4.90	1.87	14.3	4.84	1.09	129
Oct	46.1	45.2	17.8	18.0	40.7	14.7	47.6	36.9	36.5	19.4	1.05	5.98	2.90	9.4
Nov	33.1	31.2	23.7	31.7	37.2	31.9	9.94	45.1	44.5	15.5	0.540	6.27	2.96	6.2
Dec	87.2	85.0	31.4	33.2	73.1	36.3	6.71	129	128	23.6	0.406	6.39	5.68	5.0
Annual	22.6	22.0	11.2	9.05	23.7	9.98	3.72	14.1	13.9	3.85	14.0	4.85	1.54	484
Max.	589	533	173	691	345	922	223	372	366	93.2	77.6	7.80	25.5	
Min.	3.44	3.20	2.10	<0.5	1.70	0.435	<0.3	1.50	1.41	0.330	0.0158	4.11	0.350	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.298	0.287	0.280	0.188	0.329	0.183	0.0301	0.413	0.409	0.0771	<0.01
Feb	0.605	0.573	0.302	0.499	0.358	0.529	0.0376	0.815	0.803	0.125	<0.01
Mar	0.940	0.851	0.468	1.21	0.767	1.48	0.0771	0.888	0.856	0.128	<0.01
Apr	0.492	0.471	0.173	0.245	0.404	0.358	0.103	0.396	0.388	0.107	0.0405
May	1.50	1.48	0.625	0.781	1.90	0.267	0.146	0.745	0.739	0.298	0.823
June	0.587	0.581	0.310	0.112	0.708	0.0991	0.0677	0.354	0.352	0.141	0.219
July	1.53	1.52	0.947	0.234	1.72	0.286	0.135	0.803	0.797	0.191	1.24
Aug	2.07	2.03	1.02	0.204	2.71	0.549	0.109	0.497	0.485	0.162	2.58
Sept	1.85	1.82	0.845	0.383	1.62	0.565	0.553	0.643	0.631	0.240	1.84
Oct	0.432	0.424	0.166	0.169	0.381	0.138	0.446	0.345	0.342	0.181	<0.01
Nov	0.204	0.192	0.146	0.195	0.229	0.196	0.0612	0.278	0.274	0.0956	<0.01
Dec	0.435	0.424	0.157	0.166	0.365	0.181	0.0335	0.645	0.641	0.118	<0.01
Annual	10.9	10.7	5.44	4.38	11.5	4.83	1.80	6.82	6.72	1.86	6.77

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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 3.55 Monthly results

Site: Primorskaya

Country: Russia

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	48.6	47.2	34.2	31.6	37.1	23.5	19.7	20.7	20.2	15.2	10.3	4.99	2.49	6.6
Feb	17.8	16.1	26.7	35.2	23.0	27.2	10.7	15.6	15.0	10.9	1.69	5.77	1.49	46.4
Mar	22.5	20.5	31.1	36.7	9.64	32.5	9.51	24.3	23.6	11.4	0.796	6.10	1.65	41.4
Apr	29.2	27.2	23.7	28.2	21.8	32.7	9.26	22.9	22.2	9.03	0.679	6.17	1.63	67.4
May	51.4	49.5	19.3	33.3	26.1	31.4	11.5	41.8	41.1	11.8	0.712	6.15	2.23	61.7
June	21.2	19.8	15.7	30.5	12.9	23.1	11.4	18.9	18.4	8.23	0.821	6.09	1.36	167
July	36.7	34.4	14.8	30.3	22.9	37.5	9.00	28.3	27.5	10.7	1.16	5.94	1.78	28.5
Aug	20.4	18.4	19.0	31.2	23.0	33.0	8.70	13.7	13.0	8.87	0.708	6.15	1.43	158
Sept	23.0	20.8	13.1	21.7	27.7	36.0	6.79	8.84	8.06	6.84	1.11	5.96	1.32	126
Oct	23.9	22.7	16.9	25.1	28.6	19.9	6.44	19.5	19.1	6.68	0.742	6.13	1.43	38.6
Nov	38.7	34.2	16.2	53.8	39.2	74.5	5.37	14.6	13.0	7.05	1.20	5.92	2.10	65.1
Dec	*	*	*	*	*	*	*	*	*	*	2.60	5.58	*	0.8
Annual	26.3	24.2	18.4	31.5	22.8	33.8	9.07	18.2	17.5	8.73	0.990	6.00	1.56	808
Max.	99.3	97.6	36.4	71.4	68.2	127	39.1	91.3	90.7	25.5	11.2	7.75	4.10	
Min.	5.90	5.38	3.70	5.10	3.90	8.70	1.80	3.00	2.02	1.60	0.0178	4.95	0.430	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.321	0.311	0.226	0.209	0.245	0.155	0.130	0.137	0.133	0.100	0.0680
Feb	0.825	0.748	1.24	1.63	1.07	1.26	0.495	0.723	0.696	0.507	0.0783
Mar	0.931	0.850	1.29	1.52	0.399	1.34	0.394	1.01	0.979	0.472	0.0329
Apr	1.97	1.84	1.60	1.90	1.47	2.20	0.624	1.54	1.49	0.608	0.0458
May	3.17	3.05	1.19	2.05	1.61	1.93	0.707	2.58	2.54	0.731	0.0439
June	3.54	3.31	2.62	5.09	2.15	3.86	1.90	3.15	3.07	1.37	0.137
July	1.04	0.980	0.421	0.864	0.654	1.07	0.257	0.807	0.784	0.304	0.0331
Aug	3.22	2.90	3.00	4.92	3.63	5.21	1.37	2.17	2.06	1.40	0.112
Sept	2.91	2.63	1.66	2.74	3.51	4.55	0.858	1.12	1.02	0.865	0.140
Oct	0.924	0.878	0.653	0.970	1.10	0.770	0.249	0.753	0.736	0.258	0.0287
Nov	2.52	2.23	1.06	3.50	2.55	4.85	0.350	0.950	0.846	0.459	0.0782
Dec	*	*	*	*	*	*	*	*	*	*	<0.01
Annual	21.2	19.6	14.9	25.4	18.5	27.3	7.32	14.7	14.1	7.05	0.800

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9	100	100	87.9	100
Feb	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	100	100	98.7	100
Mar	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4	100	100	87.4	100
Apr	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	100	100	88.0	100
May	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	100	100	88.7	100
June	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	100	100	96.7	100
July	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
Aug	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	100	100	96.9	100
Sept	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	100	100	98.3	100
Oct	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	100	100	92.2	100
Nov	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	100	100	97.8	100
Dec	0	0	0	0	0	0	0	0	0	0	100	100	0	100
Annual	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	100	100	94.7	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	0
May	--	--	--	--	--	--	--	--	--	--	--	--	--	0
June	5.74	4.77	13.8	16.9	23.1	16.1	2.18	20.1	19.8	2.82	0.436	6.36	1.04	129
July	11.2	8.98	33.0	27.1	56.8	36.1	8.23	21.4	20.6	4.16	1.50	5.82	0.828	368
Aug	8.29	7.71	24.4	5.73	31.5	9.57	2.14	20.7	20.5	2.75	0.352	6.45	0.502	259
Sept	11.2	10.6	40.8	4.93	52.0	9.62	3.03	17.0	16.8	2.77	4.12	5.38	1.35	326
Oct	8.51	8.19	21.6	5.80	42.1	5.18	2.06	12.7	12.5	1.52	1.20	5.92	0.740	315
Nov	8.10	7.97	16.1	2.50	28.3	2.20	1.00	12.5	12.5	0.800	0.871	6.06	1.11	30.0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	9.50	8.54	28.6	12.0	44.2	15.9	3.88	18.0	17.7	2.81	1.70	5.77	0.891	1427
Max.	32.4	31.4	120	102	132	121	31.2	67.1	64.5	11.1	14.8	6.89	2.42	
Min.	2.10	1.58	1.24	<0.5	6.70	1.30	0.800	3.50	3.42	0.800	0.129	4.83	0.200	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	0.742	0.617	1.78	2.19	2.99	2.08	0.282	2.60	2.56	0.364	0.0564
July	4.11	3.31	12.1	9.96	20.9	13.3	3.03	7.88	7.59	1.53	0.553
Aug	2.14	1.99	6.31	1.48	8.15	2.47	0.554	5.35	5.30	0.710	0.0910
Sept	3.63	3.44	13.3	1.61	16.9	3.13	0.987	5.55	5.48	0.902	1.34
Oct	2.68	2.58	6.82	1.83	13.2	1.63	0.647	3.99	3.95	0.480	0.377
Nov	0.243	0.239	0.483	0.0750	0.849	0.0660	0.0300	0.375	0.374	0.0240	0.0261
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	13.5	12.2	40.8	17.1	63.1	22.7	5.53	25.7	25.3	4.01	2.43

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	--	--	--	--	--	--	--	--	--	--	--	--	--	100
May	--	--	--	--	--	--	--	--	--	--	--	--	--	100
June	100	100	100	100	100	100	100	100	100	100	100	100	100	100
July	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	97.9	97.9	97.9	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
Annual	100	100	100	100	100	100	100	100	100	100	99.5	99.5	99.5	100

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	9.10	8.71	34.2	8.70	41.6	6.50	2.80	9.20	9.06	1.20	2.75	5.56	0.990	26.6
May	11.7	10.9	40.2	17.7	66.3	14.5	2.07	11.0	10.7	1.85	1.07	5.97	1.38	63.2
June	4.27	3.55	6.98	13.4	19.0	11.9	1.28	6.60	6.34	3.66	0.436	6.36	0.656	148
July	10.4	8.82	16.7	28.1	33.2	26.0	2.94	11.7	11.2	4.00	1.55	5.81	1.18	143
Aug	8.32	7.59	10.3	13.0	33.1	12.1	2.97	6.71	6.45	2.24	0.519	6.28	0.810	299
Sept	6.19	5.56	16.3	11.4	28.7	10.3	1.77	4.91	4.68	1.59	0.777	6.11	0.700	235
Oct	6.02	5.74	8.12	4.21	22.2	4.56	1.12	3.12	3.02	0.992	1.12	5.95	0.770	172
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	7.43	6.69	13.9	13.5	30.6	12.3	2.13	6.70	6.44	2.28	0.880	6.06	0.845	1086
Max.	27.9	20.4	74.5	232	92.6	206	17.4	71.4	70.2	26.7	4.37	6.97	4.63	
Min.	1.90	1.29	1.00	2.30	2.80	1.70	0.500	1.50	1.35	0.800	0.107	5.36	0.280	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.242	0.232	0.910	0.231	1.11	0.173	0.0745	0.245	0.241	0.0319	0.0733
May	0.742	0.687	2.54	1.12	4.19	0.918	0.131	0.694	0.674	0.117	0.0677
June	0.633	0.526	1.03	1.98	2.81	1.77	0.189	0.977	0.939	0.542	0.0645
July	1.48	1.26	2.39	4.01	4.74	3.71	0.419	1.67	1.59	0.571	0.221
Aug	2.49	2.27	3.07	3.88	9.89	3.62	0.889	2.01	1.93	0.670	0.155
Sept	1.45	1.31	3.82	2.68	6.73	2.43	0.415	1.15	1.10	0.373	0.182
Oct	1.03	0.986	1.39	0.724	3.82	0.784	0.193	0.536	0.519	0.170	0.192
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	8.07	7.27	15.2	14.6	33.3	13.4	2.31	7.28	6.99	2.48	0.956

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	100	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	96.8
Sept	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nov	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Annual	100	100	100	100	100	100	100	100	100	100	100	100	100	99.7

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	13.3	12.6	34.2	18.9	44.8	10.5	10.2	8.69	8.46	2.95	21.4	4.67	2.16	6.6
Apr	9.48	9.13	44.8	10.6	54.0	5.78	2.00	9.72	9.60	1.73	1.74	5.76	1.43	54.1
May	12.1	11.6	41.9	13.2	70.0	7.77	7.34	11.4	11.2	2.55	1.03	5.99	1.67	88.2
June	6.31	6.00	22.9	7.35	35.3	5.02	1.17	5.08	4.97	1.97	1.23	5.91	0.730	329
July	4.67	4.54	16.3	3.12	28.9	2.12	0.598	3.09	3.04	0.491	2.41	5.62	0.784	232
Aug	4.24	4.03	6.26	6.81	22.0	3.48	0.863	2.56	2.49	<0.3	0.769	6.11	0.550	287
Sept	7.33	7.08	26.3	6.20	38.8	4.81	1.26	6.72	6.62	0.640	2.13	5.67	1.12	110
Oct	3.66	3.58	8.94	3.37	17.6	1.33	1.38	2.25	2.22	0.573	3.31	5.48	0.588	278
Nov	3.25	3.15	13.5	2.12	36.3	1.72	0.973	3.95	3.91	1.24	0.676	6.17	0.769	37.6
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	5.61	5.40	17.8	6.09	31.3	3.64	1.51	4.37	4.30	1.02	1.89	5.72	0.798	1423
Max.	91.7	80.9	220	370	273	180	648	187	184	70.2	30.9	6.83	14.3	
Min.	<0.3	<0.3	<0.5	<0.5	<0.8	<0.3	<0.3	<0.2	<0.2	<0.3	0.148	4.51	0.188	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.0877	0.0835	0.225	0.124	0.296	0.0692	0.0673	0.0573	0.0558	0.0194	0.141
Apr	0.513	0.494	2.43	0.575	2.92	0.313	0.108	0.526	0.519	0.0936	0.0941
May	1.06	1.02	3.70	1.16	6.18	0.685	0.647	1.00	0.988	0.225	0.0904
June	2.07	1.97	7.54	2.42	11.6	1.65	0.383	1.67	1.63	0.647	0.405
July	1.08	1.05	3.78	0.724	6.70	0.493	0.139	0.716	0.705	0.114	0.559
Aug	1.22	1.16	1.80	1.96	6.32	1.00	0.248	0.736	0.715	0.0701	0.221
Sept	0.808	0.779	2.89	0.683	4.27	0.530	0.139	0.740	0.728	0.0704	0.234
Oct	1.02	0.996	2.49	0.939	4.89	0.369	0.384	0.627	0.619	0.160	0.921
Nov	0.122	0.118	0.507	0.0797	1.37	0.0647	0.0366	0.148	0.147	0.0468	0.0254
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	7.98	7.68	25.4	8.66	44.5	5.17	2.15	6.22	6.11	1.45	2.69

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	100	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 3.59 Monthly results

Site: Khanchanaburi

Country: Thailand

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Max.	***	***	***	***	***	***	***	***	***	***	***	***	***	
Min.	***	***	***	***	***	***	***	***	***	***	***	***	***	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	***	***	***	***	***	***	***	***	***	***	***
Feb	***	***	***	***	***	***	***	***	***	***	***
Mar	***	***	***	***	***	***	***	***	***	***	***
Apr	***	***	***	***	***	***	***	***	***	***	***
May	***	***	***	***	***	***	***	***	***	***	***
June	***	***	***	***	***	***	***	***	***	***	***
July	***	***	***	***	***	***	***	***	***	***	***
Aug	***	***	***	***	***	***	***	***	***	***	***
Sept	***	***	***	***	***	***	***	***	***	***	***
Oct	***	***	***	***	***	***	***	***	***	***	***
Nov	***	***	***	***	***	***	***	***	***	***	***
Dec	***	***	***	***	***	***	***	***	***	***	***
Annual	***	***	***	***	***	***	***	***	***	***	***

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	97.0	94.7	84.8	75.9	56.9	39.6	3.65	120	119	22.9	0.410	6.39	5.14	81.6
Feb	211	205	213	143	364	99.7	8.76	134	132	24.1	0.574	6.24	10.7	17.1
Mar	74.3	72.8	135	41.7	163	25.4	4.20	73.2	72.6	9.60	0.518	6.29	4.79	141
Apr	146	143	139	88.2	293	52.6	2.06	77.8	76.6	13.0	0.556	6.25	7.65	97.8
May	94.2	93.1	87.9	52.6	121	19.8	3.42	86.9	86.5	6.82	0.607	6.22	4.60	158
June	68.9	65.9	60.4	45.5	48.1	49.6	33.7	61.5	60.4	1.17	0.640	6.19	3.57	68.9
July	130	127	111	78.5	138	38.1	14.6	118	118	9.79	0.592	6.23	6.17	137
Aug	83.0	82.1	44.8	30.7	61.9	15.2	6.06	84.1	83.8	5.27	0.552	6.26	3.64	343
Sept	57.8	57.1	46.2	40.8	43.2	11.3	4.25	69.7	69.4	7.96	0.884	6.05	2.97	283
Oct	63.3	62.4	57.3	36.0	72.3	15.5	3.25	67.5	67.1	7.44	0.659	6.18	3.04	213
Nov	98.6	97.6	90.3	29.3	75.1	16.6	5.36	108	107	7.31	1.45	5.84	4.57	35.8
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	0.7
Annual	86.0	84.5	76.4	48.3	98.6	23.9	6.51	83.0	82.5	8.43	0.650	6.19	4.28	1577
Max.	242	236	261	143	395	100	34.9	192	190	25.1	2.34	6.58	12.5	
Min.	48.2	47.6	33.6	21.6	27.9	8.36	0.985	35.9	35.6	0.724	0.263	5.63	1.24	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	7.92	7.72	6.92	6.19	4.65	3.23	0.298	9.78	9.72	1.87	0.0335
Feb	3.61	3.51	3.65	2.44	6.22	1.70	0.150	2.29	2.26	0.412	<0.01
Mar	10.5	10.3	19.1	5.89	23.0	3.58	0.593	10.3	10.3	1.36	0.0732
Apr	14.3	14.0	13.6	8.63	28.6	5.14	0.201	7.61	7.50	1.28	0.0544
May	14.9	14.7	13.9	8.30	19.1	3.12	0.540	13.7	13.6	1.08	0.0957
June	4.75	4.54	4.16	3.14	3.32	3.42	2.32	4.24	4.16	0.0805	0.0441
July	17.8	17.5	15.2	10.7	18.9	5.22	2.00	16.2	16.1	1.34	0.0811
Aug	28.5	28.2	15.4	10.5	21.2	5.22	2.08	28.8	28.7	1.81	0.189
Sept	16.3	16.2	13.1	11.5	12.2	3.19	1.20	19.7	19.6	2.25	0.250
Oct	13.5	13.3	12.2	7.67	15.4	3.29	0.693	14.4	14.3	1.58	0.140
Nov	3.53	3.49	3.23	1.05	2.69	0.595	0.192	3.86	3.84	0.262	0.0518
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	136	133	120	76.1	155	37.7	10.3	131	130	13.3	1.02

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	100
Feb	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
Mar	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
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	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
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	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	59.7	58.1	59.3	37.3	87.3	25.6	3.60	40.9	40.3	3.48	8.75	5.06	3.13	81.5
Feb	80.4	78.6	196	52.9	225	28.8	13.0	54.6	54.0	6.58	41.7	4.38	7.25	5.0
Mar	53.1	51.7	73.6	32.9	99.2	23.2	1.16	33.8	33.3	6.35	8.45	5.07	3.38	126
Apr	82.4	81.4	116	52.8	96.6	16.7	6.90	106	106	6.57	0.870	6.06	4.63	126
May	48.7	48.1	87.1	17.7	37.6	10.6	6.32	72.8	72.6	7.75	0.720	6.14	3.03	183
June	30.8	30.6	74.9	11.5	22.9	3.34	2.01	58.3	58.2	3.16	1.28	5.89	2.14	87.2
July	28.8	28.3	27.9	13.6	25.5	8.01	1.41	29.1	28.9	4.72	1.02	5.99	1.45	439
Aug	25.6	25.3	19.0	11.1	23.3	5.68	1.72	25.6	25.5	2.70	1.59	5.80	1.23	346
Sept	49.7	49.4	46.1	34.9	55.5	5.86	2.26	55.1	55.0	6.95	0.802	6.10	2.56	343
Oct	35.5	35.3	22.6	17.1	25.7	3.48	2.05	39.9	39.8	4.84	1.04	5.98	1.63	395
Nov	95.3	94.9	65.2	60.0	113	7.14	5.61	103	102	8.88	0.490	6.31	4.53	31.9
Dec	*	*	*	*	*	*	*	*	*	*	*	*	*	0.6
Annual	39.8	39.3	42.4	21.4	41.2	8.27	2.46	43.6	43.4	5.14	1.87	5.73	2.11	2163
Max.	108	106	241	68.3	307	48.3	13.0	139	138	18.4	41.7	6.39	7.85	
Min.	11.4	11.1	15.4	4.67	3.90	1.88	0.794	15.8	15.7	0.789	0.407	4.38	0.890	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	4.86	4.74	4.83	3.04	7.12	2.09	0.294	3.33	3.28	0.283	0.713
Feb	0.402	0.393	0.980	0.265	1.13	0.144	0.0651	0.273	0.270	0.0329	0.208
Mar	6.69	6.52	9.28	4.15	12.5	2.93	0.147	4.26	4.20	0.801	1.07
Apr	10.3	10.2	14.6	6.63	12.1	2.10	0.867	13.4	13.3	0.825	0.109
May	8.90	8.79	15.9	3.23	6.87	1.94	1.15	13.3	13.3	1.42	0.132
June	2.68	2.67	6.53	1.00	2.00	0.292	0.175	5.08	5.08	0.276	0.111
July	12.7	12.4	12.3	5.97	11.2	3.52	0.618	12.8	12.7	2.08	0.449
Aug	8.86	8.74	6.59	3.83	8.05	1.96	0.594	8.85	8.81	0.934	0.550
Sept	17.0	16.9	15.8	12.0	19.0	2.01	0.773	18.9	18.8	2.38	0.275
Oct	14.0	13.9	8.93	6.76	10.1	1.37	0.810	15.7	15.7	1.91	0.410
Nov	3.04	3.03	2.08	1.91	3.59	0.228	0.179	3.27	3.26	0.283	0.0156
Dec	*	*	*	*	*	*	*	*	*	*	*
Annual	86.1	85.0	91.8	46.3	89.1	17.9	5.31	94.2	93.8	11.1	4.04

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	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
Feb	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	100
Mar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Apr	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	100
May	100	100	100	100	100	100	100	100	100	100	100	100	100	100
June	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	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	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	100
Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Annual	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

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	43.7	41.9	40.9	49.3	34.9	29.7	5.36	42.2	41.6	18.1	6.46	5.19	2.70	117
Feb	62.5	58.7	87.3	115	156	62.5	8.29	40.3	39.0	14.6	3.98	5.40	4.74	31.3
Mar	37.4	36.1	52.0	46.7	52.0	21.8	8.76	27.9	27.4	13.0	17.2	4.76	2.82	129
Apr	95.7	91.5	98.0	92.4	112	69.4	13.9	76.0	74.5	20.4	10.8	4.97	5.61	94.5
May	19.9	18.8	13.8	33.4	6.94	17.1	3.20	11.9	11.5	8.93	21.1	4.68	1.81	102
June	10.3	9.81	3.29	33.1	1.33	8.87	2.69	12.0	11.8	8.39	5.01	5.30	0.880	132
July	9.98	8.95	10.5	44.9	5.31	17.1	3.70	14.6	14.2	12.2	2.30	5.64	1.05	182
Aug	7.64	7.14	3.33	23.6	1.30	8.31	1.88	9.52	9.34	5.62	3.07	5.51	0.641	417
Sept	9.37	8.79	9.86	35.5	1.37	9.63	2.59	17.4	17.2	10.9	1.95	5.71	0.958	299
Oct	13.3	12.6	9.01	37.7	5.89	12.7	4.86	15.9	15.6	11.3	4.88	5.31	1.10	371
Nov	12.0	10.3	16.3	27.6	7.59	28.8	3.86	27.1	26.4	11.8	0.200	6.70	1.55	66.0
Dec	48.0	43.3	79.9	73.3	95.7	77.6	22.3	189	187	21.5	0.200	6.70	7.20	10.6
Annual	19.5	18.4	18.6	39.3	16.4	17.5	4.33	20.8	20.5	10.8	5.64	5.25	1.51	1953
Max.	297	287	243	219	350	175	40.5	215	212	66.9	79.4	6.70	14.8	
Min.	4.60	4.33	2.50	10.3	<0.8	4.44	0.588	5.44	4.83	1.73	0.200	4.10	0.420	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	5.12	4.91	4.80	5.79	4.09	3.48	0.628	4.95	4.88	2.12	0.757
Feb	1.96	1.84	2.73	3.60	4.87	1.96	0.259	1.26	1.22	0.458	0.125
Mar	4.84	4.67	6.73	6.03	6.72	2.82	1.13	3.60	3.54	1.67	2.23
Apr	9.04	8.65	9.26	8.73	10.6	6.55	1.31	7.18	7.04	1.92	1.02
May	2.03	1.92	1.41	3.42	0.709	1.75	0.327	1.21	1.17	0.913	2.16
June	1.36	1.29	0.434	4.36	0.175	1.17	0.354	1.58	1.56	1.11	0.661
July	1.82	1.63	1.91	8.19	0.968	3.11	0.674	2.66	2.60	2.23	0.420
Aug	3.19	2.98	1.39	9.84	0.544	3.47	0.782	3.97	3.90	2.34	1.28
Sept	2.81	2.63	2.95	10.6	0.410	2.88	0.775	5.20	5.14	3.26	0.585
Oct	4.94	4.66	3.34	14.0	2.18	4.71	1.80	5.88	5.78	4.17	1.81
Nov	0.794	0.680	1.07	1.82	0.501	1.90	0.255	1.79	1.75	0.779	0.0132
Dec	0.508	0.459	0.847	0.777	1.01	0.823	0.236	2.00	1.99	0.228	<0.01
Annual	38.0	35.9	36.3	76.7	32.0	34.2	8.46	40.7	39.9	21.1	11.0

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	100
Feb	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	100
Mar	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	100
Apr	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1	100
May	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	100
June	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	100
July	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
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	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
Nov	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8	100
Dec	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	100
Annual	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

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	38.6	30.1	<0.5	230	5.03	141	28.5	95.7	92.6	41.3	0.817	6.09	5.62	49.9
Feb	*	*	*	*	*	*	*	*	*	*	*	*	*	3.6
Mar	40.3	28.8	<0.5	338	4.16	191	23.6	125	121	61.1	0.525	6.28	7.09	30.3
Apr	28.7	21.4	<0.5	186	103	120	16.9	99.8	97.2	32.8	0.414	6.38	6.39	115
May	19.7	18.0	<0.5	53.0	22.7	29.4	8.57	142	142	15.0	0.447	6.35	4.00	64.2
June	*	*	*	*	*	*	*	*	*	*	*	*	*	0.4
July	25.6	23.1	<0.5	65.4	111	41.5	38.1	151	150	31.2	0.521	6.28	6.47	64.2
Aug	9.64	8.24	<0.5	663	4.96	23.3	651	158	158	14.9	0.537	6.27	13.6	59.2
Sept	2.27	1.45	2.66	23.3	4.74	13.5	7.19	52.6	52.3	8.43	0.891	6.05	1.56	309
Oct	6.90	4.15	0.639	145	15.9	45.6	76.5	97.5	96.5	13.5	0.586	6.23	4.21	1743
Nov	14.5	9.99	6.78	289	28.1	74.6	191	90.3	88.7	18.4	0.940	6.03	6.73	482
Dec	35.0	24.3	4.13	254	6.28	178	9.84	54.4	50.5	33.2	1.61	5.79	4.90	145
Annual	11.2	7.76	1.94	171	21.2	57.8	89.7	93.3	92.1	16.7	0.712	6.15	4.72	3065
Max.	55.4	46.9	14.3	663	322	281	651	239	238	61.1	2.09	6.82	13.6	
Min.	2.27	1.45	<0.5	23.3	1.94	13.5	1.76	4.62	2.98	5.14	0.151	5.68	1.26	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	1.93	1.50	0.0160	11.5	0.251	7.03	1.42	4.77	4.62	2.06	0.0408
Feb	*	*	*	*	*	*	*	*	*	*	*
Mar	1.22	0.872	0.0108	10.2	0.126	5.78	0.716	3.79	3.67	1.85	0.0159
Apr	3.29	2.46	0.0364	21.3	11.8	13.8	1.94	11.4	11.1	3.75	0.0474
May	1.27	1.15	0.0166	3.40	1.46	1.88	0.550	9.14	9.10	0.964	0.0287
June	*	*	*	*	*	*	*	*	*	*	*
July	1.64	1.48	0.0190	4.20	7.11	2.66	2.45	9.67	9.61	2.00	0.0334
Aug	0.571	0.488	0.0220	39.3	0.294	1.38	38.5	9.36	9.33	0.884	0.0318
Sept	0.702	0.450	0.822	7.22	1.47	4.18	2.22	16.3	16.2	2.61	0.276
Oct	12.0	7.23	1.11	252	27.8	79.5	133	170	168	23.5	1.02
Nov	6.99	4.82	3.27	139	13.5	36.0	92.1	43.5	42.8	8.88	0.453
Dec	5.08	3.52	0.599	36.8	0.910	25.8	1.43	7.88	7.33	4.82	0.234
Annual	34.5	23.8	5.94	524	65.0	177	275	286	282	51.1	2.18

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	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	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Mar	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	100
Apr	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
May	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	100
June	0	0	0	0	0	0	0	0	0	0	0	0	0	100
July	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Aug	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	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	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
Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dec	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	100
Annual	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

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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	*	*	*	*	*	*	*	*	*	*	7.59	5.12	2.19	3.0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	33.4	32.3	4.65	30.2	17.1	17.7	6.33	15.6	15.2	9.44	3.52	5.45	1.77	54.2
May	21.1	20.0	3.32	27.2	17.0	17.9	6.70	14.4	14.0	7.35	1.21	5.92	1.22	52.8
June	21.7	21.0	3.82	28.6	15.2	11.2	7.05	15.3	15.1	9.15	1.21	5.92	1.14	167
July	24.4	23.4	2.97	29.8	16.1	15.9	6.74	13.9	13.5	7.87	1.18	5.93	1.28	336
Aug	22.7	21.7	3.75	29.7	15.7	18.1	8.64	15.2	14.8	9.49	1.23	5.91	1.32	62.3
Sept	23.6	22.3	5.05	31.4	17.7	21.4	7.66	12.8	12.4	7.29	1.28	5.89	1.41	421
Oct	23.1	21.9	3.57	25.7	14.6	19.0	6.79	14.4	14.0	7.90	1.53	5.81	1.36	398
Nov	28.1	27.0	3.75	27.6	16.8	17.7	6.41	15.9	15.6	6.56	1.46	5.83	1.27	113
Dec	25.4	24.3	3.07	29.8	14.6	17.1	6.72	16.3	15.9	6.88	1.55	5.81	1.33	47.4
Annual	24.0	22.9	3.88	28.9	16.1	17.9	7.05	14.2	13.8	7.83	1.41	5.85	1.34	1654
Max.	36.5	35.4	5.36	36.2	19.1	23.8	10.4	18.2	17.8	10.2	7.59	6.02	2.19	
Min.	18.2	17.2	2.56	22.8	9.92	9.92	5.67	12.2	11.7	5.33	0.955	5.12	1.00	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	*	*	*	*	*	*	*	*	*	*	0.0228
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	1.81	1.75	0.252	1.64	0.927	0.959	0.343	0.844	0.823	0.512	0.191
May	1.11	1.06	0.175	1.44	0.897	0.948	0.354	0.762	0.742	0.388	0.0638
June	3.62	3.51	0.637	4.77	2.54	1.87	1.18	2.55	2.51	1.53	0.201
July	8.17	7.85	0.998	10.0	5.41	5.34	2.26	4.65	4.54	2.64	0.396
Aug	1.42	1.35	0.234	1.85	0.979	1.13	0.538	0.949	0.925	0.591	0.0764
Sept	9.91	9.37	2.12	13.2	7.43	9.00	3.22	5.40	5.21	3.07	0.538
Oct	9.19	8.73	1.42	10.2	5.80	7.55	2.70	5.73	5.57	3.15	0.611
Nov	3.19	3.07	0.426	3.13	1.90	2.01	0.727	1.81	1.76	0.744	0.166
Dec	1.20	1.15	0.145	1.41	0.693	0.812	0.319	0.773	0.755	0.326	0.0734
Annual	39.7	37.9	6.42	47.8	26.6	29.7	11.7	23.5	22.9	13.0	2.34

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	0	0	0	0	0	0	0	0	0	0	100	100	100	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	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	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	100	100	100	100

Terms and abbreviations are given in Table 3.5.

Table 3.65 Monthly results

Site: Ho Chi Minh

Country: Vietnam

Precipitation amount-weighted average concentration/ Precipitation amount

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Apr	36.7	35.3	10.7	44.0	27.7	23.4	8.33	18.0	17.5	10.3	4.57	5.34	2.31	49.0
May	32.4	31.5	11.7	47.7	28.9	15.3	9.57	16.9	16.5	9.79	3.80	5.42	2.18	36.6
June	24.8	23.7	8.77	43.4	28.5	18.4	9.53	18.4	18.0	9.28	1.20	5.92	1.32	232
July	22.9	21.7	9.35	41.0	28.5	19.4	9.87	16.0	15.6	9.06	1.08	5.97	1.70	429
Aug	24.5	23.6	8.77	44.7	36.9	15.6	9.44	14.2	13.9	9.30	0.967	6.01	1.65	405
Sept	23.5	22.3	7.60	41.9	27.1	20.3	11.1	17.6	17.1	9.83	0.911	6.04	1.70	571
Oct	23.1	22.0	9.21	47.4	29.4	18.2	9.54	14.1	13.7	9.09	1.05	5.98	1.66	578
Nov	27.2	26.1	7.22	35.9	36.5	18.0	7.23	16.5	16.1	9.59	0.868	6.06	1.57	97.3
Dec	21.4	20.5	9.76	35.6	30.0	15.8	9.15	12.6	12.2	8.70	0.260	6.58	1.31	131
Annual	24.0	22.9	8.78	43.2	30.1	18.4	9.79	15.7	15.3	9.34	1.08	5.96	1.64	2529
Max.	36.7	35.3	12.9	51.1	45.8	27.9	12.4	21.1	20.7	12.6	4.57	6.64	2.31	
Min.	20.5	19.5	4.73	32.3	22.3	12.8	6.46	10.4	10.0	6.80	0.229	5.34	1.22	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	1.80	1.73	0.523	2.15	1.36	1.15	0.408	0.883	0.858	0.505	0.224
May	1.19	1.15	0.429	1.75	1.06	0.560	0.350	0.617	0.605	0.358	0.139
June	5.76	5.50	2.03	10.1	6.62	4.27	2.21	4.27	4.18	2.15	0.278
July	9.83	9.32	4.01	17.6	12.2	8.30	4.23	6.86	6.68	3.89	0.464
Aug	9.94	9.56	3.55	18.1	14.9	6.32	3.82	5.75	5.61	3.77	0.392
Sept	13.4	12.7	4.34	24.0	15.5	11.6	6.33	10.0	9.80	5.62	0.520
Oct	13.3	12.7	5.32	27.4	17.0	10.5	5.51	8.13	7.90	5.25	0.606
Nov	2.64	2.54	0.702	3.49	3.55	1.75	0.703	1.60	1.56	0.933	0.0845
Dec	2.80	2.68	1.28	4.66	3.92	2.07	1.20	1.64	1.60	1.14	0.0340
Annual	60.7	57.9	22.2	109	76.2	46.5	24.8	39.8	38.8	23.6	2.74

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Feb	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Mar	--	--	--	--	--	--	--	--	--	--	--	--	--	100
Apr	100	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

2020	SO ₄ ²⁻ μmol L ⁻¹	nss-SO ₄ ²⁻ μmol L ⁻¹	NO ₃ ⁻ μmol L ⁻¹	Cl ⁻ μmol L ⁻¹	NH ₄ ⁺ μmol L ⁻¹	Na ⁺ μmol L ⁻¹	K ⁺ μmol L ⁻¹	Ca ²⁺ μmol L ⁻¹	nss-Ca ²⁺ μmol L ⁻¹	Mg ²⁺ μmol L ⁻¹	H ⁺ μmol L ⁻¹	pH	EC mS m ⁻¹	Precip. mm month ⁻¹ or mm year ⁻¹
Jan	206	203	198	153	418	46.8	1.23	125	124	26.4	0.603	6.22	10.6	12.6
Feb	180	178	155	107	361	28.3	1.07	99.3	98.7	12.9	2.09	5.68	9.25	22.3
Mar	67.1	65.9	89.5	37.6	118	18.7	10.6	50.0	49.6	8.83	1.48	5.83	3.69	103
Apr	59.9	59.4	102	22.1	107	8.97	6.75	56.8	56.6	6.61	2.54	5.60	3.61	211
May	24.0	23.6	57.8	14.1	60.0	6.14	3.08	27.0	26.8	3.59	0.773	6.11	1.85	138
June	31.5	31.0	71.0	17.9	57.9	8.35	4.09	40.0	39.8	5.24	0.973	6.01	2.23	36.6
July	41.1	40.7	33.1	16.7	42.5	5.88	1.61	39.9	39.8	4.91	0.738	6.13	1.98	210
Aug	45.7	44.5	58.2	20.3	35.2	20.1	6.35	44.4	44.0	14.4	1.01	6.00	2.42	409
Sept	37.8	36.0	130	61.8	72.7	28.8	2.06	81.0	80.3	10.9	4.11	5.39	3.78	297
Oct	46.1	45.5	32.9	28.0	30.6	10.8	3.97	50.6	50.4	7.68	0.744	6.13	2.17	230
Nov	41.9	40.7	102	33.8	72.8	20.5	8.35	50.4	50.0	9.41	1.23	5.91	3.16	22.9
Dec	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Annual	47.7	46.7	74.7	31.2	66.2	16.0	4.59	52.9	52.5	9.32	1.70	5.77	2.90	1691
Max.	206	203	198	153	418	46.8	16.4	148	148	27.4	4.47	6.38	10.6	
Min.	10.2	9.80	24.6	9.38	3.24	2.63	<0.3	22.9	22.8	1.91	0.417	5.35	1.49	

Wet deposition amount

2020	SO ₄ ²⁻ mmol m ⁻²	nss-SO ₄ ²⁻ mmol m ⁻²	NO ₃ ⁻ mmol m ⁻²	Cl ⁻ mmol m ⁻²	NH ₄ ⁺ mmol m ⁻²	Na ⁺ mmol m ⁻²	K ⁺ mmol m ⁻²	Ca ²⁺ mmol m ⁻²	nss-Ca ²⁺ mmol m ⁻²	Mg ²⁺ mmol m ⁻²	H ⁺ mmol m ⁻²
Jan	2.59	2.56	2.50	1.93	5.26	0.590	0.0155	1.57	1.56	0.333	<0.01
Feb	4.01	3.97	3.46	2.38	8.05	0.631	0.0238	2.21	2.20	0.288	0.0466
Mar	6.87	6.76	9.17	3.85	12.1	1.92	1.08	5.13	5.09	0.905	0.151
Apr	12.6	12.5	21.5	4.66	22.5	1.89	1.42	11.9	11.9	1.39	0.535
May	3.30	3.25	7.95	1.94	8.26	0.844	0.424	3.71	3.69	0.494	0.106
June	1.15	1.14	2.60	0.655	2.12	0.306	0.150	1.46	1.46	0.192	0.0356
July	8.64	8.56	6.97	3.52	8.95	1.24	0.338	8.39	8.36	1.03	0.155
Aug	18.7	18.2	23.8	8.32	14.4	8.21	2.60	18.2	18.0	5.91	0.412
Sept	11.2	10.7	38.6	18.3	21.6	8.55	0.610	24.0	23.8	3.23	1.22
Oct	10.6	10.5	7.57	6.44	7.03	2.49	0.914	11.6	11.6	1.77	0.171
Nov	0.960	0.932	2.33	0.774	1.67	0.469	0.191	1.15	1.14	0.215	0.0282
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	80.6	79.0	126	52.8	112	27.1	7.76	89.4	88.8	15.8	2.87

Data completeness

2020	SO ₄ ²⁻ %TP	nss-SO ₄ ²⁻ %TP	NO ₃ ⁻ %TP	Cl ⁻ %TP	NH ₄ ⁺ %TP	Na ⁺ %TP	K ⁺ %TP	Ca ²⁺ %TP	nss-Ca ²⁺ %TP	Mg ²⁺ %TP	H ⁺ %TP	pH %TP	EC %TP	Precip. %PCL
Jan	100	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 2020

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	1279	25.8	25.6	42.9	6.35	74.5	3.55	2.71	22.0	22.0	2.22	3.41	5.47	1.86
	Jinyunshan	1231	30.9	30.8	42.9	4.69	62.5	2.02	2.60	19.3	19.2	2.55	17.5	4.76	2.20
	Shizhan	438	44.6	43.3	24.8	19.5	160	20.4	7.55	46.1	45.6	9.92	0.120	6.92	3.43
	Jiwozi	450	15.0	13.7	4.81	16.1	37.9	20.8	13.4	63.8	63.4	6.32	0.268	6.57	2.21
	Hongwen	318	30.6	27.7	50.0	49.1	31.9	48.1	9.74	413	412	14.5	0.391	6.41	7.26
	Xiaoping	795	11.7	11.0	29.1	14.3	25.9	10.5	2.71	4.79	4.56	2.85	17.2	4.76	1.41
	Xiang Zhou	1783	8.70	7.28	22.6	28.1	23.3	23.5	1.22	7.13	6.62	3.82	8.13	5.09	1.24
	Zhuxiandong	2115	10.6	8.35	24.3	44.6	21.6	38.1	2.15	12.1	11.3	5.87	6.82	5.17	1.49
	Wuzhishan	833	4.21	3.80	9.77	8.42	20.0	7.39	2.68	3.75	3.61	1.34	1.29	5.89	0.613
	Lijiang	998	37.0	36.9	29.7	20.7	2.44	0.580	0.768	2.78	2.77	2.62	0.374	6.43	0.418
Indonesia	Jakarta	2976	15.4	14.5	16.2	18.1	24.5	15.5	3.53	7.50	7.16	2.52	6.52	5.19	1.27
	Serpong	3132	26.3	25.5	29.7	34.9	69.6	13.1	14.5	8.52	8.26	1.95	7.37	5.13	2.03
	Kototabang	2808	4.33	4.10	4.61	5.03	6.87	7.43	3.86	5.25	5.09	1.22	4.75	5.32	0.499
	Bandung	1320	33.3	32.5	27.9	13.1	69.1	14.7	5.06	24.5	24.2	5.09	1.06	5.97	1.96
	Maros	1685	4.90	3.97	3.08	28.1	1.61	15.4	11.3	8.08	7.75	2.10	4.00	5.40	0.692
	Jembrana	2234	8.99	7.18	23.8	60.7	14.4	30.0	19.7	20.3	19.7	4.74	6.91	5.16	1.78
	Lombok	1635	9.17	7.61	8.19	23.3	20.9	25.9	6.77	7.98	7.43	6.84	4.04	5.39	1.03
Japan	Rishiri	1248	18.2	9.83	14.1	157	19.1	139	4.30	6.66	3.65	15.9	10.2	4.99	3.13
	Ochiishi	638	13.0	5.92	9.05	134	10.6	117	3.05	4.37	1.84	13.6	7.77	5.11	2.52
	Sado-seki	1346	18.8	8.30	13.2	196	11.3	175	4.27	5.63	1.87	19.7	13.6	4.87	3.17
	Happo	2608	4.12	3.86	5.54	5.00	5.58	4.21	0.509	1.92	1.83	0.853	5.50	5.26	0.494
	Ijira	3486	7.18	6.36	11.1	15.8	10.7	13.7	0.490	1.61	1.31	1.69	11.4	4.94	1.00
	Oki	1503	23.7	9.94	13.2	264	10.0	229	5.39	7.56	2.61	25.9	14.6	4.84	4.37
	Yusuhara	2842	6.75	6.19	5.75	11.2	5.94	9.34	0.719	1.10	0.909	1.05	11.4	4.94	0.839
	Hedo	1943	19.3	5.60	6.83	271	8.05	228	5.15	6.38	1.47	27.2	8.57	5.07	4.16
	Ogasawara	1662	7.55	4.48	2.68	60.8	3.51	51.1	1.43	1.59	0.504	5.89	10.6	4.97	1.39
	Tokyo	1401	8.34	7.41	13.9	18.4	21.8	15.3	0.541	3.20	2.87	2.18	7.95	5.10	0.997
	Niigata-maki	2103	14.3	7.51	13.7	131	12.5	113	2.70	5.36	2.93	13.0	11.3	4.95	2.58
	Tsushima	2399	10.5	8.59	11.4	35.9	12.8	31.2	1.10	1.58	0.912	3.50	11.9	4.92	1.40
Lao PDR	Vientiane	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	3722	11.0	10.6	25.8	9.04	20.2	5.51	1.97	4.32	4.20	0.889	22.4	4.65	1.58
	Tanah Rata	2875	5.10	4.80	6.67	4.36	10.9	5.02	4.70	5.94	5.83	1.16	12.7	4.90	1.01
	Danum Valley	2290	7.38	6.61	<0.5	14.6	<0.8	12.7	2.95	7.13	6.86	2.10	6.04	5.22	0.707
	Kuching	4121	7.79	7.15	3.37	14.4	2.20	10.7	1.94	19.2	19.0	1.55	2.50	5.60	0.750
Mongolia	Ulaanbaatar	161	38.8	35.0	43.5	4.60	49.6	77.7	1.64	45.9	44.4	3.25	1.12	5.95	2.09
	Terelj	117	47.9	44.3	40.0	5.60	22.5	60.8	3.48	62.5	61.3	9.00	0.564	6.25	2.37
Myanmar	Yangon	2235	6.24	5.40	16.5	22.7	21.0	14.0	4.64	9.86	9.56	2.78	0.550	6.26	1.19
Philippines	Metro Manila	2519	11.4	10.8	11.3	10.3	21.4	10.4	1.47	16.3	16.1	3.26	2.50	5.60	1.01
	Los Baños	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	***	***	***	***	***	***	***	***	***	***	***	***	***	***
R of Korea	Kanghwa	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	59	3.62	3.32	3.45	2.20	5.19	5.00	0.937	3.46	3.35	0.549	3.97	5.40	0.330
	Listvyanka	416	14.2	14.0	11.4	3.61	11.8	4.45	3.53	7.30	7.20	2.38	15.7	4.80	1.14
	Irkutsk	484	22.6	22.0	11.2	9.05	23.7	9.98	3.72	14.1	13.9	3.85	14.0	4.85	1.54
	Primorskaya	808	26.3	24.2	18.4	31.5	22.8	33.8	9.07	18.2	17.5	8.73	0.990	6.00	1.56
Thailand	Bangkok	1427	9.50	8.54	28.6	12.0	44.2	15.9	3.88	18.0	17.7	2.81	1.70	5.77	0.891
	Samutprakarn	1086	7.43	6.69	13.9	13.5	30.6	12.3	2.13	6.70	6.44	2.28	0.880	6.06	0.845
	Pathumthani	1423	5.61	5.40	17.8	6.09	31.3	3.64	1.51	4.37	4.30	1.02	1.89	5.72	0.798
	Khanchanaburi	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	1577	86.0	84.5	76.4	48.3	98.6	23.9	6.51	83.0	82.5	8.43	0.650	6.19	4.28
	Hoa Binh	2163	39.8	39.3	42.4	21.4	41.2	8.27	2.46	43.6	43.4	5.14	1.87	5.73	2.11
	Cuc Phuong	1953	19.5	18.4	18.6	39.3	16.4	17.5	4.33	20.8	20.5	10.8	5.64	5.25	1.51
	Da Nang	3065	11.2	7.76	1.94	171	21.2	57.8	89.7	93.3	92.1	16.7	0.712	6.15	4.72
	Can Tho	1654	24.0	22.9	3.88	28.9	16.1	17.9	7.05	14.2	13.8	7.83	1.41	5.85	1.34
	Ho Chi Minh	2529	24.0	22.9	8.78	43.2	30.1	18.4	9.79	15.7	15.3	9.34	1.08	5.96	1.64
	Yen Bai	1691	47.7	46.7	74.7	31.2	66.2	16.0	4.59	52.9	52.5	9.32	1.70	5.77	2.90

Terms and abbreviations are given in Table 3.5.

Table 3.68 Annual wet depositions in 2020

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	33.0	32.7	54.9	8.12	95.3	4.54	3.46	28.2	28.1	2.84	4.36
	Jinyunshan	38.0	37.9	52.8	5.77	77.0	2.49	3.20	23.7	23.7	3.14	21.5
	Shizhan	19.5	19.0	10.8	8.54	70.1	8.94	3.31	20.2	20.0	4.35	0.0528
	Jiwozi	6.75	6.18	2.16	7.25	17.1	9.35	6.02	28.7	28.5	2.84	0.121
	Hongwen	9.74	8.82	15.9	15.6	10.1	15.3	3.09	131	131	4.60	0.124
	Xiaoping	9.26	8.76	23.2	11.4	20.6	8.37	2.16	3.81	3.63	2.27	13.7
	Xiang Zhou	15.5	13.0	40.3	50.1	41.6	41.9	2.17	12.7	11.8	6.81	14.5
	Zhuxiandong	22.5	17.7	51.4	94.3	45.7	80.5	4.54	25.6	23.8	12.4	14.4
	Wuzhishan	3.50	3.17	8.14	7.02	16.6	6.16	2.23	3.12	3.01	1.12	1.07
	Lijiang	36.9	36.9	29.6	20.7	2.44	0.579	0.767	2.78	2.77	2.62	0.374
Indonesia	Jakarta	45.8	43.0	48.3	53.9	73.0	46.2	10.5	22.3	21.3	7.50	19.4
	Serpong	82.4	80.0	93.1	109	218	40.9	45.5	26.7	25.9	6.11	23.1
	Kototabang	12.2	11.5	12.9	14.1	19.3	20.9	10.8	14.7	14.3	3.44	13.3
	Bandung	44.0	42.9	36.9	17.3	91.2	19.4	6.68	32.3	31.9	6.71	1.40
	Maros	8.26	6.69	5.20	47.4	2.71	26.0	19.0	13.6	13.1	3.55	6.75
	Jembrana	20.1	16.0	53.1	136	32.2	67.0	43.9	45.4	44.0	10.6	15.4
	Lombok	15.0	12.4	13.4	38.2	34.3	42.3	11.1	13.1	12.1	11.2	6.61
Japan	Rishiri	22.7	12.3	17.6	196	23.8	174	5.37	8.31	4.56	19.9	12.7
	Ochiishi	8.29	3.77	5.77	85.6	6.77	74.9	1.94	2.79	1.17	8.65	4.95
	Sado-seki	25.3	11.2	17.7	264	15.2	235	5.74	7.58	2.52	26.5	18.3
	Happo	10.7	10.1	14.4	13.0	14.5	11.0	1.33	5.00	4.76	2.22	14.3
	Ijira	25.0	22.2	38.8	55.1	37.4	47.8	1.71	5.61	4.58	5.89	39.7
	Oki	35.6	14.9	19.9	397	15.0	344	8.09	11.4	3.92	38.9	21.9
	Yusuhara	19.2	17.6	16.4	31.7	16.9	26.5	2.04	3.12	2.58	2.98	32.5
	Hedo	37.5	10.9	13.3	527	15.6	442	10.0	12.4	2.86	52.9	16.6
	Ogasawara	12.6	7.45	4.46	101	5.84	85.0	2.37	2.64	0.838	9.80	17.7
	Tokyo	11.7	10.4	19.4	25.8	30.6	21.5	0.758	4.48	4.02	3.05	11.1
	Niigata-maki	30.1	15.8	28.7	276	26.3	237	5.67	11.3	6.16	27.4	23.8
	Tsushima	25.1	20.6	27.3	86.1	30.8	74.9	2.65	3.79	2.19	8.39	28.6
Lao PDR	Vientiane	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	40.9	39.6	96.1	33.6	75.3	20.5	7.34	16.1	15.6	3.31	83.4
	Tanah Rata	14.7	13.8	19.2	12.5	31.3	14.4	13.5	17.1	16.8	3.34	36.4
	Danum Valley	16.9	15.1	<0.01	33.3	0.1	29.1	6.77	16.3	15.7	4.80	13.8
	Kuching	32.1	29.5	13.9	59.5	9.09	44.1	7.98	79.2	78.3	6.38	10.3
Mongolia	Ulaanbaatar	6.27	5.65	7.03	0.743	8.00	12.5	0.264	7.40	7.17	0.524	0.182
	Terelj	5.60	5.17	4.68	0.655	2.63	7.11	0.407	7.31	7.16	1.05	0.066
Myanmar	Yangon	14.0	12.1	36.8	50.8	47.0	31.2	10.4	22.0	21.4	6.20	1.23
Philippines	Metro Manila	28.8	27.3	28.5	25.9	53.8	26.3	3.69	41.0	40.7	8.21	6.31
	Los Baños	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	***	***	***	***	***	***	***	***	***	***	***
R of Korea	Kanghwa	***	***	***	***	***	***	***	***	***	***	***
	Cheju	***	***	***	***	***	***	***	***	***	***	***
	Imsil	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy	0.212	0.194	0.202	0.128	0.304	0.293	0.05	0.202	0.196	0.032	0.232
	Listvyanka	5.92	5.81	4.75	1.50	4.91	1.85	1.47	3.04	3.00	0.992	6.52
	Irkutsk	10.9	10.7	5.44	4.38	11.5	4.83	1.80	6.82	6.72	1.86	6.77
	Primorskaya	21.2	19.6	14.9	25.4	18.5	27.3	7.32	14.7	14.1	7.05	0.800
Thailand	Bangkok	13.5	12.2	40.8	17.1	63.1	22.7	5.53	25.7	25.3	4.01	2.43
	Samutprakarn	8.07	7.27	15.2	14.6	33.3	13.4	2.31	7.28	6.99	2.48	0.956
	Pathumthani	7.98	7.68	25.4	8.66	44.5	5.17	2.15	6.22	6.11	1.45	2.69
	Khanchanaburi	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	136	133	120	76.1	155	37.7	10.3	131	130	13.3	1.02
	Hoa Binh	86.1	85.0	91.8	46.3	89.1	17.9	5.31	94.2	93.8	11.1	4.04
	Cuc Phuong	38.0	35.9	36.3	76.7	32.0	34.2	8.46	40.7	39.9	21.1	11.0
	Da Nang	34.5	23.8	5.94	524	65.0	177	275	286	282	51.1	2.18
	Can Tho	39.7	37.9	6.42	47.8	26.6	29.7	11.7	23.5	22.9	13.0	2.34
	Ho Chi Minh	60.7	57.9	22.2	109	76.2	46.5	24.8	39.8	38.8	23.6	2.74
	Yen Bai	80.6	79.0	126	52.8	112	27.1	7.76	89.4	88.8	15.8	2.87

Terms and abbreviations are given in Table 3.5.

Table 3.69 Data completeness for annual summaries in 2020 (%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	98.5	100	100	100	98.5	98.5	98.5	98.5	98.5	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	99.7	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1
	Ochiishi	100	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	77.9	75.7	75.7	75.7
	Sado-seki	99.7	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	48.2	48.2	48.2
	Happo	100	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.0	70.0	70.0
	Ijira	100	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8
	Oki	96.2	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4	92.4	92.4	92.4
	Yusuhara	90.7	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3
	Hedo	100	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.2	92.2	92.2
	Ogasawara	100	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	96.9	96.9	96.9
	Tokyo	99.5	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3	97.7	97.7	97.7
	Niigata-maki	99.5	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.5	88.5	88.5
	Tsushima	98.9	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.4	93.4	93.4
Lao PDR	Vientiane	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	100	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
	Tanah Rata	100	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4
	Danum Valley	100	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
	Kuching	100	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1
Mongolia	Ulaanbaatar	100	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	100	100	100
	Terelj	100	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	100	100	100
Myanmar	Yangon	96.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6
Philippines	Metro Manila	100	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.7	86.7	86.7
	Los Baños	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	***	***	***	***	***	***	***	***	***	***	***	***	***	***
R of Korea	Kanghwa	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju	***	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	***	***	***	***	***	***	***	***	***	***	***	***	***	***
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	100	100	100	100	100	100	100	100	100	100	100	100	100
	Primorskaya	100	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	100	100	94.7
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	99.5	99.5	99.5
	Samutprakarn	99.7	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pathumthani	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Khanchanaburi	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	100	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7
	Hoa Binh	100	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
	Cuc Phuong	100	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
	Da Nang	100	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
	Can Tho	100	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	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 2020

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*	135	135	66	48.9	135	134	99.3	135	66	48.9
	Jinyunshan*	146	146	117	80.1	146	142	97.3	146	115	78.8
	Shizhan	44	44	2	4.5	44	30	68.2	44	2	4.5
	Jiwozi	44	44	3	6.8	44	19	43.2	44	3	6.8
	Hongwen*	32	32	1	3.1	32	32	100	32	1	3.1
	Xiaoping*	75	75	75	100	75	74	98.7	75	74	98.7
	Xiang Zhou*	65	65	37	56.9	65	64	98.5	65	37	56.9
	Zhuxiandong*	98	98	44	44.9	98	97	99.0	98	44	44.9
	Wuzhishan*	60	59	20	33.9	59	33	55.9	59	10	16.9
	Lijiang*	85	85	11	12.9	85	14	16.5	85	7	8.2
Indonesia	Jakarta	40	40	21	52.5	40	33	82.5	40	19	47.5
	Serpong	106	106	72	67.9	106	99	93.4	106	70	66.0
	Kototabang	43	43	25	58.1	43	24	55.8	43	16	37.2
	Bandung	62	62	13	21.0	62	56	90.3	62	13	21.0
	Maros	17	17	11	64.7	17	16	94.1	17	10	58.8
	Jembrana	39	39	18	46.2	39	32	82.1	39	15	38.5
	Lombok	32	32	7	21.9	32	27	84.4	32	7	21.9
Japan	Rishiri	158	128	125	97.7	128	128	100	128	125	97.7
	Ochiishi*	87	49	49	100	49	49	100	49	49	100
	Sado-seki	232	85	85	100	85	85	100	85	85	100
	Happo	118	102	98	96.1	102	100	98.0	102	97	95.1
	Ijira	50	49	49	100	49	49	100	49	49	100
	Oki	195	119	119	100	119	119	100	119	119	100
	Yusuhara*	130	121	118	97.5	121	120	99.2	121	117	96.7
	Hedo	143	134	128	95.5	134	134	100	134	128	95.5
	Ogasawara*	176	132	132	100	132	132	100	132	132	100
	Tokyo*	162	116	113	97.4	116	116	100	116	113	97.4
	Niigata-maki*	193	182	182	100	182	182	100	182	182	100
	Tsushima	125	109	105	96.3	109	103	94.5	109	103	94.5
Lao PDR	Vientiane	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya*	51	50	48	96.0	50	49	98.0	50	48	96.0
	Tanah Rata*	28	28	12	42.9	28	25	89.3	28	12	42.9
	Danum Valley*	10	10	8	80.0	10	10	100	10	8	80.0
	Kuching*	13	13	10	76.9	13	12	92.3	13	10	76.9
Mongolia	Ulaanbaatar	26	25	4	16.0	25	20	80.0	25	2	8.0
	Terelj	30	29	11	37.9	29	17	58.6	29	6	20.7
Myanmar	Yangon	26	20	0	0	20	8	40.0	20	0	0
Philippines	Metro Manila	35	32	5	15.6	32	23	71.9	32	3	9.4
	Los Baños	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	***	***	***	***	***	***	***	***	***	***
R of Korea	Kanghwa	***	***	***	***	***	***	***	***	***	***
	Cheju	***	***	***	***	***	***	***	***	***	***
	Imsil	***	***	***	***	***	***	***	***	***	***
Russia	Mondy*	7	7	7	100	7	7	100	7	7	100
	Listvyanka*	58	58	58	100	58	58	100	58	58	100
	Irkutsk*	92	92	88	95.7	92	92	100	92	88	95.7
	Primorskaya	116	68	31	45.6	68	68	100	68	31	45.6
Thailand	Bangkok*	39	38	2	5.3	38	19	50.0	38	2	5.3
	Samutprakarn*	50	50	12	24.0	50	40	80.0	50	11	22.0
	Pathumthani*	105	105	32	30.5	105	66	62.9	105	26	24.8
	Khanchanaburi	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi*	41	37	37	100	37	36	97.3	37	36	97.3
	Hoa Binh*	41	35	35	100	35	35	100	35	35	100
	Cuc Phuong*	49	31	31	100	31	31	100	31	31	100
	Da Nang*	34	21	21	100	21	21	100	21	21	100
	Can Tho*	32	30	23	76.7	30	29	96.7	30	23	76.7
	Ho Chi Minh*	28	28	24	85.7	28	27	96.4	28	23	82.1
	Yen Bai*	32	32	32	100	32	32	100	32	32	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 2006 to 2020

unit: mm y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	949	1374	1834	1326	1851	1277	1617	1345	1561	1103	1277	1379	***	***	***
China	Guanyinqiao	842	1299													
	Haifu			1010	1066	977	810	1010	1026	1417	1220	1270	1217	1117	1224	1279
	Jinyunshan	1196	1645	1213	1098	979	848	1005	1127	1490	1288	1217	1268	935	1037	1231
	Shizhan	483	527	385	592	459	659	393	441	623	594	415	577	471	465	438
	Weishuiyuan	316														
	Jiwozi	234	100	438	628	1155	971	390	649	568	447	369	508	547	582	450
	Hongwen	2134	1347	945	737	1530	843	924	1403	1129	1015	1771	538	978	1027	318
	Xiaoping	2352	1044	2000	1134	1518	1531	1291	1979	1364	1557	1851	676	840	1013	795
	Xiang Zhou	1529	1442	2815	2010	1857	1259	1518	2421	1673	1431	2344	1905	2067	1988	1783
	Zhuxiandong	887	***	2311	1580	1853	1146	***	***	***	1598	2356	1817	2109	2105	2115
	Wuzhishan														1495	833
	Lijiang														508	998
Indonesia	Jakarta	1481	2171	1717	1557	2120	990	2722	2331	3168	2807	1976	1307	1709	1500	2976
	Serpong	1603	2015	2370	1344	1426	830	894	2324	2882	1770	2929	3197	2117	2199	3132
	Kototabang	1248	2772	2481	2656	2370	2193	2639	2120	2496	2503	2163	2437	2905	2134	2808
	Bandung	1311	1969	2334	2683	2606	1530	2084	2346	2033	2012	2699	1921	1747	1689	1320
	Maros			3037	3237	2663	3632	2451	4033	2763	2479	1973	2301	3339	1663	1685
	Jembrana														1589	2234
	Lombok														1604	1635
Japan	Rishiri	1294	883	828	1054	1072	1232	1172	1170	1033	1092	1299	938	1087	713	1248
	Ochiishi	997	866	730	1580	1085	818	871	1059	838	827	1138	836	1124	830	638
	Tappi	964	1055	824	1337	1555	1144	1178	1070	1194	1114	1222	1129	1649		
	Sado-seki	1264	1163	1021	1037	1368	1387	1296	1576	1409	867	999	1262	1573	959	1346
	Happo	2755	2329	1645	2352	2621	3076	2002	2658	2453	2242	2446	3121	2758	2484	2608
	Ijira	2829	2263	2250	2876	3847	3068	2862	2724	3044	3135	3151	2919	3725	2777	3486
	Oki	1396	1160	1110	1123	1452	1534	1296	1395	1053	1061	1519	992	1308	1095	1503
	Banryu	1960	1273	1268	1735	1471	1432	1208	2024	1516	1458	1829	1471	1662		
	Yusuhara	3160	2373	2189	2068	2476	3401	3048	2485	3529	3046	2744	2594	4022	3102	2842
	Hedo	1863	2701	1961	1975	2643	1766	2837	1612	2442	1762	1822	1623	2632	2566	1943
	Ogasawara	1585	1567	1674	1675	1856	1297	1572	1265	1532	1586	1153	1654	960	1868	1662
	Tokyo		1080	1860	1727	1656	1388	1635	1609	1807	1641	1609	1280	1296	1641	1401
	Niigata-maki														1522	2103
	Tsushima														2461	2399
Lao PDR	Vientiane	709	1399	1668	181	***	***	1322	***	1273	921	713	1337	829	700	***
Malaysia	Petaling Jaya	4009	3021	3747	2968	3517	3607	3412	3570	3708	3751	3432	3125	3848	***	3722
	Tanah Rata	2785	2968	3925	3077	2451	3293	2846	2771	2895	2684	2366	3016	2607	***	2875
	Danum Valley	3005	2988	2999	3391	2370	3787	2958	3202	2848	2025	2987	2964	2489	***	2290
	Kuching			4286	4671	4645	4632	3796	4110	3656	4428	5655	3828	3804	***	4095
Mongolia	Ulaanbaatar	188	126	155	228	153	163	170	154	***	150	160	160	170	33.7	161
	Terelj	215	185	206	111	130	144	117	90.8	***	100	106	105	149	***	117
Myanmar	Yangon		3981	6375	3010	2280	3151	2570	2692	2872	2432	2180	2813	2940	2962	2235
Philippines	Metro Manila	2696	3505	2381	3782	2676	3657	4461	3516	2628	2499	2519	***	***	2367	2519
	Los Baños	2222	3097	1894	2900	2068	2384	2102	2394	2073	1559	1756	***	***	***	***
	Mt.Sto.Tomas	431	3379	5078	4727	3610	4608	5730	4392	3641	6108	4426	***	***	***	***
Republic of Korea	Kanghwa	1092	883	1546	1266	1570	1476	748	898	427	589	837	588	628	502	***
	Cheju	1127	1244	843	1039	1003	1076	1199	636	1195	1452	1121	714	1035	791	***
	Imsil	709	1344	854	1069	1642	1493	1400	1220	1101	719	838	761	1171	1096	***
Russia	Mondy	410	351	206	119	90.2	73.5	105	330	123	136	222	191	362	182	58.5
	Listvyanka	311	408	391	312	327	478	343	278	279	335	316	315	225	430	416
	Irkutsk	357	478	527	430	375	329	443	277	388	291	481	502	442	402	484
	Primorskaya	623	989	553	864	673	621	922	723	643	1157	925	635	1023	880	808
Thailand	Bangkok	1589	1579	1776	2072	2023	2171	1799	1330	1011	1593	1631	1592	1144	630	1427
	Samutprakarn	1420	1871	1734	1989	1880	2103	953	1115	991	1442	1810	1815	1471	899	1086
	Pathumthani	1608	1381	1670	1314	1763	1562	1563	1181	1059	1071	1069	1365	1322	804	1423
	Khanchanaburi	2518	1704	1962	1998	1626	1941	2390	1501	979	1093	1059	1178	994	652	***
	Mae Hia	1420	937	1286	1052	1167	1614	1111	1433	527	747	743	1234	818	754	
	Sakaerat	1190	1386	1722	1259	1627	1509	1126	1443	427	1385	1083	1692	1129	1141	
Vietnam	Hanoi	1231	1659	2267	1609	1236	1817	1798	1945	1661	1273	1661	2071	1900	1290	1577
	HoaBinh	1546	1949	1978	1357	1370	1760	1915	2008	1303	1616	1438	1895	2799	1529	2163
	Cuc Phuong				2266	1654	1853	2018	1898	1702	1461	1937	2236	2521	1571	1953
	Da Nang				2966	1690	3639	1682	2315	2219	1891	2723	2244	2597	2142	3065
	Can Tho									1840	2205	1670	1907	2608	2370	1654
	Ho Chi Minh									1916	1420	2553	3444	2480	2262	2529
	Yen Bai										1514	1815	2397	1866	1593	1691

Terms and abbreviations are given in Table 3.5.

Table 3.72 Precipitation amount-weighted annual average concentrations of SO₄²⁻ from 2006 to 2020

unit: $\mu\text{mol L}^{-1}$																
Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	5.31	22.5	11.6	11.6	7.37	9.04	10.5	7.99	6.27	7.04	5.37	11.3	***	***	***
China	Guanyinqiao	177	130													
	Haifu			144	99.3	139	142	102	106	84.4	50.3	46.9	41.0	41.2	33.5	25.8
	Jinyunshan	141	90.4	120	114	151	141	124	81.4	60.4	43.9	40.0	36.5	36.3	35.3	30.9
	Shizhan	274	183	191	136	100.0	110	109	141	113	82.8	62.5	72.5	47.0	30.3	44.6
	Weishuiyuan	330														
	Jiwozi	128	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
	Hongwen	28.6	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
	Xiaoping	16.9	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
	Xiang Zhou	29.2	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
	Zhuxiandong	19.3	***	21.5	21.0	17.1	20.4	***	***	***	23.3	18.1	14.1	15.7	11.8	10.6
	Wuzhishan														6.78	4.21
	Lijiang														0.460	37.0
Indonesia	Jakarta	26.2	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
	Serpong	28.2	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
	Kototabang	7.65	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
	Bandung	26.8	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
	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
	Jembrana														9.30	8.99
	Lombok														11.6	9.17
Japan	Rishiri	22.9	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
	Ochiishi	27.7	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
	Tappi	35.8	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	28.3	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
	Happo	10.3	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
	Ijira	20.6	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
	Oki	29.5	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
	Banryu	22.0	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	10.1	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
	Hedo	19.2	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
	Ogasawara	10.2	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
	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
	Niigata-maki														20.7	14.3
Tsushima														10.5	10.5	
Lao PDR	Vientiane	3.46	4.67	5.06	4.05	***	***	2.41	***	***	3.19	3.66	*	*	*	***
Malaysia	Petaling Jaya	20.6	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
	Tanah Rata	4.43	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	3.41	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
	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
Mongolia	Ulaanbaatar	25.4	37.1	27.9	19.9	22.2	28.1	***	56.6	***	122	129	34.6	32.1	346	38.8
	Terelj	23.8	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
Philippines	Metro Manila	17.6	22.3	24.9	13.6	20.3	18.7	24.1	15.1	18.0	19.0	21.7	***	***	10.2	11.4
	Los Baños	10.8	8.38	18.0	8.82	7.39	8.57	12.6	6.60	9.13	13.4	15.4	***	***	***	***
	Mt.Sto.Tomas	1.37	5.74	3.47	5.04	4.94	4.69	7.26	7.71	4.62	4.02	5.52	***	***	***	***
Republic of Korea	Kanghwa	37.0	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	***
	Cheju	28.1	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	***
	Imsil	26.8	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	***
Russia	Mondy	4.70	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
	Listvyanka	19.0	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
	Irkutsk	26.0	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
	Primorskaya	46.0	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
Thailand	Bangkok	22.3	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	20.7	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	13.4	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
	Khanchanaburi	4.04	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	4.54	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	8.24	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	46.9	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
	HoaBinh	24.9	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
	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
	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
	Can Tho									8.73	30.7	15.9	16.2	22.7	25.7	24.0
	Ho Chi Minh									24.2	47.6	19.2	23.4	25.6	31.7	24.0
	Yen Bai										22.6	43.6	26.2	25.4	24.4	47.7

Terms and abbreviations are given in Table 3.5.

Table 3.73 Precipitation amount-weighted annual average concentrations of nss-SO₄²⁻ from 2006 to 2020

		unit: $\mu\text{mol L}^{-1}$															
Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Cambodia	PhnomPenh	5.08	22.0	8.67	11.2	7.18	8.83	10.3	7.80	5.81	6.66	5.11	11.0	***	***	***	
China	Guanyinqiao	177	130														
	Haifu			144	99.0	138	142	101	106	84.0	50.1	46.5	40.7	40.9	33.3	25.6	
	Jinyunshan	140	90.0	120	113	151	140	124	81.2	60.1	43.8	39.8	36.4	36.2	35.1	30.8	
	Shizhan	271	182	190	135	99.5	109	109	132	105	75.9	59.2	70.8	45.8	29.6	43.3	
	Weishuiyuan	326															
	Jiwozi	124	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	
	Hongwen	27.0	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	
	Xiaoping	16.1	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	
	Xiang Zhou	27.0	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	
	Zhuxiandong	18.0	***	19.0	18.3	15.9	17.7	***	***	***	19.3	16.2	12.6	10.3	10.3	8.35	
	Wuzhishan														6.26	3.80	
	Lijiang														0.407	36.9	
Indonesia	Jakarta	25.4	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	
	Serpong	27.7	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	
	Kototabang	7.28	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	
	Bandung	25.7	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	
	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	
	Jembrana														8.10	7.18	
	Lombok														10.2	7.61	
Japan	Rishiri	16.3	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	
	Ochiishi	11.3	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	
	Tappi	18.4	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	14.8	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	
	Happo	10.1	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	
	Ijira	20.0	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	
	Oki	15.8	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	
	Banryu	18.0	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	9.39	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	
	Hedo	7.86	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	
	Ogasawara	4.15	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	
	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	
	Niigata-maki														10.1	7.51	
	Tsushima														8.69	8.59	
Lao PDR	Vientiane	3.03	4.53	4.88	3.50	***	***	***	***	***	3.02	3.56	*	*	*	***	
Malaysia	Petaling Jaya	20.3	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	
	Tanah Rata	4.34	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	3.07	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	
	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	
Mongolia	Ulaanbaatar	24.9	36.8	27.3	19.6	22.0	27.7	***	52.0	***	***	119	33.3	29.6	339	35.0	
	Terelj	23.0	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	
Philippines	Metro Manila	16.5	21.1	23.4	12.6	18.9	17.4	23.1	13.4	16.5	17.6	20.7	***	***	9.10	10.8	
	Los Baños	9.44	7.32	16.9	7.77	6.02	7.40	11.3	5.22	8.20	12.4	14.0	***	***	***	***	
	Mt.Sto.Tomas	1.20	5.40	3.17	4.54	4.56	4.43	6.64	7.31	4.24	3.49	4.62	***	***	***	***	
Republic of Korea	Kanghwa	35.2	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	***	
	Cheju	22.9	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	***	
	Imsil	24.9	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	***	
Russia	Mondy	4.60	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	
	Listvyanka	18.8	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	
	Irkutsk	25.4	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	
	Primorskaya	45.0	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	
Thailand	Bangkok	21.8	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	19.7	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	13.0	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	
	Khanchanaburi	3.67	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	4.34	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	7.97	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	46.1	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	
	HoaBinh	24.6	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	
	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	
	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	
	Can Tho									7.80	28.9	15.1	15.6	22.1	24.6	22.9	
	Ho Chi Minh									22.7	45.5	18.4	22.3	24.8	30.5	22.9	
	Yen Bai										22.2	43.0	26.0	25.1	23.7	46.7	

Terms and abbreviations are given in Table 3.5.

Table 3.74 Precipitation amount-weighted annual average concentrations of NO₃⁻ from 2006 to 2020unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	9.05	8.26	9.40	10.3	8.37	8.85	10.7	7.65	8.51	10.4	7.66	10.9	***	***	***
China	Guanyinqiao	60.7	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
	Jinyunshan	46.1	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
	Shizhan	81.7	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
	Weishuiyuan	104														
	Jiwozi	50.7	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
	Hongwen	22.4	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
	Xiaoping	16.0	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
	Xiang Zhou	21.8	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
	Zhuxiandong	13.2	***	14.7	19.8	19.7	18.8	***	***	***	29.4	22.2	22.8	19.3	24.2	24.3
	Wuzhishan														9.44	9.77
	Lijiang														4.42	29.7
Indonesia	Jakarta	20.5	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
	Serpong	28.3	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
	Kototabang	1.40	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
	Bandung	23.1	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
	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
	Jembrana														9.64	23.8
	Lombok														12.5	8.19
Japan	Rishiri	14.0	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
	Ochiishi	11.4	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
	Tappi	22.5	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	18.9	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
	Happo	8.25	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
	Ijira	24.2	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
	Oki	18.2	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
	Banryu	19.5	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	7.56	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
	Hedo	8.09	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
	Ogasawara	4.78	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
	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
	Niigata-maki														16.9	13.7
	Tsushima														6.76	11.4
Lao PDR	Vientiane	6.94	6.90	5.96	9.73	***	***	5.55	***	***	4.12	4.07	*	*	*	***
Malaysia	Petaling Jaya	30.0	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
	Tanah Rata	5.34	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	1.41	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
	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
Mongolia	Ulaanbaatar	18.6	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	15.5	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
Philippines	Metro Manila	12.3	14.1	21.1	8.68	50.5	14.4	18.2	13.9	16.0	13.4	36.4	***	***	13.1	11.3
	Los Baños	8.13	6.25	7.97	8.01	31.4	8.35	11.9	7.80	8.22	8.81	38.5	***	***	***	***
	Mt.Sto.Tomas	1.87	5.47	3.92	3.94	4.29	2.56	6.10	8.47	5.07	3.49	5.76	***	***	***	***
Republic of Korea	Kanghwa	33.0	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	***
	Cheju	25.5	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	***
	Imsil	27.7	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	***
Russia	Mondy	5.10	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
	Listvyanka	14.6	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
	Irkutsk	16.5	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
	Primorskaya	29.2	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
Thailand	Bangkok	33.0	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	14.1	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	22.0	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
	Khanchanaburi	6.15	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	7.87	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	11.3	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	24.9	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
	HoaBinh	16.1	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
	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
	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
	Can Tho									8.38	11.7	3.31	3.83	3.07	16.7	3.88
	Ho Chi Minh									17.9	18.0	7.42	10.8	4.90	18.3	8.78
	Yen Bai										17.8	40.3	24.5	28.9	39.5	74.7

Terms and abbreviations are given in Table 3.5.

Table 3.75 Precipitation amount-weighted annual average concentrations of Cl⁻ from 2006 to 2020unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	6.20	12.6	8.68	10.3	4.93	5.89	6.67	7.53	9.08	9.01	6.45	6.09	***	***	***
China	Guanyinqiao	19.3	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
	Jinyunshan	13.6	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
	Shizhan	35.8	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
	Weishuiyuan	51.1														
	Jiwozi	33.2	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
	Hongwen	45.9	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
	Xiaoping	22.3	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
	Xiang Zhou	44.6	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
	Zhuxiandong	29.3	***	45.6	51.4	21.7	18.8	***	***	***	72.4	33.5	29.3	102	28.8	44.6
	Wuzhishan														7.43	8.42
	Lijiang														3.38	20.7
Indonesia	Jakarta	15.6	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
	Serpong	10.9	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
	Kototabang	7.80	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
	Bandung	14.1	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
	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
	Jembrana														31.4	60.7
	Lombok														23.6	23.3
Japan	Rishiri	126	161	268	193	184	156	332	222	184	160	79.8	234	194	209	157
	Ochiishi	317	219	194	205	266	180	307	486	112	201	161	258	88.7	77.7	134
	Tappi	326	262	226	217	124	167	162	289	176	283	195	215	185		
	Sado-seki	256	257	236	364	351	182	293	355	317	367	199	170	151	250	196
	Happo	5.68	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
	Ijira	14.4	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
	Oki	253	312	371	436	471	552	411	579	617	473	384	555	473	189	264
	Banryu	76.0	89.2	82.5	114	107	125	103	80.8	102	107	92.1	99.8	65.0		
	Yusuhara	14.0	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
	Hedo	217	146	138	141	284	232	496	263	157	368	236	429	186	153	271
	Ogasawara	119	154	98.8	227	211	241	134	166	154	370	106	208	52.8	203	60.8
	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
	Niigata-maki														210	131
	Tsushima														34.7	35.9
Lao PDR	Vientiane	4.77	7.42	7.41	6.19	***	***	4.46	***	***	4.97	5.28	*	*	*	***
Malaysia	Petaling Jaya	6.94	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
	Tanah Rata	2.10	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	7.15	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
	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
Mongolia	Ulaanbaatar	7.77	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	9.28	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
Philippines	Metro Manila	23.1	27.9	28.7	24.6	20.6	29.8	20.2	28.7	26.1	27.3	31.4	***	***	23.3	10.3
	Los Baños	21.0	24.4	18.8	25.0	25.3	26.2	21.6	25.8	18.3	92.0	25.2	***	***	***	***
	Mt.Sto.Tomas	1.57	7.38	5.24	8.31	5.07	4.41	6.50	7.11	4.21	7.79	5.46	***	***	***	***
Republic of Korea	Kanghwa	36.0	57.7	45.6	60.2	43.9	48.5	67.5	36.3	61.6	161	50.1	55.7	42.3	216	***
	Cheju	102	104	136	63.7	114	147	455	344	124	109	444	280	293	76.4	***
	Imsil	77.5	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	***
Russia	Mondy	4.47	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
	Listvyanka	3.50	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
	Irkutsk	12.5	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
	Primorskaya	18.0	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
Thailand	Bangkok	10.8	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	12.5	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	6.83	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
	Khanchanaburi	6.30	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	3.73	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	
Vietnam	Sakaerat	5.52	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	
	Hanoi	15.6	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
	HoaBinh	6.46	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
	Cuc Phuong				44.2	24.3	15.5	20.3	25.2	11.7	21.3	17.1	35.6	30.2	38.8	39.3
	Da Nang				110	50.4	93.5	83.1	174	92.9	72.8	70.2	80.9	97.8	167	171
	Can Tho									27.4	41.2	36.1	29.2	30.4	23.9	28.9
	Ho Chi Minh									44.8	52.0	37.3	47.5	36.3	36.9	43.2
	Yen Bai										7.48	14.3	17.3	12.4	14.0	31.2

Terms and abbreviations are given in Table 3.5.

Table 3.76 Precipitation amount-weighted annual average concentrations of NH₄⁺ from 2006 to 2020

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

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	17.9	19.7	11.8	13.1	22.6	21.9	21.6	13.5	13.9	18.1	19.5	22.2	***	***	***
China	Guanyinqiao	179	140													
	Haifu			148	105	141	145	116	142	116	95.2	98.7	96.3	103	91.5	74.5
	Jinyunshan	121	75.2	98.8	110	124	117	124	90.1	70.6	62.6	65.8	60.0	79.3	70.6	62.5
	Shizhan	167	206	164	169	187	60.8	109	238	170	194	118	147	127	136	160
	Weishuiyuan	239														
	Jiwozi	48.6	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
	Hongwen	29.1	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
	Xiaoping	21.5	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
	Xiang Zhou	56.7	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
	Zhuxiandong	27.4	***	18.6	25.6	22.7	24.8	***	***	***	24.3	42.4	25.7	23.6	23.0	21.6
	Wuzhishan														14.7	20.0
	Lijiang														11.0	2.44
Indonesia	Jakarta	17.4	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
	Serpong	40.3	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
	Kototabang	9.88	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
	Bandung	46.5	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
	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
	Jembrana														16.8	14.4
	Lombok														16.9	20.9
Japan	Rishiri	17.5	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
	Ochiishi	15.6	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
	Tappi	18.9	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	16.6	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
	Happo	8.96	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
	Ijira	22.8	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
	Oki	12.8	15.7	15.7	17.0	17.8	18.6	17.0	17.5	14.0	9.63	14.4	12.7	12.1	15.5	10.0
	Banryu	14.9	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	7.52	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
	Hedo	8.55	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
	Ogasawara	4.59	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
	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
	Niigata-maki														16.3	12.5
	Tsushima														8.61	12.8
Lao PDR	Vientiane	7.72	10.9	8.39	17.3	***	***	***	***	***	7.78	7.50	*	*	*	***
Malaysia	Petaling Jaya	23.3	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
	Tanah Rata	3.53	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	2.05	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
	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
Mongolia	Ulaanbaatar	53.7	87.1	53.3	46.7	54.7	45.9	***	62.2	***	***	40.7	48.9	57.4	75.1	49.6
	Terelj	54.6	38.8	51.1	41.0	35.0	39.4	***	5.37	***	***	60.2	41.9	31.0	***	22.5
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
Philippines	Metro Manila	40.5	33.6	62.2	21.1	53.1	183	273	41.2	61.6	86.1	112	***	***	28.6	21.4
	Los Baños	16.3	16.8	19.6	11.7	38.2	29.4	67.8	22.3	55.9	54.9	84.8	***	***	***	***
	Mt.Sto.Tomas	<0.8	8.69	10.5	14.1	4.65	0.822	3.42	4.71	13.5	9.57	7.79	***	***	***	***
Republic of Korea	Kanghwa	53.0	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	***
	Cheju	26.1	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	***
	Imsil	50.2	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	***
Russia	Mondy	3.70	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
	Listvyanka	15.5	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
	Irkutsk	24.9	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
	Primorskaya	49.8	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
Thailand	Bangkok	56.1	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	49.9	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	33.5	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
	Khanchanaburi	17.5	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	15.2	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	23.1	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	45.7	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
	HoaBinh	27.6	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
	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
	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
	Can Tho									18.3	21.3	22.7	21.5	12.3	17.6	16.1
	Ho Chi Minh									24.3	29.4	28.8	38.4	20.7	22.8	30.1
	Yen Bai										30.5	91.5	33.6	39.0	18.2	66.2

Terms and abbreviations are given in Table 3.5.

Table 3.77 Precipitation amount-weighted annual average concentrations of Na⁺ from 2006 to 2020

		unit: $\mu\text{mol L}^{-1}$														
Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	1.85	8.25	10.3	6.95	3.10	3.55	3.65	3.10	7.60	6.28	4.23	4.45	***	***	***
China	Guanyinqiao	7.92	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
	Jinyunshan	6.65	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
	Shizhan	45.2	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
	Weishuiyuan	66.9														
	Jiwozi	65.6	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
	Hongwen	30.8	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
	Xiaoping	23.2	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
	Xiang Zhou	35.5	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
	Zhuxiandong	22.6	***	40.7	45.3	19.9	45.0	***	***	***	66.9	34.1	26.2	89.3	24.0	38.1
	Wuzhishan														8.68	7.39
	Lijiang														8.65	0.580
Indonesia	Jakarta	13.1	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
	Serpong	7.46	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
	Kototabang	6.21	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
	Bandung	18.3	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
	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
	Jembrana														19.9	30.0
	Lombok														22.8	25.9
Japan	Rishiri	110	143	247	176	162	139	292	200	162	140	69.7	207	170	182	139
	Ochiishi	278	186	171	182	232	155	274	421	97.2	178	138	219	77.6	67.4	117
	Tappi	289	234	197	199	114	150	141	257	156	237	169	189	159		
	Sado-seki	224	227	215	321	320	153	246	328	282	327	175	150	134	220	175
	Happo	4.13	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
	Ijira	10.8	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
	Oki	225	275	324	376	409	480	357	505	545	412	332	486	405	163	229
	Banryu	66.4	78.6	72.2	98.8	94.2	108	92.2	69.1	86.9	91.1	81.9	87.8	56.7		
	Yusuhara	11.9	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
	Hedo	189	129	124	127	254	204	418	227	137	313	201	368	160	130	228
	Ogasawara	103	133	86.2	188	208	202	114	141	131	306	90.9	180	46.7	178	51.1
	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
	Niigata-maki														176	113
	Tsushima														30.0	31.2
Lao PDR	Vientiane	7.10	2.38	2.91	9.14	***	***	***	***	***	2.78	1.52	*	*	*	***
Malaysia	Petaling Jaya	4.27	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
	Tanah Rata	1.41	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	5.64	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
	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
Mongolia	Ulaanbaatar	8.43	5.25	3.59	4.88	3.50	5.65	***	78.8	***	***	172	21.9	41.5	110	77.7
	Terelj	12.5	9.42	5.47	7.60	11.1	6.07	***	17.0	***	***	206	13.5	49.5	***	60.8
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
Philippines	Metro Manila	17.2	20.2	24.6	20.2	22.3	21.4	16.7	28.0	24.5	23.4	17.4	***	***	18.0	10.4
	Los Baños	22.7	17.6	19.1	17.4	22.7	19.4	22.2	22.8	15.4	17.6	22.4	***	***	***	***
	Mt.Sto.Tomas	2.81	5.68	5.11	8.26	6.30	4.31	10.3	6.70	6.30	8.71	14.8	***	***	***	***
Republic of Korea	Kanghwa	28.8	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	***
	Cheju	85.0	101	133	53.6	103	152	375	290	116	101	394	261	264	93.4	***
	Imsil	31.1	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	***
Russia	Mondy	1.57	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
	Listvyanka	2.80	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
	Irkutsk	10.0	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
	Primorskaya	16.8	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
Thailand	Bangkok	8.72	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	14.6	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	7.49	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
	Khanchanaburi	6.86	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	3.53	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	4.45	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	13.5	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
	HoaBinh	4.49	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
	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
	Da Nang				94.6	41.3	70.2	63.2	144	82.1	79.6	65.7	81.0	68.1	108	57.8
	Can Tho									15.4	29.4	12.6	9.61	9.73	18.1	17.9
	Ho Chi Minh									25.0	34.6	13.5	17.4	14.2	20.4	18.4
	Yen Bai										5.40	8.96	3.68	3.65	11.7	16.0

Terms and abbreviations are given in Table 3.5.

Table 3.78 Precipitation amount-weighted annual average concentrations of K⁺ from 2006 to 2020

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

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	1.48	3.64	10.3	1.50	0.861	1.15	0.761	1.06	2.69	1.98	2.11	1.22	***	***	***
China	Guanyinqiao	12.6	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
	Jinyunshan	11.4	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
	Shizhan	18.0	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
	Weishuiyuan	33.6														
	Jiwozi	20.8	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
	Hongwen	3.35	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
	Xiaoping	13.5	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
	Xiang Zhou	8.16	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
	Zhuxiandong	2.62	***	4.50	2.56	3.29	5.92	***	***	***	8.30	5.80	2.24	4.65	1.87	2.15
	Wuzhishan														2.87	2.68
	Lijiang														1.53	0.768
Indonesia	Jakarta	8.01	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
	Serpong	4.46	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
	Kototabang	4.56	8.40	3.40	9.35	4.43	3.96	5.52	19.3	10.4	49.49	11.5	1.86	2.06	2.87	3.86
	Bandung	4.81	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
	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
	Jembrana														3.81	19.7
	Lombok														3.28	6.77
Japan	Rishiri	3.75	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
	Ochiishi	7.66	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
	Tappi	7.12	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	5.69	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
	Happo	0.515	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
	Ijira	0.980	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
	Oki	6.56	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
	Banryu	2.23	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	0.681	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
	Hedo	4.71	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
	Ogasawara	2.53	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
	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
	Niigata-maki														4.80	2.70
	Tsushima														0.882	1.10
Lao PDR	Vientiane	3.51	1.69	1.69	0.930	***	***	***	***	***	1.74	0.958	*	*	*	***
Malaysia	Petaling Jaya	1.55	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
	Tanah Rata	0.626	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	1.01	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
	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
Mongolia	Ulaanbaatar	5.15	1.28	2.81	2.53	2.72	3.98	***	3.88	***	***	0.620	1.29	1.01	2.01	1.64
	Terelj	8.98	3.80	6.46	4.10	5.43	5.00	***	7.98	***	***	7.09	3.40	3.65	***	3.48
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
Philippines	Metro Manila	12.6	5.38	15.6	3.99	17.0	23.5	26.3	6.45	9.79	13.1	14.2	***	***	4.13	1.47
	Los Baños	2.49	4.92	2.91	9.08	7.43	6.82	8.14	6.37	8.18	73.4	13.8	***	***	***	***
	Mt.Sto.Tomas	1.32	2.29	0.702	1.95	1.41	0.821	0.885	0.752	1.26	1.63	0.889	***	***	***	***
Republic of Korea	Kanghwa	4.86	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	***
	Cheju	6.04	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	***
	Imsil	42.1	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	***
Russia	Mondy	1.11	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
	Listvyanka	1.54	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
	Irkutsk	7.64	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
	Primorskaya	5.47	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
Thailand	Bangkok	2.83	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	4.31	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	1.66	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
	Khanchanaburi	2.44	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	1.70	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	0.665	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	3.78	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
	HoaBinh	2.43	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
	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
	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
	Can Tho									7.45	7.17	6.07	5.44	6.27	12.7	7.05
	Ho Chi Minh									10.6	12.0	6.62	10.4	8.29	11.0	9.79
	Yen Bai										4.03	4.98	6.20	3.27	2.59	4.59

Terms and abbreviations are given in Table 3.5.

Table 3.79 Precipitation amount-weighted annual average concentrations of Ca²⁺ from 2006 to 2020

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

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	9.11	19.2	32.6	20.4	8.33	9.30	10.7	9.57	9.47	11.6	14.3	9.74	***	***	***
China	Guanyinqiao	143	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
	Jinyunshan	98.3	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
	Shizhan	301	116	150	138	105	91.2	128	325	92.7	89.7	35.0	68.3	61.9	50.9	46.1
	Weishuiyuan	330														
	Jiwozi	221	347	266	93.7	40.7	91.6	203	133	149	57.7	36.8	95.1	56.3	161	63.8
	Hongwen	25.5	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
	Xiaoping	10.5	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
	Xiang Zhou	14.1	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
	Zhuxiandong	17.1	***	13.6	7.40	16.4	19.1	***	***	***	25.2	17.3	13.9	17.7	10.8	12.1
	Wuzhishan														10.3	3.75
	Lijiang														23.1	2.78
Indonesia	Jakarta	18.8	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
	Serpong	7.19	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
	Kototabang	5.19	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
	Bandung	14.8	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
	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
	Jembrana														7.88	20.3
	Lombok														15.7	7.98
Japan	Rishiri	5.33	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
	Ochiishi	10.2	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
	Tappi	12.7	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	12.1	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
	Happo	6.28	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
	Ijira	2.89	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
	Oki	11.4	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
	Banryu	9.51	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	2.61	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
	Hedo	9.21	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
	Ogasawara	3.58	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
	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
	Niigata-maki														7.18	5.36
	Tsushima														1.35	1.58
Lao PDR	Vientiane	8.75	3.04	5.77	5.50	***	***	***	***	***	4.00	2.21	*	*	*	***
Malaysia	Petaling Jaya	3.80	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
	Tanah Rata	1.15	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	1.26	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
	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
Mongolia	Ulaanbaatar	45.9	41.2	42.9	42.2	34.3	33.9	***	95.3	***	***	***	29.1	41.8	23.5	39.0
	Terelj	24.8	13.6	17.9	35.8	42.3	20.4	***	69.1	***	***	16.8	15.9	15.3	***	62.5
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
Philippines	Metro Manila	13.7	10.4	13.7	6.41	12.8	12.9	13.9	11.5	14.5	17.4	20.5	***	***	14.7	16.3
	Los Baños	6.92	5.19	3.75	5.08	20.1	6.38	9.40	6.40	6.99	8.77	11.8	***	***	***	***
	Mt.Sto.Tomas	5.64	23.4	3.09	5.87	22.7	7.84	14.0	8.58	8.06	6.85	13.4	***	***	***	***
Republic of Korea	Kanghwa	15.8	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	***
	Cheju	9.05	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	***
	Imsil	14.7	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	***
Russia	Mondy	5.46	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
	Listvyanka	8.81	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
	Irkutsk	29.9	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
	Primorskaya	25.0	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
Thailand	Bangkok	18.4	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	14.8	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	12.8	8.50	11.6	9.19	9.17	12.1	20.6	27.1	22.5	16.6	13.7	12.3	7.97	10.3	4.37
	Khanchanaburi	2.71	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	4.74	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	9.54	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	35.2	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
	HoaBinh	17.8	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
	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
	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
	Can Tho									12.8	26.8	11.9	10.6	14.4	15.8	14.2
	Ho Chi Minh									26.0	44.3	12.1	14.8	18.2	26.5	15.7
	Yen Bai										15.9	20.3	23.1	20.8	27.4	52.9

Terms and abbreviations are given in Table 3.5.

Table 3.80 Precipitation amount-weighted annual average concentrations of nss-Ca²⁺ from 2006 to 2020

		unit: $\mu\text{mol L}^{-1}$															
Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Cambodia	PhnomPenh	9.07	19.1	32.5	20.3	8.26	9.23	10.7	9.50	9.31	11.5	14.2	9.64	***	***	***	
China	Guanyinqiao	143	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	
	Jinyunshan	98.2	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	
	Shizhan	300	116	149	138	105	90.8	128	322	90.0	87.2	33.9	67.7	61.4	50.6	45.6	
	Weishuiyuan	328															
	Jiwozi	220	345	264	93.2	40.6	91.4	202	130	146	55.7	36.6	94.4	55.7	160	63.4	
	Hongwen	24.8	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	
	Xiaoping	9.99	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	
	Xiang Zhou	13.3	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	
	Zhuxiandong	16.7	***	12.7	6.44	15.9	18.1	***	***	***	23.7	16.6	13.3	15.8	10.3	11.3	
	Wuzhishan														10.2	3.61	
	Lijiang														22.9	2.77	
Indonesia	Jakarta	18.5	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	
	Serpong	7.03	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	
	Kototabang	5.06	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	
	Bandung	14.4	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	
	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	
	Jembrana														7.45	19.7	
	Lombok														15.2	7.43	
Japan	Rishiri	2.99	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	
	Ochiishi	4.30	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	
	Tappi	6.50	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	7.28	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	
	Happo	6.19	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	
	Ijira	2.65	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	
	Oki	6.85	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	
	Banryu	8.08	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	2.35	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	
	Hedo	5.15	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	
	Ogasawara	1.37	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	
	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	
	Niigata-maki														3.40	2.93	
	Tsushima														0.717	0.912	
Lao PDR	Vientiane	8.59	2.99	5.70	5.30	***	***	***	***	***	3.94	2.18	*	*	*	***	
Malaysia	Petaling Jaya	3.71	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	
	Tanah Rata	1.12	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	1.16	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	
	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	
Mongolia	Ulaanbaatar	45.7	41.1	42.9	42.1	34.2	33.8	***	93.6	***	***	25.4	41.3	22.6	36.6	44.4	
	Terelj	24.5	13.4	17.7	35.6	42.1	20.2	***	68.8	***	***	13.7	15.6	14.4	***	61.3	
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	
Philippines	Metro Manila	13.3	9.96	13.2	5.98	12.3	12.4	13.5	10.9	14.0	16.9	20.2	***	***	14.3	16.1	
	Los Baños	6.43	4.82	3.34	4.71	19.7	5.96	8.92	5.94	6.67	8.42	11.3	***	***	***	***	
	Mt.Sto.Tomas	5.58	23.3	2.98	5.69	22.5	7.75	13.8	8.43	7.92	6.66	13.1	***	***	***	***	
Republic of Korea	Kanghwa	15.2	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	***	
	Cheju	7.21	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	***	
	Imsil	14.0	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	***	
Russia	Mondy	5.43	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	
	Listvyanka	8.76	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	
	Irkutsk	29.7	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	
	Primorskaya	24.7	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	
Thailand	Bangkok	18.2	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	14.5	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	12.7	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	
	Khanchanaburi	2.56	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	4.68	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	9.45	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	35.0	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	
	HoaBinh	17.7	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	
	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	
	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	
	Can Tho									12.4	26.2	11.6	10.3	14.2	15.4	13.8	
	Ho Chi Minh									25.4	43.5	11.8	14.4	17.9	26.1	15.3	
	Yen Bai										15.8	20.1	23.0	20.7	27.1	52.5	

Terms and abbreviations are given in Table 3.5.

Table 3.81 Precipitation amount-weighted annual average concentrations of Mg²⁺ from 2006 to 2020

		unit: $\mu\text{mol L}^{-1}$														
Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	0.661	3.27	3.45	2.00	0.717	1.22	1.22	1.12	1.63	2.56	1.44	1.41	***	***	***
China	Guanyinqiao	12.6	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
	Jinyunshan	4.00	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
	Shizhan	28.3	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
	Weishuiyuan	42.0														
	Jiwozi	40.6	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
	Hongwen	5.44	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
	Xiaoping	2.77	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
	Xiang Zhou	12.0	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
	Zhuxiandong	4.99	***	5.70	6.15	2.86	6.75	***	***	***	8.78	5.17	3.21	10.2	4.12	5.87
	Wuzhishan														2.30	1.34
	Lijiang														4.59	2.62
Indonesia	Jakarta	8.59	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
	Serpong	1.73	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
	Kototabang	2.26	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
	Bandung	3.26	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
	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
	Jembrana														2.63	4.74
	Lombok														4.15	6.84
Japan	Rishiri	12.6	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
	Ochiishi	31.2	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
	Tappi	33.3	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	25.9	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
	Happo	0.958	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
	Ijira	1.64	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
	Oki	26.9	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
	Banryu	8.34	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	1.66	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
	Hedo	21.8	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
	Ogasawara	11.4	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
	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
	Niigata-maki														20.4	13.0
	Tsushima														3.27	3.50
Lao PDR	Vientiane	3.49	0.698	1.31	0.722	***	***	***	***	***	0.613	<0.3	*	*	*	***
Malaysia	Petaling Jaya	0.710	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
	Tanah Rata	<0.3	<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	0.481	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
	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
Mongolia	Ulaanbaatar	4.39	4.75	3.67	5.32	2.98	9.23	***	3.74	***	***	6.06	3.06	2.50	3.71	3.25
	Terelj	4.85	2.07	3.00	5.45	5.54	7.35	***	4.97	***	***	2.19	1.32	1.46	***	9.00
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
Philippines	Metro Manila	5.46	4.13	4.64	2.56	9.12	7.13	6.53	4.54	4.64	6.39	5.29	***	***	3.97	3.26
	Los Baños	3.44	3.46	4.65	3.73	8.20	4.76	4.26	3.25	3.32	4.40	4.14	***	***	***	***
	Mt.Sto.Tomas	0.971	2.08	0.346	1.53	3.34	1.61	2.90	1.69	1.35	3.44	2.78	***	***	***	***
Republic of Korea	Kanghwa	5.10	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	***
	Cheju	9.59	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	***
	Imsil	3.99	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	***
Russia	Mondy	0.986	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
	Listvyanka	1.71	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
	Irkutsk	5.76	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
	Primorskaya	5.50	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
Thailand	Bangkok	2.34	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	4.63	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	1.76	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
	Khanchanaburi	0.983	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	2.42	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	1.98	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	8.55	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
	HoaBinh	5.28	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
	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
	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
	Can Tho									4.45	9.17	6.85	5.35	9.84	10.2	7.83
	Ho Chi Minh									8.73	17.9	6.90	9.01	10.2	13.2	9.34
	Yen Bai										2.68	3.24	1.66	3.39	2.33	9.32

Terms and abbreviations are given in Table 3.5.

Table 3.82 Precipitation amount-weighted annual average concentrations of H⁺ from 2006 to 2020unit: $\mu\text{mol L}^{-1}$

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	0.191	0.203	1.45	0.649	1.07	1.10	0.694	0.662	0.621	0.717	0.389	0.667	***	***	***
China	Guanyinqiao	13.7	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
	Jinyunshan	20.4	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
	Shizhan	2.75	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
	Weishuiyuan	1.46														
	Jiwozi	1.36	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
	Hongwen	14.7	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
	Xiaoping	16.5	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
	Xiang Zhou	13.4	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
	Zhuxiandong	15.0	***	13.1	17.7	11.3	16.7	***	***	***	3.29	6.88	8.49	6.98	9.55	6.82
	Wuzhishan														1.14	1.29
	Lijiang														0.529	0.374
Indonesia	Jakarta	41.5	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
	Serpong	25.0	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
	Kototabang	29.4	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
	Bandung	7.00	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
	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
	Jembrana														4.32	6.91
	Lombok														2.56	4.04
Japan	Rishiri	21.5	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
	Ochiishi	13.8	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
	Tappi	26.5	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	19.7	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
	Happo	10.7	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
	Ijira	31.0	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
	Oki	18.7	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
	Banryu	20.5	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	14.4	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
	Hedo	10.1	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
	Ogasawara	10.1	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
	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
	Niigata-maki														13.7	11.3
	Tsushima														10.2	11.9
Lao PDR	Vientiane	0.325	2.16	0.987	3.31	***	***	0.351	***	0.288	1.15	0.171	*	*	*	***
Malaysia	Petaling Jaya	37.8	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
	Tanah Rata	11.3	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	8.93	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
	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
Mongolia	Ulaanbaatar	0.354	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
	Terelj	6.89	6.04	3.72	0.608	2.44	5.47	1.81	12.3	***	3.14	6.47	9.14	1.56	***	0.564
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
Philippines	Metro Manila	5.01	5.33	2.84	5.87	2.25	2.27	6.03	2.85	0.736	0.528	3.05	***	***	3.94	2.50
	Los Baños	2.44	2.91	11.2	2.64	1.32	2.70	2.19	1.41	1.61	0.508	19.3	***	***	***	***
	Mt.Sto.Tomas	0.475	2.97	3.22	1.47	0.201	4.46	1.12	5.18	0.724	1.10	0.345	***	***	***	***
Republic of Korea	Kanghwa	21.0	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	***
	Cheju	45.9	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	***
	Imsil	6.45	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	***
Russia	Mondy	4.08	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
	Listvyanka	22.8	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
	Irkutsk	7.04	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
	Primorskaya	15.0	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
Thailand	Bangkok	6.91	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	1.36	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	13.0	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
	Khanchanaburi	1.78	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	2.00	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	7.61	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	1.85	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
	HoaBinh	2.57	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
	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
	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
	Can Tho									0.550	1.68	1.43	1.08	1.34	1.18	1.41
	Ho Chi Minh									1.42	0.775	1.75	0.861	0.773	1.08	1.08
	Yen Bai										5.90	6.63	6.40	4.48	15.3	1.70

Terms and abbreviations are given in Table 3.5.

Table 3.83 Precipitation amount-weighted annual average pH from 2006 to 2020

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	6.72	6.69	5.84	6.19	5.97	5.96	6.16	6.18	6.21	6.14	6.41	6.18	***	***	***
China	Guanyinqiao	4.86	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
	Jinyunshan	4.69	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
	Shizhan	5.56	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
	Weishuiyuan	5.84														
	Jiwozi	5.87	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
	Hongwen	4.83	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
	Xiaoping	4.78	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
	Xiang Zhou	4.87	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
	Zhuxiandong	4.82	***	4.88	4.75	4.95	4.78	***	***	***	5.48	5.16	5.07	5.16	5.02	5.17
	Wuzhishan														5.94	5.89
	Lijiang														6.28	6.43
Indonesia	Jakarta	4.38	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
	Serpong	4.60	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
	Kototabang	4.53	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
	Bandung	5.15	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
	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
	Jembrana														5.36	5.16
	Lombok														5.59	5.39
Japan	Rishiri	4.67	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
	Ochiishi	4.86	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
	Tappi	4.58	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	4.70	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
	Happo	4.97	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
	Ijira	4.51	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
	Oki	4.73	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
	Banryu	4.69	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	4.84	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
	Hedo	4.99	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
	Ogasawara	4.99	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
	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
	Niigata-maki														4.86	4.95
	Tsushima														4.99	4.92
Lao PDR	Vientiane	6.49	5.67	6.01	5.48	***	***	6.46	***	6.54	5.94	6.77	*	*	*	***
Malaysia	Petaling Jaya	4.42	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
	Tanah Rata	4.95	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	5.05	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
	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
Mongolia	Ulaanbaatar	6.45	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
	Terelj	5.16	5.22	5.43	6.22	5.61	5.26	5.74	4.91	***	5.50	5.19	5.04	5.81	***	6.25
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
Philippines	Metro Manila	5.30	5.27	5.55	5.23	5.65	5.64	5.22	5.55	6.13	6.28	5.52	***	***	5.40	5.60
	Los Baños	5.61	5.54	4.95	5.58	5.88	5.57	5.66	5.85	5.79	6.29	4.71	***	***	***	***
	Mt.Sto.Tomas	6.32	5.53	5.49	5.83	6.70	5.35	5.95	5.29	6.14	5.96	6.46	***	***	***	***
Republic of Korea	Kanghwa	4.68	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	***
	Cheju	4.34	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	***
	Imsil	5.19	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	***
Russia	Mondy	5.39	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
	Listvyanka	4.64	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
	Irkutsk	5.15	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
	Primorskaya	4.83	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
Thailand	Bangkok	5.16	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	5.87	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	4.89	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
	Khanchanaburi	5.75	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	5.70	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	5.12	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	5.73	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
	HoaBinh	5.59	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
	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
	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
	Can Tho									6.26	5.77	5.84	5.97	5.87	5.93	5.85
	Ho Chi Minh									5.85	6.11	5.76	6.06	6.11	5.96	5.96
	Yen Bai										5.23	5.18	5.19	5.35	4.82	5.77

Terms and abbreviations are given in Table 3.5.

Table 3.84 Precipitation amount-weighted annual average EC from 2006 to 2020

unit: mS m⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	PhnomPenh	1.17	1.37	1.53	0.880	0.747	0.820	0.704	0.665	0.676	0.691	0.705	0.747	***	***	***
China	Guanyinqiao	6.70	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
	Jinyunshan	5.45	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
	Shizhan	9.81	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
	Weishuiyuan	13.4														
	Jiwozi	6.95	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
	Hongwen	2.31	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
	Xiaoping	2.19	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
	Xiang Zhou	2.20	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
	Zhuxiandong	2.67	***	1.94	2.15	1.37	1.99	***	***	***	2.29	2.01	1.45	2.38	1.53	1.49
	Wuzhishan														0.733	0.613
	Lijiang														1.50	0.418
Indonesia	Jakarta	1.92	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
	Serpong	2.10	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
	Kototabang	0.881	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
	Bandung	1.69	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
	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
	Jembrana														0.898	1.78
	Lombok														1.10	1.03
Japan	Rishiri	3.04	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
	Ochiishi	5.00	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
	Tappi	5.98	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	3.81	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
	Happo	0.840	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
	Ijira	2.15	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
	Oki	4.77	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
	Banryu	2.54	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	1.08	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
	Hedo	3.58	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
	Ogasawara	2.14	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
	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
	Niigata-maki														3.87	2.58
	Tsushima														1.23	1.40
Lao PDR	Vientiane	0.764	0.396	0.644	0.534	***	***	0.411	***	0.867	1.26	0.730	*	*	*	***
Malaysia	Petaling Jaya	1.81	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
	Tanah Rata	0.510	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	0.465	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
	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
Mongolia	Ulaanbaatar	1.92	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
	Terelj	1.95	2.02	1.34	2.06	1.88	1.54	1.33	1.94	***	2.80	3.27	1.38	1.19	***	2.37
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
Philippines	Metro Manila	1.66	1.40	2.88	1.24	1.89	3.76	4.81	1.53	1.92	2.53	3.02	***	***	1.20	1.01
	Los Baños	1.08	0.859	1.76	0.802	1.22	1.18	1.74	1.02	1.45	3.34	2.25	***	***	***	***
	Mt.Sto.Tomas	0.221	1.03	0.347	0.495	0.533	0.355	0.500	0.558	0.460	0.464	0.527	***	***	***	***
Republic of Korea	Kanghwa	2.75	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	***
	Cheju	3.64	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	***
	Imsil	2.51	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	***
Russia	Mondy	0.428	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
	Listvyanka	1.51	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
	Irkutsk	1.76	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
	Primorskaya	2.47	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
Thailand	Bangkok	1.94	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	1.56	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	1.42	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
	Khanchanaburi	0.462	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	0.593	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	0.918	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	2.18	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
	HoaBinh	1.22	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
	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
	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
	Can Tho									1.10	1.92	1.20	1.06	1.27	1.35	1.34
	Ho Chi Minh									2.00	2.85	1.33	1.68	1.35	1.78	1.64
	Yen Bai										1.31	2.47	1.55	1.49	1.90	2.90

Terms and abbreviations are given in Table 3.5.

Table 3.85 Annual SO₄²⁻ deposition amount from 2006 to 2020unit: mmol m⁻²y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	5.04	30.9	21.3	15.4	13.6	11.5	17.0	10.7	9.78	7.76	6.85	15.6	***	***	***
China	Guanyinqiao	149	169													
	Haifu			145	106	136	115	103	109	120	61.3	59.5	49.8	46.1	41.0	33.0
	Jinyunshan	169	149	146	125	148	119	125	91.7	90.0	56.5	48.6	46.3	33.9	36.6	38.0
	Shizhan	132	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
	Weishuiyuan	104														
	Jiwozi	30.0	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
	Hongwen	61.1	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
	Xiaoping	39.7	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
	Xiang Zhou	44.6	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
	Zhuxiandong	17.1	***	49.6	33.2	31.6	23.4	***	***	***	37.2	42.6	25.7	33.1	24.8	22.5
	Wuzhishan														10.1	3.50
	Lijiang														0.234	36.9
Indonesia	Jakarta	38.7	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
	Serpong	45.2	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
	Kototabang	9.55	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
	Bandung	35.1	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
	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
	Jembrana														14.8	20.1
	Lombok														18.6	15.0
Japan	Rishiri	29.6	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
	Ochiishi	27.6	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
	Tappi	34.5	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	35.7	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
	Happo	28.4	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
	Ijira	58.3	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
	Okii	41.1	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
	Banryu	43.1	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	31.9	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
	Hedo	35.8	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
	Ogasawara	16.2	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
	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
	Niigata-maki														31.6	30.1
	Tsushima														25.8	25.1
Lao PDR	Vientiane	2.45	6.54	8.43	0.733	***	***	3.19	***	***	2.94	2.61	*	*	*	***
Malaysia	Petaling Jaya	82.5	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
	Tanah Rata	12.3	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	10.2	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
	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
Mongolia	Ulaanbaatar	4.78	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	5.10	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
Philippines	Metro Manila	47.4	78.1	59.2	51.3	54.2	68.3	108	52.9	47.3	47.4	54.7	***	***	24.1	28.8
	Los Baños	23.9	26.0	34.2	25.6	15.3	20.4	26.5	15.8	18.9	21.0	27.0	***	***	***	***
	Mt.Sto.Tomas	0.592	19.4	17.6	23.8	17.8	21.6	41.6	33.8	16.8	24.5	24.4	***	***	***	***
Republic of Korea	Kanghwa	40.3	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	***
	Cheju	31.6	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	***
	Imsil	19.0	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	***
Russia	Mondy	1.93	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
	Listvyanka	5.90	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
	Irkutsk	9.28	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
	Primorskaya	28.6	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
Thailand	Bangkok	35.5	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	29.4	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	21.6	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
	Khanchanaburi	10.2	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	6.44	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	9.80	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	57.7	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
	Hoa Binh	38.5	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
	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
	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
	Can Tho									16.1	67.7	26.5	30.9	59.1	61.0	39.7
	Ho Chi Minh									46.3	67.6	49.0	80.5	63.5	71.8	60.7
	Yen Bai										34.2	79.1	62.9	47.3	38.9	80.6

Terms and abbreviations are given in Table 3.5.

Table 3.86 Annual nss-SO₄²⁻ deposition amount from 2006 to 2020

unit: mmol m⁻²y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	4.82	30.2	15.9	14.9	13.3	11.3	16.6	10.5	9.07	7.35	6.53	15.2	***	***	***
China	Guanyinqiao	149	169													
	Haifu			145	106	135	115	102	108	119	61.1	59.1	49.5	45.7	40.7	32.7
	Jinyunshan	168	148	145	124	148	119	125	91.5	89.6	56.4	48.5	46.1	33.8	36.5	37.9
	Shizhan	131	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
	Weishuiyuan	103														
	Jiwozi	29.1	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
	Hongwen	57.7	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
	Xiaoping	37.9	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
	Xiang Zhou	41.3	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
	Zhuxiandong	15.9	***	44.0	28.9	29.4	20.3	***	***	***	30.8	38.3	22.8	21.8	21.7	17.7
	Wuzhishan														9.35	3.17
	Lijiang														0.207	36.9
Indonesia	Jakarta	37.6	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
	Serpong	44.4	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
	Kototabang	9.08	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
	Bandung	33.7	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
	Maros			13.5	20.0	26.7		18.7	21.3	17.2	14.9	11.0	8.53	16.7	9.75	6.69
	Jembrana														12.9	16.0
	Lombok														16.4	12.4
Japan	Rishiri	21.0	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
	Ochiishi	11.3	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
	Tappi	17.8	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	18.7	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
	Happo	27.8	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
	Ijira	56.5	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
	Oki	22.0	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
	Banryu	35.3	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	29.7	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
	Hedo	14.7	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
	Ogasawara	6.58	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
	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
	Niigata-maki														15.4	15.8
	Tsushima														21.4	20.6
Lao PDR	Vientiane	2.15	6.34	8.14	0.633	***	***	***	***	***	2.79	2.54	*	*	*	***
Malaysia	Petaling Jaya	81.4	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
	Tanah Rata	12.1	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	9.23	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
	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
Mongolia	Ulaanbaatar	4.68	4.63	4.22	4.47	3.36	4.53	***	8.00	***	***	19.0	5.32	5.05	11.4	5.65
	Terelj	4.93	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
Philippines	Metro Manila	44.6	73.9	55.7	47.7	50.6	63.6	103	47.0	43.5	43.9	52.0	***	***	21.5	27.3
	Los Baños	21.0	22.7	32.0	22.5	12.5	17.6	23.7	12.5	17.0	19.3	24.7	***	***	***	***
	Mt.Sto.Tomas	0.519	18.2	16.1	21.5	16.5	20.4	38.1	32.1	15.4	21.3	20.5	***	***	***	***
Republic of Korea	Kanghwa	38.5	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	***
	Cheju	25.9	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	***
	Imsil	17.6	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	***
Russia	Mondy	1.89	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
	Listvyanka	5.85	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
	Irkutsk	9.07	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
	Primorskaya	28.0	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
Thailand	Bangkok	34.6	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	28.0	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	20.8	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
	Khanchanaburi	9.24	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	6.16	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	9.48	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	56.7	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
	Hoa Binh	38.1	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
	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
	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
	Can Tho									14.4	63.8	25.2	29.8	57.5	58.4	37.9
	Ho Chi Minh									43.5	64.6	46.9	76.9	61.4	69.0	57.9
	Yen Bai										33.7	78.1	62.4	46.9	37.7	79.0

Terms and abbreviations are given in Table 3.5.

Table 3.87 Annual NO₃⁻ deposition amount from 2006 to 2020unit: mmol m⁻²y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	8.59	11.3	17.2	13.7	15.5	11.3	17.4	10.3	13.3	11.4	9.78	15.1	***	***	***
China	Guanyinqiao	51.1	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
	Jinyunshan	55.2	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
	Shizhan	39.4	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
	Weishuiyuan	32.8														
	Jiwozi	11.9	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
	Hongwen	47.7	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
	Xiaoping	37.7	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
	Xiang Zhou	33.3	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
	Zhuxiandong	11.7	***	33.9	31.3	36.6	21.5	***	***	***	47.0	52.2	41.5	40.7	51.0	51.4
	Wuzhishan														14.1	8.14
	Lijiang														2.25	29.6
Indonesia	Jakarta	30.4	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
	Serpong	45.4	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
	Kototabang	1.74	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
	Bandung	30.3	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
	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
	Jembrana														15.3	53.1
	Lombok														20.0	13.4
Japan	Rishiri	18.2	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
	Ochiishi	11.3	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
	Tappi	21.7	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	23.9	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
	Happo	22.7	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
	Ijira	68.5	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
	Oki	25.4	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
	Banryu	38.3	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	23.9	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
	Hedo	15.1	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
	Ogasawara	7.57	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
	Tokyo			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
	Niigata-maki														25.7	28.7
	Tsushima														16.6	27.3
Lao PDR	Vientiane	4.92	9.65	9.95	1.76	***	***	7.34	***	***	3.79	2.90	*	*	*	***
Malaysia	Petaling Jaya	120	80.5	135	138	174	190	150	119	133	164	151	90.1	140	***	96.1
	Tanah Rata	14.9	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	4.24	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
	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
Mongolia	Ulaanbaatar	3.50	3.27	3.12	4.35	3.26	2.75	***	4.76	***	5.20	5.87	4.86	4.16	1.92	7.03
	Terelj	3.32	3.39	3.77	2.33	3.58	2.59	***	2.89	***	2.41	5.20	4.58	3.81	***	4.68
Myanmar	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
Philippines	Metro Manila	33.1	49.4	50.2	32.8	135	52.7	81.4	49.0	42.0	33.5	91.8	***	***	31.0	28.5
	Los Baños	18.1	19.4	15.1	23.2	64.9	19.9	25.0	18.7	17.0	13.7	67.7	***	***	***	***
	Mt.Sto. Tomas	0.804	18.5	19.9	18.6	15.5	11.8	34.9	37.2	18.5	21.3	25.5	***	***	***	***
Republic of Korea	Kanghwa	36.1	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	***
	Cheju	28.8	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	***
	Imsil	19.6	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	***
Russia	Mondy	2.09	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
	Listvyanka	4.54	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
	Irkutsk	5.89	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
	Primorskaya	18.2	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
Thailand	Bangkok	52.4	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	20.0	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	35.4	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
	Khanchanaburi	15.5	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	11.2	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	13.5	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	30.6	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
	Hoa Binh	25.0	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
	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
	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
	Can Tho										15.4	25.8	5.52	7.30	39.7	6.42
	Ho Chi Minh										34.2	25.5	18.9	37.2	41.4	22.2
	Yen Bai										27.0	73.2	58.6	54.0	63.0	126

Terms and abbreviations are given in Table 3.5.

Table 3.88 Annual Cl⁻ deposition amount from 2006 to 2020unit: mmol m⁻² y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	5.88	17.4	15.9	13.6	9.12	7.52	10.8	10.1	14.2	9.94	8.23	8.40	***	***	***
China	Guanyinqiao	16.2	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
	Jinyunshan	16.2	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
	Shizhan	17.3	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
	Weishuiyuan	16.1														
	Jiwozi	7.77	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
	Hongwen	98.0	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
	Xiaoping	52.4	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
	Xiang Zhou	68.1	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
	Zhuxiandong	25.9	***	105	81.2	40.2	21.5	***	***	***	116	78.9	53.3	214	60.5	94.3
	Wuzhishan														11.1	7.02
	Lijiang														1.72	20.7
Indonesia	Jakarta	23.0	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
	Serpong	17.4	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
	Kototabang	9.74	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
	Bandung	18.6	14.8		31.6	22.4	18.9	22.1	36.5	29.8	19.1	26.0	28.7	24.0	36.3	17.3
	Maros			60.9	49.7	56.2	58.4	48.9	146	99.9	17.1	304	262	51.8	35.5	47.4
	Jembrana														49.8	136
	Lombok														37.9	38.2
Japan	Rishiri	163	142	222	203	197	192	389	260	190	175	104	219	211	149	196
	Ochiishi	316	189	142	323	288	147	267	514	93.8	166	184	216	99.6	64.6	85.6
	Tappi	314	276	186	290	192	191	191	309	210	315	238	242	305		
	Sado-seki	324	298	241	377	481	252	380	559	447	318	199	214	237	240	264
	Happo	15.6	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
	Ijira	40.8	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
	Oki	353	362	412	489	684	847	532	807	649	502	583	551	619	207	397
	Banryu	149	114	105	197	157	179	125	164	155	157	168	147	108		
	Yusuhara	44.4	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
	Hedo	404	394	270	278	751	410	1407	424	383	648	429	696	490	391	527
	Ogasawara	188	241	165	379	391	313	210	236	587	122	344	50.7	379	101	
	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
	Niigata-maki														320	276
	Tsushima														85.5	86.1
Lao PDR	Vientiane	3.38	10.4	12.4	1.12	***	***	5.89	***	***	4.58	3.76	*	*	*	***
Malaysia	Petaling Jaya	27.8	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
	Tanah Rata	5.85	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	21.5	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
	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
Mongolia	Ulaanbaatar	1.46	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	1.99	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
Philippines	Metro Manila	62.3	97.8	68.4	92.9	55.2	109	90.1	101	68.6	68.2	79.0	***	***	55.1	25.9
	Los Baños	46.7	75.5	35.5	72.6	52.3	62.5	45.4	61.7	38.0	143	44.3	***	***	***	***
	Mt.Sto.Tomas	0.677	24.9	26.6	39.3	18.3	20.3	37.2	31.2	15.3	47.6	24.1	***	***	***	***
Republic of Korea	Kanghwa	39.2	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	***
	Cheju	116	130	114	66.1	114	158	545	219	148	159	498	200	303	60.4	***
	Imsil	54.9	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	***
Russia	Mondy	1.83	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
	Listvyanka	1.09	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
	Irkutsk	4.48	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
	Primorskaya	11.2	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
Thailand	Bangkok	17.1	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	17.7	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	11.0	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
	Khanchanaburi	15.9	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	5.29	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	6.56	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	19.2	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
	Hoa Binh	9.99	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
	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
	Da Nang				325	85.2	340	140	403	206	138	191	182	254	359	524
	Can Tho										50.4	90.8	60.3	55.6	56.6	47.8
	Ho Chi Minh										85.8	73.9	95.2	164	89.9	109
	Yen Bai										11.3	25.9	41.4	23.2	22.3	52.8

Terms and abbreviations are given in Table 3.5.

Table 3.89 Annual NH₄⁺ deposition amount from 2006 to 2020

unit: mmol m⁻²y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	17.0	27.0	21.6	17.3	41.9	28.0	34.9	18.1	21.7	19.9	24.9	30.7	***	***	***
China	Guanyinqiao	151	181													
	Haifu			149	112	137	117	118	145	164	116	125	117	115	112	95.3
	Jinyunshan	145	124	120	121	121	98.8	125	102	105	80.6	80.1	76.1	74.2	73.2	77.0
	Shizhan	80.7	109	63.3	99.7	85.6	40.0	42.7	105	106	115	49.0	85.0	59.8	63.3	70.1
	Weishuiyuan	75.4														
	Jiwozi	11.4	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
	Hongwen	62.0	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
	Xiaoping	50.5	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
	Xiang Zhou	86.6	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
	Zhuxiandong	24.3	***	42.9	40.5	42.1	28.4	***	***	***	38.9	99.8	46.7	49.8	48.4	45.7
	Wuzhishan														22.0	16.6
	Lijiang														5.58	2.44
Indonesia	Jakarta	25.7	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
	Serpong	64.6	89.2	112	57.7	74.6	51.6	63.6	193	189	112	163	161	147	148	218
	Kototabang	12.3	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
	Bandung	61.0	94.3	104	130	83.7	93.0	112	111	113	114	157	120	108	124	91.2
	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
	Jembrana														26.7	32.2
	Lombok														27.0	34.3
Japan	Rishiri	22.6	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
	Ochiishi	15.6	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
	Tappi	18.2	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	21.0	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
	Happo	24.7	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
	Ijira	64.5	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
	Okii	17.8	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
	Banryu	29.1	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	23.8	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
	Hedo	15.9	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
	Ogasawara	7.27	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
	Tokyo	29.9	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
	Niigata-maki														24.8	26.3
	Tsushima														21.2	30.8
Lao PDR	Vientiane	5.47	15.3	14.0	3.13	***	***	***	***	***	7.17	5.35	*	*	*	***
Malaysia	Petaling Jaya	93.3	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
	Tanah Rata	9.84	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	6.15	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
	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
Mongolia	Ulaanbaatar	10.1	11.0	8.26	10.6	8.35	7.50	***	9.58	***	***	6.50	7.81	9.78	2.53	8.00
	Terelj	11.7	7.19	10.5	4.54	4.53	5.66	***	0.487	***	***	6.41	4.40	4.62	***	2.63
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
Philippines	Metro Manila	109	118	148	79.7	142	667	1218	145	162	215	283	***	***	67.6	53.8
	Los Baños	36.2	52.1	37.1	33.9	79.1	70.1	142	53.3	116	85.6	149	***	***	***	***
	Mt.Sto. Tomas	0.293	29.4	53.3	66.7	16.8	3.79	19.6	20.7	49.0	58.4	34.5	***	***	***	***
Republic of Korea	Kanghwa	57.9	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	***
	Cheju	29.5	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	***
	Imsil	35.5	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	***
Russia	Mondy	1.52	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
	Listvyanka	4.82	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
	Irkutsk	8.89	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
	Primorskaya	31.0	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
Thailand	Bangkok	89.0	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	70.8	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	53.9	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
	Khanchanaburi	44.1	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	21.6	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	27.5	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	56.2	80.1	69.4	81.4	64.8	95.9	108	104	113	82.6	102	109	108	38.6	155
	Hoa Binh	42.7	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
	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
	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
	Can Tho									33.7	46.9	38.0	41.0	32.0	41.8	26.6
	Ho Chi Minh									46.6	41.8	73.6	132	51.3	51.5	76.2
	Yen Bai										46.1	166	80.5	72.8	29.0	112

Terms and abbreviations are given in Table 3.5.

Table 3.90 Annual Na⁺ deposition amount from 2006 to 2020unit: mmol m⁻² y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	1.75	11.3	18.8	9.22	5.74	4.54	5.90	4.16	11.9	6.92	5.40	6.14	***	***	***
China	Guanyinqiao	6.66	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
	Jinyunshan	7.95	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
	Shizhan	21.8	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
	Weishuiyuan	21.1														
	Jiwozi	15.4	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
	Hongwen	65.6	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
	Xiaoping	54.5	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
	Xiang Zhou	54.3	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
	Zhuxiandong	20.0	***	94.1	71.5	37.0	51.5	***	***	***	107	80.4	47.7	188	50.5	80.5
Indonesia	Wuzhishan														13.0	6.16
	Lijiang														4.40	0.579
	Jakarta	19.3	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
	Serpong	12.0	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
	Kototabang	7.75	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
	Bandung	24.0	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
	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
Japan	Jembrana														31.6	67.0
	Lombok														36.6	42.3
	Rishiri	142	126	204	185	173	171	343	234	168	153	90.6	194	185	130	174
	Ochiishi	277	161	125	287	252	126	239	446	81.5	147	158	183	87.2	56.0	74.9
	Tappi	278	247	162	266	177	171	166	275	187	264	206	213	263		
	Sado-seki	283	264	219	333	437	213	319	517	397	283	175	189	211	211	235
	Happo	11.4	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
	Ijira	30.7	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
	Okii	315	319	360	422	594	737	462	705	574	437	505	482	530	178	344
	Banryu	130	100	91.6	171	139	155	111	140	132	133	150	129	94.3		
	Yusuhara	37.5	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
	Hedo	351	349	243	250	670	360	1186	366	335	552	365	597	421	333	442
Lao PDR	Ogasawara	163	209	144	315	386	262	179	178	201	486	105	298	44.8	333	85.0
	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
	Niigata-maki														269	237
	Tsushima														73.8	74.9
Malaysia	Vientiane	5.04	3.32	4.86	1.66	***	***	***	***	***	2.56	1.08	*	*	*	***
Malaysia	Petaling Jaya	17.1	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
	Tanah Rata	3.93	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	16.9	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
	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
Mongolia	Ulaanbaatar	1.58	0.660	0.556	1.11	0.535	0.924	***	12.1	***	***	27.6	3.50	7.07	3.72	12.5
	Terelj	2.68	1.74	1.13	0.843	1.44	0.873	***	1.54	***	***	21.9	1.42	7.38	***	7.11
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
Philippines	Metro Manila	46.3	70.8	58.7	76.5	59.7	78.2	74.6	98.3	64.4	58.5	43.7	***	***	42.7	26.3
	Los Baños	50.5	54.4	36.2	50.5	46.9	46.3	46.7	54.5	32.0	27.4	39.3	***	***	***	***
	Mt.Sto. Tomas	1.21	19.2	25.9	39.1	22.7	19.9	58.9	29.4	23.0	53.2	65.7	***	***	***	***
Republic of Korea	Kanghwa	31.5	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	***
	Cheju	95.8	126	112	55.7	103	163	449	184	139	147	442	187	273	73.8	***
	Imsil	22.0	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	***
Russia	Mondy	0.643	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
	Listvyanka	0.870	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
	Irkutsk	3.58	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
	Primorskaya	10.5	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
Thailand	Bangkok	13.8	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	20.8	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	12.0	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
	Khanchanaburi	17.3	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	5.02	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	5.30	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	16.6	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
	Hoa Binh	6.94	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
	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
	Da Nang				281	69.9	255	106	333	182	151	179	182	177	231	177
	Can Tho									28.4	64.8	21.0	18.3	25.4	42.8	29.7
	Ho Chi Minh									47.9	49.1	34.4	59.8	35.1	46.1	46.5
	Yen Bai										8.18	16.3	8.81	6.81	18.7	27.1

Terms and abbreviations are given in Table 3.5.

Table 3.91 Annual K⁺ deposition amount from 2006 to 2020unit: mmol m⁻²y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	1.41	5.00	19.0	1.98	1.59	1.47	1.23	1.42	4.20	2.18	2.70	1.68	***	***	***
China	Guanyinqiao	10.6	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
	Jinyunshan	13.6	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
	Shizhan	8.67	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
	Weishuiyuan	10.6														
	Jiwozi	4.88	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
	Hongwen	7.14	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
	Xiaoping	31.7	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
	Xiang Zhou	12.5	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
	Zhuxiandong	2.32	***	10.4	4.04	6.10	6.78	***	***	***	13.3	13.7	4.08	9.80	3.93	4.54
	Wuzhishan														4.29	2.23
	Lijiang														0.778	0.767
Indonesia	Jakarta	11.9	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
	Serpong	7.14	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
	Kototabang	5.69	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
	Bandung	6.31	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
	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
	Jembrana														6.05	43.9
	Lombok														5.26	11.1
Japan	Rishiri	4.85	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
	Ochiishi	7.64	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
	Tappi	6.86	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	7.20	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
	Happo	1.42	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
	Ijira	2.77	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
	Okii	9.16	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
	Banryu	4.37	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	2.15	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
	Hedo	8.77	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
	Ogasawara	4.01	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
	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
	Niigata-maki														7.31	5.67
	Tsushima														2.17	2.65
Lao PDR	Vientiane	2.49	2.37	2.82	0.168	***	***	***	***	***	1.61	0.683	*	*	*	***
Malaysia	Petaling Jaya	6.23	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
	Tanah Rata	1.74	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	3.05	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
	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
Mongolia	Ulaanbaatar	0.968	0.161	0.435	0.577	0.416	0.650	***	0.598	***	***	0.0990	0.207	0.172	0.0677	0.264
	Terelj	1.93	0.703	1.33	0.455	0.703	0.719	***	0.725	***	***	0.754	0.358	0.544	***	0.407
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
Philippines	Metro Manila	34.0	18.9	37.1	15.1	45.6	85.9	117	22.7	25.7	32.7	35.8	***	***	9.78	3.69
	Los Baños	5.53	15.2	5.51	26.3	15.4	16.3	17.1	15.3	17.0	114	24.3	***	***	***	***
	Mt.Sto. Tomas	0.569	7.73	3.57	9.24	5.09	3.78	5.07	3.30	4.57	9.93	3.93	***	***	***	***
Republic of Korea	Kanghwa	5.31	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	***
	Cheju	6.80	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	***
	Imsil	29.9	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	***
Russia	Mondy	0.455	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
	Listvyanka	0.479	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
	Irkutsk	2.73	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
	Primorskaya	3.41	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
Thailand	Bangkok	4.50	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	6.12	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	2.67	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
	Khanchanaburi	6.16	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	2.41	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	0.791	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	4.65	4.48	6.28	2.53	3.43	4.12	5.39	5.13	6.23	4.73	6.03	14.7	15.3	10.5	10.3
	Hoa Binh	3.76	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
	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
	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
	Can Tho									13.7	15.8	10.1	10.4	16.4	30.0	11.7
	Ho Chi Minh									20.3	17.1	16.9	35.7	20.6	24.9	24.8
	Yen Bai										6.09	9.03	14.9	6.10	4.12	7.76

Terms and abbreviations are given in Table 3.5.

Table 3.92 Annual Ca²⁺ deposition amount from 2006 to 2020unit: mmol m⁻²y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	8.64	26.4	59.9	27.1	15.4	11.9	17.4	12.9	14.8	12.8	18.2	13.4	***	***	***
China	Guanyinqiao	120	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
	Jinyunshan	118	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
	Shizhan	145	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
	Weishuiyuan	104														
	Jiwozi	51.9	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
	Hongwen	54.4	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
	Xiaoping	24.7	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
	Xiang Zhou	21.6	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
	Zhuxiandong	15.2	***	31.4	11.7	30.3	21.8	***	***	***	40.2	40.9	25.2	37.4	22.7	25.6
	Wuzhishan														15.5	3.12
	Lijiang														11.8	2.78
Indonesia	Jakarta	27.9	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
	Serpong	11.5	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
	Kototabang	6.48	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
	Bandung	19.4	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
	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
	Jembrana														12.5	45.4
	Lombok														25.3	13.1
Japan	Rishiri	6.90	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
	Ochiishi	10.2	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
	Tappi	12.3	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	15.3	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
	Happo	17.3	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
	Ijira	8.17	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
	Oki	15.9	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
	Banryu	18.6	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	8.25	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
	Hedo	17.2	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
	Ogasawara	5.68	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
	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
	Niigata-maki														10.9	11.3
	Tsushima														3.31	3.79
Lao PDR	Vientiane	6.20	4.25	9.62	0.996	***	***	***	***	***	3.68	1.57	*	*	*	***
Malaysia	Petaling Jaya	15.2	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
	Tanah Rata	3.20	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	3.79	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
	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
Mongolia	Ulaanbaatar	8.63	5.19	6.66	9.63	5.23	5.54	***	14.7	***	***	4.65	6.68	4.00	1.31	7.40
	Terelj	5.32	2.52	3.68	3.97	5.48	2.93	***	6.28	***	***	1.78	1.67	2.29	***	7.31
Myanmar	Yangon		***	***	29.1	14.5	21.7	20.0	2.87	40.6	216	12.1	29.5	48.8	41.9	22.0
Philippines	Metro Manila	36.8	36.4	32.7	24.2	34.2	47.0	61.8	40.5	38.2	43.6	51.6	***	***	34.8	41.0
	Los Baños	15.4	16.1	7.10	14.7	41.6	15.2	19.8	15.3	14.5	13.7	20.7	***	***	***	***
	Mt.Sto. Tomas	2.43	79.0	15.7	27.8	81.8	36.1	80.4	37.7	29.3	41.8	59.5	***	***	***	***
Republic of Korea	Kanghwa	17.2	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	***
	Cheju	10.2	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	***
	Imsil	10.4	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	***
Russia	Mondy	2.24	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
	Listvyanka	2.74	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
	Irkutsk	10.7	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
	Primorskaya	15.6	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
Thailand	Bangkok	29.2	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	21.0	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	20.6	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
	Khanchanaburi	6.82	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	6.72	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	11.4	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	43.4	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
	Hoa Binh	27.5	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
	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
	Da Nang				18.8	15.0	36.4	28.4	49.7	60.6	65.0	105	76.0	94.8	197	286
	Can Tho									23.5	59.1	19.8	20.1	37.5	37.4	23.5
	Ho Chi Minh									49.7	62.8	30.8	51.0	45.1	60.0	39.8
	Yen Bai										24.1	36.9	55.4	38.8	43.6	89.4

Terms and abbreviations are given in Table 3.5.

Table 3.93 Annual nss-Ca²⁺ deposition amount from 2006 to 2020unit: mmol m⁻²y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	8.61	26.2	59.5	26.9	15.3	11.8	17.3	12.8	14.5	12.6	18.1	13.3	***	***	***
China	Guanyinqiao	120	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
	Jinyunshan	117	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
	Shizhan	145	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
	Weishuiyuan	104														
	Jiwozi	51.6	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
	Hongwen	53.0	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
	Xiaoping	23.5	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
	Xiang Zhou	20.4	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
	Zhuxiandong	14.8	***	29.3	10.2	29.5	20.7	***	***	***	37.9	39.1	24.2	33.3	21.6	23.8
	Wuzhishan														15.2	3.01
	Lijiang														11.7	2.77
Indonesia	Jakarta	27.5	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
	Serpong	11.3	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
	Kototabang	6.31	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
	Bandung	18.9	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
	Maros			24.4	25.3	24.8		38.4	40.3	75.2	41.4	22.8	28.1	45.8	33.1	13.1
	Jembrana														11.8	44.0
	Lombok														24.5	12.1
Japan	Rishiri	3.87	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
	Ochiishi	4.29	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
	Tappi	6.26	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	9.20	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
	Happo	17.0	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
	Ijira	7.51	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
	Okii	9.57	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
	Banryu	15.8	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	7.44	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
	Hedo	9.59	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
	Ogasawara	2.17	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
	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
	Niigata-maki														5.17	6.16
	Tsushima														1.76	2.19
Lao PDR	Vientiane	6.09	4.18	9.51	0.960	***	***	***	***	***	3.63	1.55	*	*	*	***
Malaysia	Petaling Jaya	14.9	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
	Tanah Rata	3.13	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	3.49	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
	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
Mongolia	Ulaanbaatar	8.59	5.17	6.64	9.60	5.22	5.53	***	14.4	***	***	4.05	6.60	3.85	1.23	7.17
	Terelj	5.26	2.48	3.66	3.95	5.45	2.91	***	6.25	***	***	1.46	1.64	2.14	***	7.16
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
Philippines	Metro Manila	35.8	34.9	31.4	22.6	32.9	45.4	60.2	38.4	36.8	42.3	50.8	***	***	33.9	40.7
	Los Baños	14.3	14.9	6.32	13.7	40.7	14.2	18.7	14.2	13.8	13.1	19.9	***	***	***	***
	Mt.Sto. Tomas	2.40	78.7	15.1	26.9	81.4	35.7	79.1	37.0	28.8	40.7	58.0	***	***	***	***
Republic of Korea	Kanghwa	16.6	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	***
	Cheju	8.13	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	***
	Imsil	9.93	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	***
Russia	Mondy	2.23	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
	Listvyanka	2.72	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
	Irkutsk	10.6	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
	Primorskaya	15.4	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
Thailand	Bangkok	28.9	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	20.6	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	20.4	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
	Khanchanaburi	6.44	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	6.64	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	11.2	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	43.0	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
	Hoa Binh	27.4	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
	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
	Da Nang				12.8	13.5	30.9	26.1	42.5	56.7	61.8	101	72.1	91.0	192	282
	Can Tho									22.9	57.7	19.4	19.7	37.0	36.5	22.9
	Ho Chi Minh									48.7	61.8	30.1	49.7	44.3	59.0	38.8
	Yen Bai										23.9	36.5	55.2	38.6	43.2	88.8

Terms and abbreviations are given in Table 3.5.

Table 3.94 Annual Mg²⁺ deposition amount from 2006 to 2020unit: mmol m⁻² y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	0.627	4.49	6.33	2.66	1.33	1.55	1.98	1.50	2.54	2.82	1.84	1.94	***	***	***
China	Guanyinqiao	10.6	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
	Jinyunshan	4.78	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
	Shizhan	13.6	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
	Weishuiyuan	13.3														
	Jiwozi	9.51	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
	Hongwen	11.6	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
	Xiaoping	6.52	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
	Xiang Zhou	18.3	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
	Zhuxiandong	4.43	***	13.2	9.71	5.30	7.74	***	***	***	14.0	12.2	5.82	21.5	8.67	12.4
	Wuzhishan														3.44	1.12
	Lijiang														2.33	2.62
Indonesia	Jakarta	12.7	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
	Serpong	2.78	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
	Kototabang	2.82	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
	Bandung	4.27	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
	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
	Jembrana														4.19	10.6
	Lombok														6.65	11.2
Japan	Rishiri	16.3	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
	Ochiishi	31.1	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
	Tappi	32.1	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	32.7	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
	Happo	2.64	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
	Ijira	4.63	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
	Okii	37.6	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
	Banryu	16.3	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	5.25	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
	Hedo	40.7	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
	Ogasawara	18.1	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
	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
	Niigata-maki														31.0	27.4
	Tsushima														8.05	8.39
Lao PDR	Vientiane	2.47	0.977	2.18	0.131	***	***	***	***	***	0.564	0.198	*	*	*	***
Malaysia	Petaling Jaya	2.85	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
	Tanah Rata	0.452	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	1.45	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
	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
Mongolia	Ulaanbaatar	0.825	0.597	0.568	1.21	0.455	1.51	***	0.576	***	***	0.968	0.489	0.426	0.125	0.524
	Terelj	1.04	0.384	0.619	0.604	0.718	1.06	***	0.451	***	***	0.233	0.139	0.218	***	1.05
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
Philippines	Metro Manila	14.7	14.5	11.1	9.69	24.4	26.1	29.1	16.0	12.2	16.0	13.3	***	***	9.41	8.21
	Los Baños	7.65	10.7	8.80	10.8	17.0	11.3	8.96	7.77	6.88	6.86	7.28	***	***	***	***
	Mt.Sto. Tomas	0.418	7.03	1.76	7.23	12.1	7.41	16.6	7.41	4.92	21.0	12.3	***	***	***	***
Republic of Korea	Kanghwa	5.57	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	***
	Cheju	10.8	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	***
	Imsil	2.83	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	***
Russia	Mondy	0.405	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
	Listvyanka	0.532	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
	Irkutsk	2.06	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
	Primorskaya	3.43	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
Thailand	Bangkok	3.72	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	6.57	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	2.82	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
	Khanchanaburi	2.47	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	3.44	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	2.36	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	10.5	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
	Hoa Binh	8.17	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
	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
	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
	Can Tho									8.19	20.2	11.4	10.2	25.7	24.1	13.0
	Ho Chi Minh									16.7	25.4	17.6	31.0	25.2	29.9	23.6
	Yen Bai										4.06	5.88	3.99	6.32	3.71	15.8

Terms and abbreviations are given in Table 3.5.

Table 3.95 Annual H⁺ deposition amount from 2006 to 2020unit: mmol m⁻²y⁻¹

Country	Name of sites	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	0.181	0.279	2.65	0.861	1.98	1.41	1.12	0.890	0.969	0.791	0.496	0.920	***	***	***
China	Guanyinqiao	11.6	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
	Jinyunshan	24.4	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
	Shizhan	1.33	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
	Weishuiyuan	0.460														
	Jiwozi	0.318	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
	Hongwen	31.4	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
	Xiaoping	38.9	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
	Xiang Zhou	20.4	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
	Zhuxiandong	13.3	***	30.2	28.0	21.0	19.1	***	***	***	5.25	16.2	15.4	14.7	20.1	14.4
	Wuzhishan														1.71	1.07
	Lijiang														0.269	0.374
Indonesia	Jakarta	61.4	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
	Serpong	40.1	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
	Kototabang	36.6	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
	Bandung	9.18	23.2	15.9	13.4	20.8	6.12	7.25	9.42	12.5	8.87	22.4	10.8	3.79	16.1	1.40
	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
	Jembrana														6.86	15.4
	Lombok														4.11	6.61
Japan	Rishiri	27.8	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
	Ochiishi	13.8	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
	Tappi	25.5	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	24.9	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
	Happo	29.4	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
	Ijira	87.6	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
	Okii	26.1	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
	Banryu	40.1	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	45.4	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
	Hedo	18.9	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
	Ogasawara	16.1	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
	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
	Niigata-maki														20.8	23.8
	Tsushima														25.1	28.6
Lao PDR	Vientiane	0.231	3.02	1.65	0.600	***	***	0.463	***	0.366	1.06	0.122	*	*	*	***
Malaysia	Petaling Jaya	151	83.2	140	134	191	250	210	136	142	153	189	96.6	122	***	83.4
	Tanah Rata	31.3	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	26.8		18.1	20.4	14.2	23.5	19.5	17.1	13.9	12.4	16.6	18.0	12.4	***	13.8
	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
Mongolia	Ulaanbaatar	0.0666	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
	Terelj	1.48	1.12	0.768	0.0675	0.316	0.786	0.211	1.11	***	0.315	0.689	0.962	0.233	***	0.0659
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
Philippines	Metro Manila	13.5	18.7	6.75	22.2	6.01	8.29	26.9	10.0	1.93	1.32	7.68	***	***	9.33	6.31
	Los Baños	5.42	9.01	21.2	7.64	2.73	6.43	4.61	3.37	3.34	0.791	33.9	***	***	***	***
	Mt.Sto. Tomas	0.204	10.0	16.3	6.96	0.726	20.6	6.41	22.7	2.64	6.72	1.52	***	***	***	***
Republic of Korea	Kanghwa	23.0	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	***
	Cheju	51.8	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	***
	Imsil	4.57	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	***
Russia	Mondy	1.67	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
	Listvyanka	7.10	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
	Irkutsk	2.52	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
	Primorskaya	9.32	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
Thailand	Bangkok	11.0	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	1.93	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	20.9	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
	Khanchanaburi	4.48	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	2.83	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	9.06	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	2.28	4.32	3.24	3.46	1.44	9.13	4.29	4.29	3.04	0.826	4.19	0.604	5.77	14.5	1.02
	Hoa Binh	3.98	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
	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
	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
	Can Tho									1.01	3.71	2.39	2.05	3.50	2.79	2.34
	Ho Chi Minh									2.72	1.10	4.46	2.97	1.92	2.45	2.74
	Yen Bai										8.93	12.0	15.3	8.36	24.4	2.87

Terms and abbreviations are given in Table 3.5.

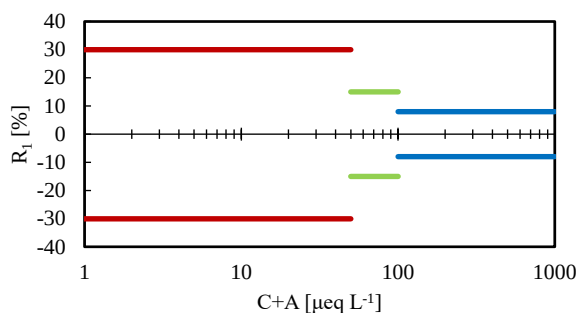


Fig. 3.2 a) Phnom Penh Ion Balance (R_1)

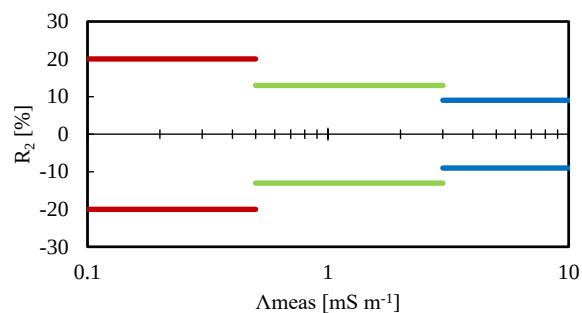


Fig. 3.2 b) Phnom Penh Conductivity Agreement (R_2)

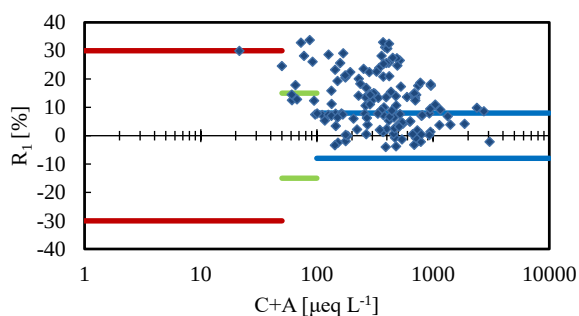


Fig. 3.3 a) Haifu Ion Balance (R_1)

All of R_1 plots were calculated including F^-

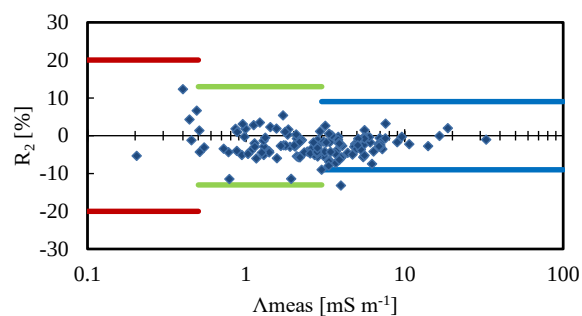


Fig. 3.3 b) Haifu Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

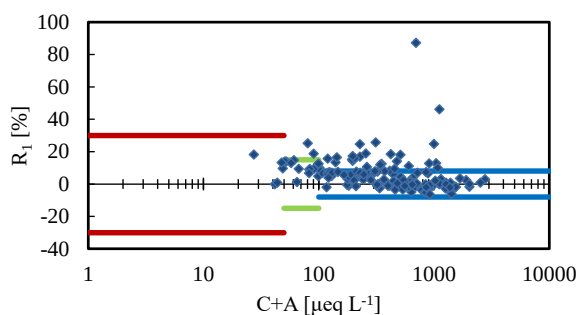


Fig. 3.4 a) Jinyunshan Ion Balance (R_1)

All of R_1 plots were calculated including F^-

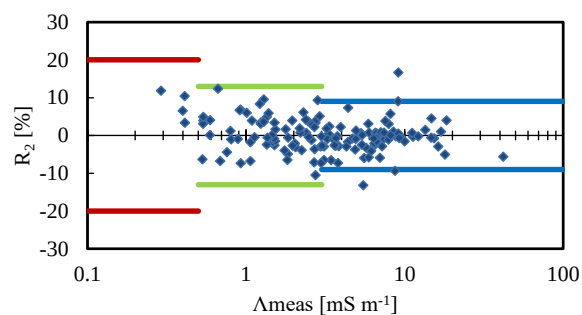


Fig. 3.4 b) Jinyunshan Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

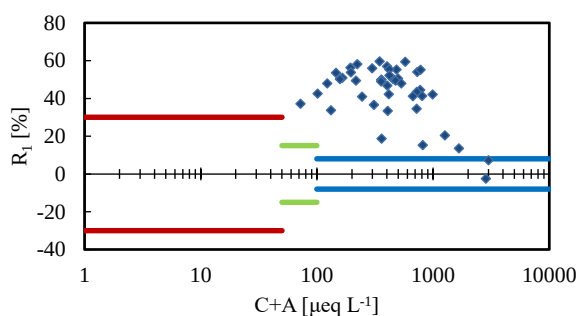


Fig. 3.5 a) Shizhan Ion Balance (R_1)

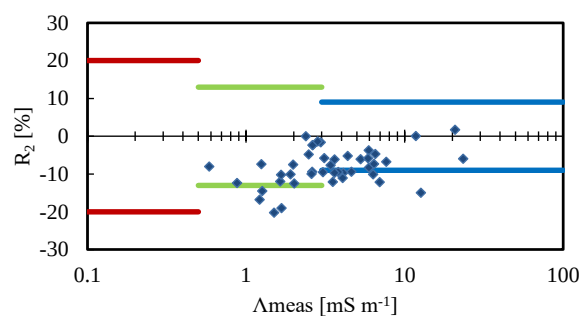


Fig. 3.5 b) Shizhan Conductivity Agreement (R_2)

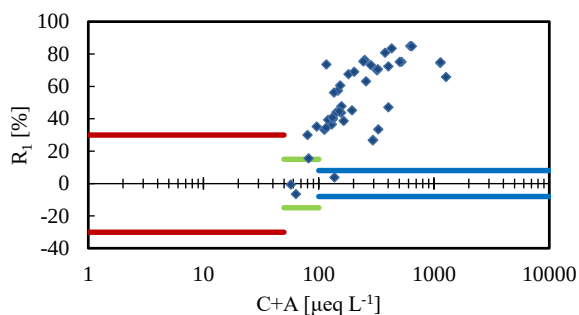


Fig. 3.6 a) Jiwozi Ion Balance (R_1)

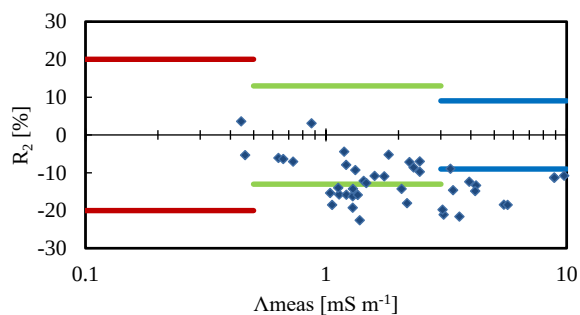


Fig. 3.6 b) Jiwozi Conductivity Agreement (R_2)

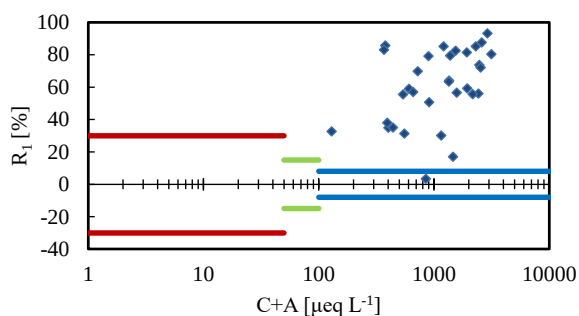


Fig. 3.7 a) Hongwen Ion Balance (R_1)

All of R_1 plots were calculated including F^-

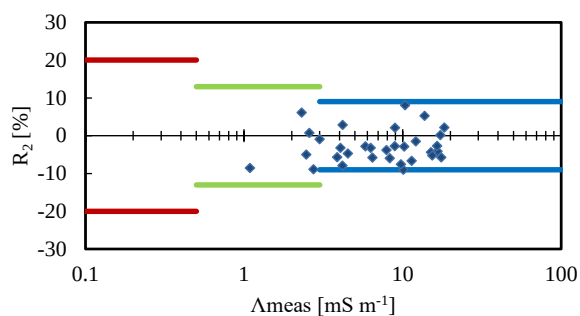


Fig. 3.7 b) Hongwen Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

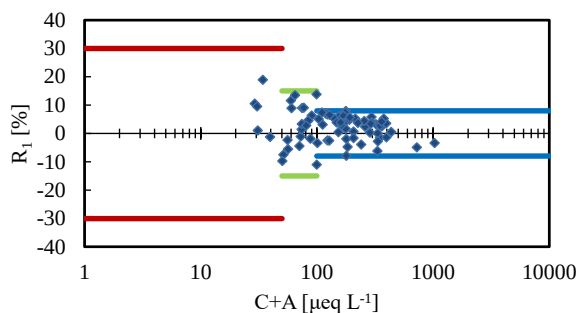


Fig. 3.8 a) Xiaoping Ion Balance (R_1)

All of R_1 plots were calculated including F^-

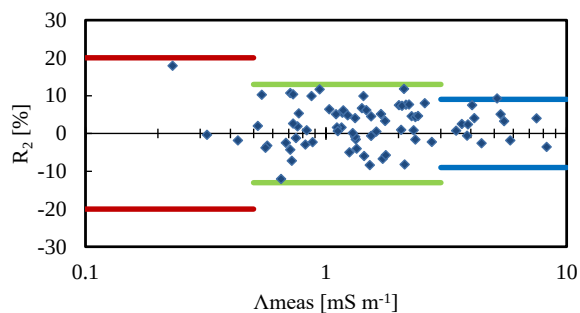


Fig. 3.8 b) Xiaoping Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

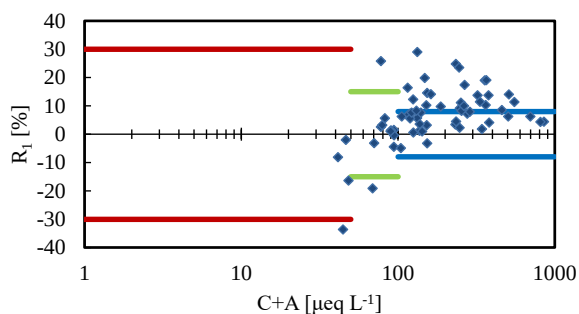


Fig. 3.9 a) Xiang Zhou Ion Balance (R_1)

All of R_1 plots were calculated including F^-

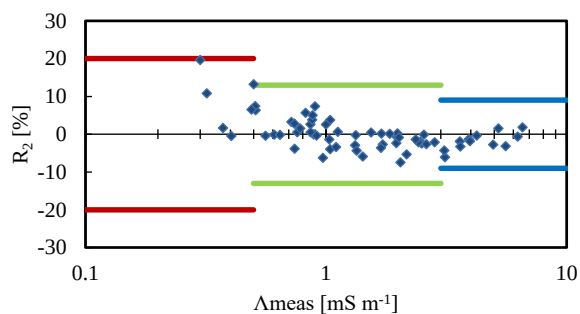


Fig. 3.9 b) Xiang Zhou Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

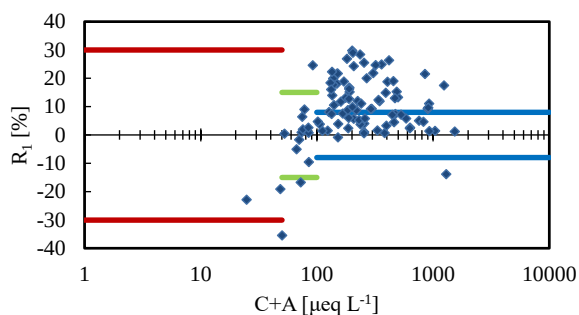


Fig. 3.10 a) Zhuxiandong Ion Balance (R_1)

All of R_1 plots were calculated including F^-

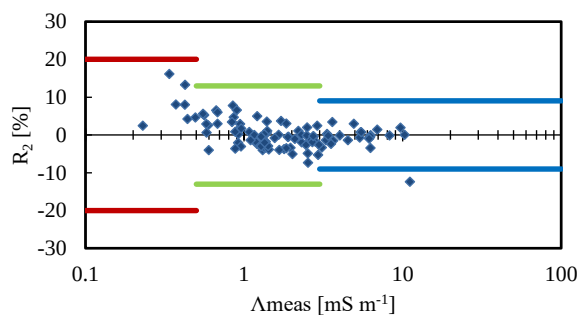


Fig. 3.10 b) Zhuxiandong Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

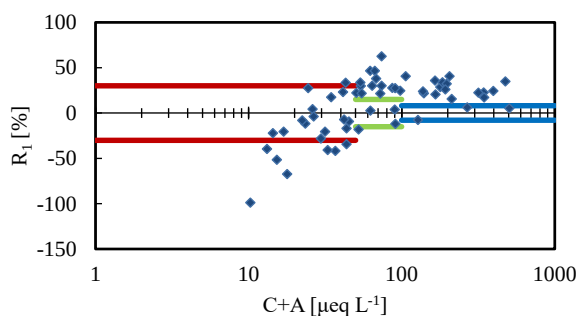


Fig. 3.11 a) Wuzhishan Ion Balance (R_1)

All of R_1 plots were calculated including F^-

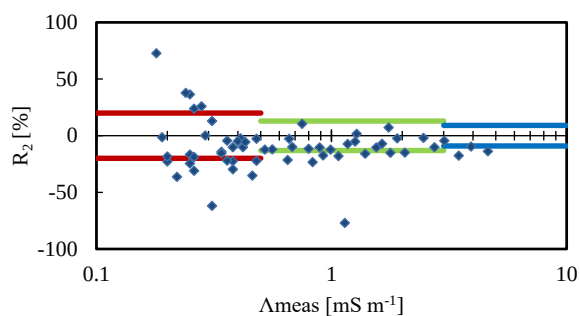


Fig. 3.11 b) Wuzhishan Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

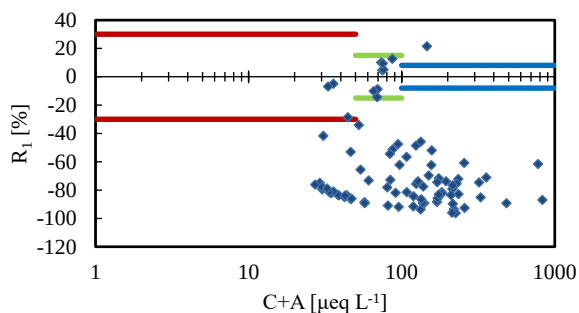


Fig. 3.12 a) Lijiang Ion Balance (R_1)

All of R_1 plots were calculated including F^-

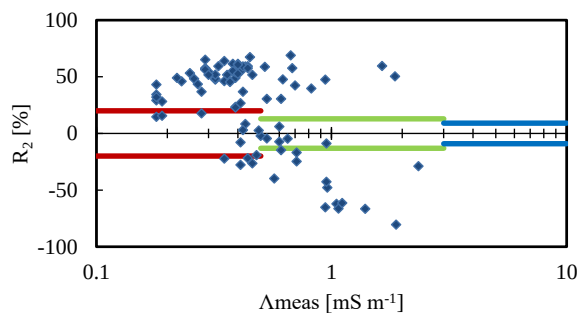


Fig. 3.12 b) Lijiang Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

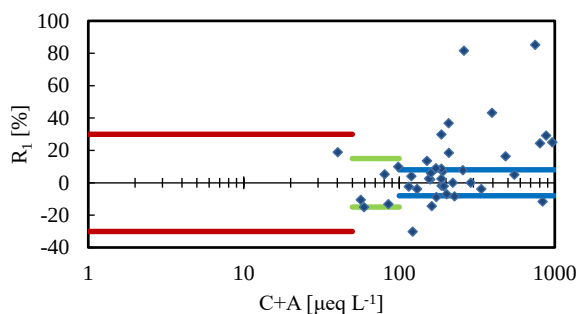


Fig. 3.13 a) Jakarta Ion Balance (R_1)

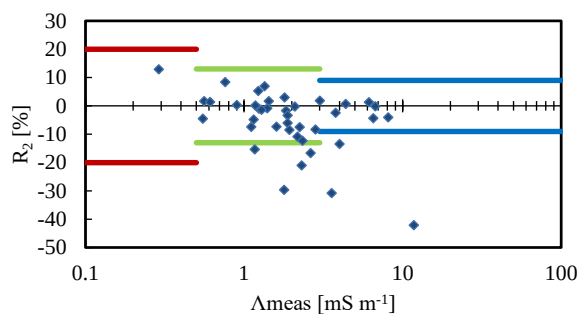


Fig. 3.13 b) Jakarta Conductivity Agreement (R_2)

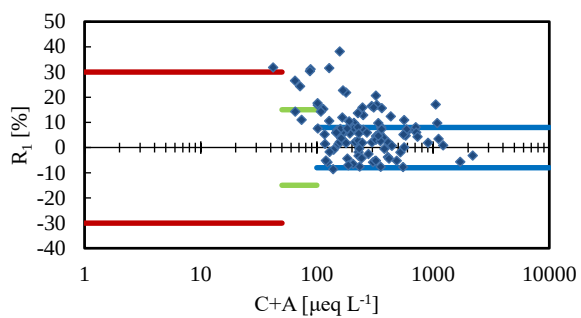


Fig. 3.14 a) Serpong Ion Balance (R_1)

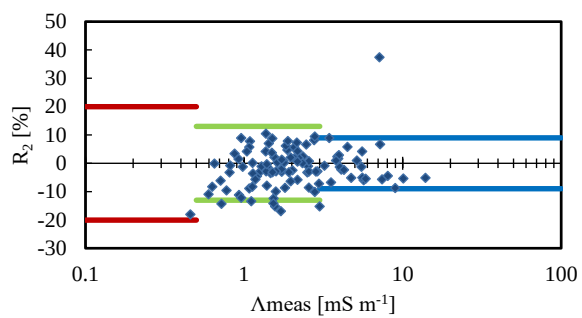


Fig. 3.14 b) Serpong Conductivity Agreement (R_2)

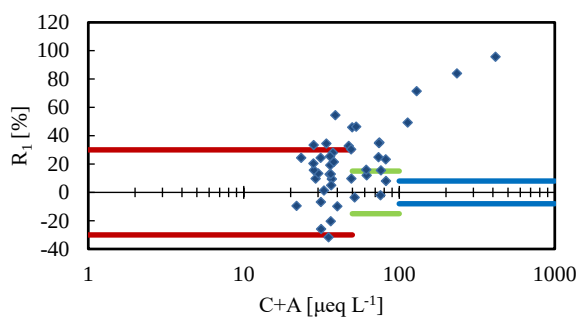


Fig. 3.15 a) Kototabang Ion Balance (R_1)

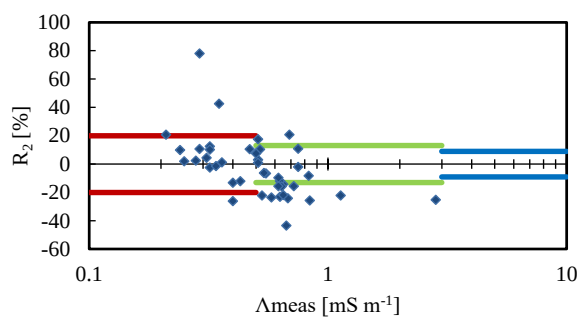


Fig. 3.15 b) Kototabang Conductivity Agreement (R_2)

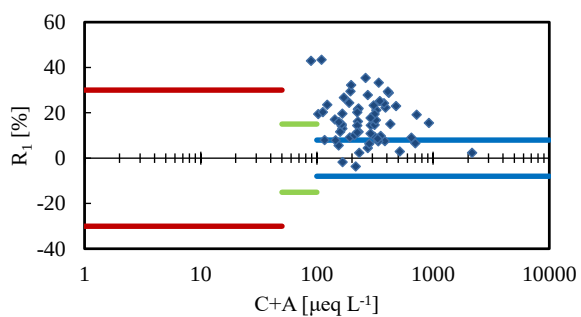


Fig. 3.16 a) Bandung Ion Balance (R_1)

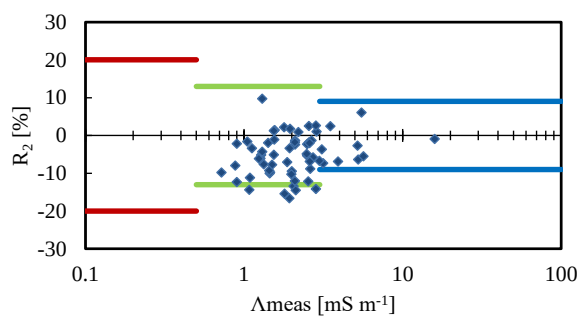


Fig. 3.16 b) Bandung Conductivity Agreement (R_2)

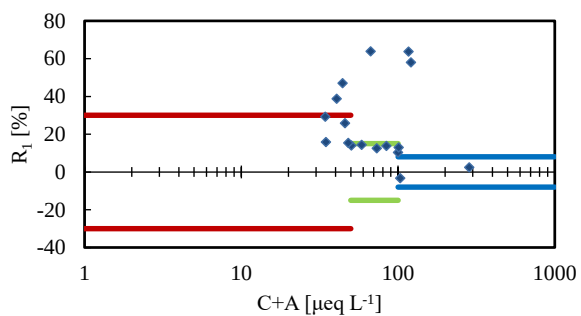


Fig. 3.17 a) Maros Ion Balance (R_1)

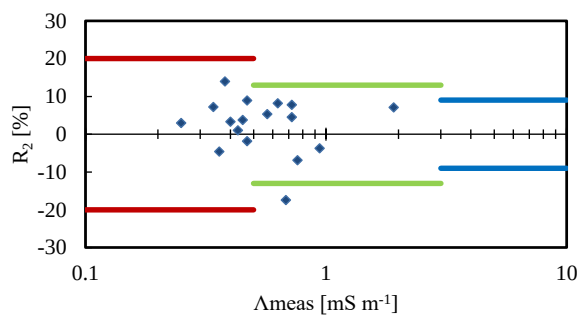


Fig. 3.17 b) Maros Conductivity Agreement (R_2)

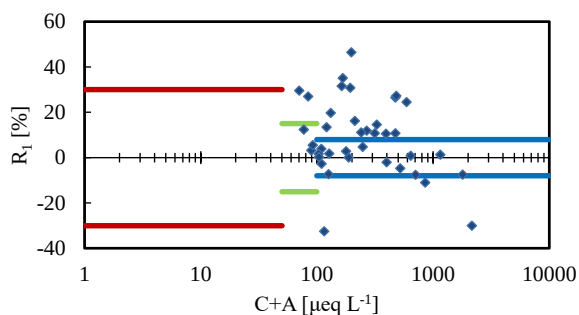


Fig. 3.18 a) Jembrana Ion Balance (R_1)

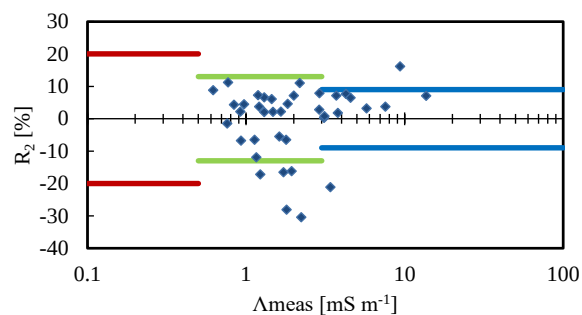


Fig. 3.18 b) Jembrana Conductivity Agreement (R_2)

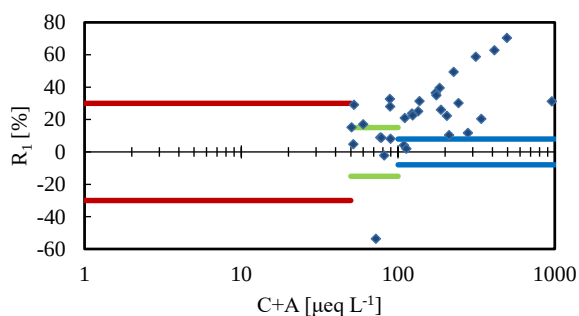


Fig. 3.19 a) Lombok Ion Balance (R_1)

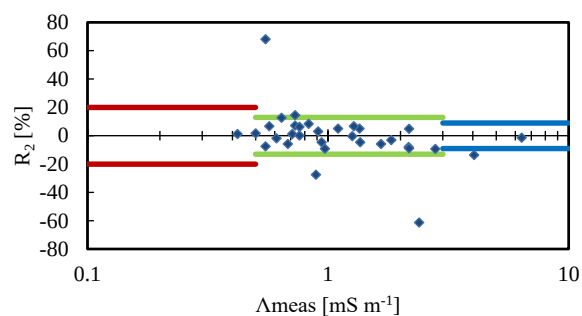


Fig. 3.19 b) Lombok Conductivity Agreement (R_2)

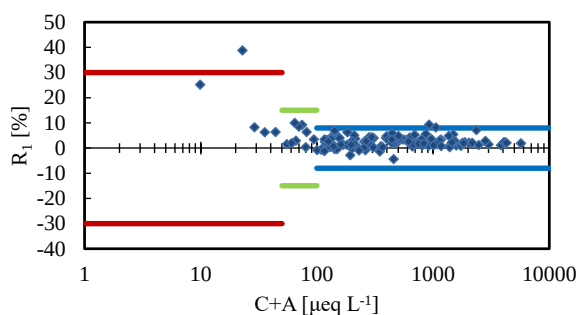


Fig. 3.20 a) Rishiri Ion Balance (R_1)

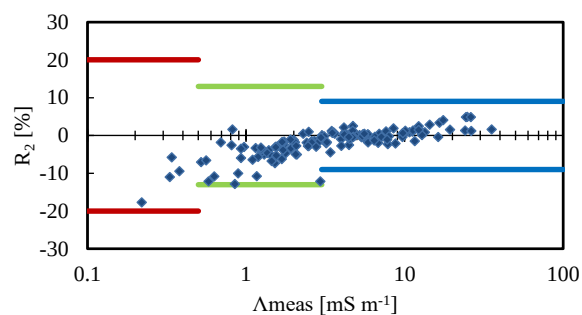


Fig. 3.20 b) Rishiri Conductivity Agreement (R_2)

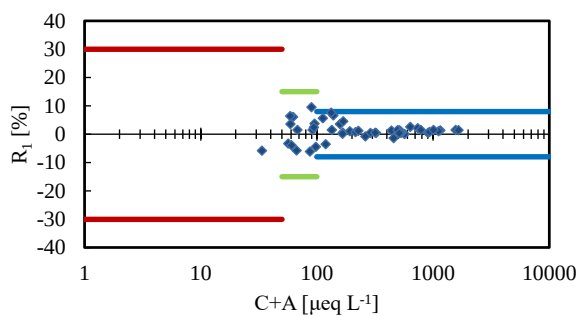


Fig. 3.21 a) Ochiishi Ion Balance (R_1)

All of R_1 plots were calculated including HCO_3^- and PO_4^{3-}

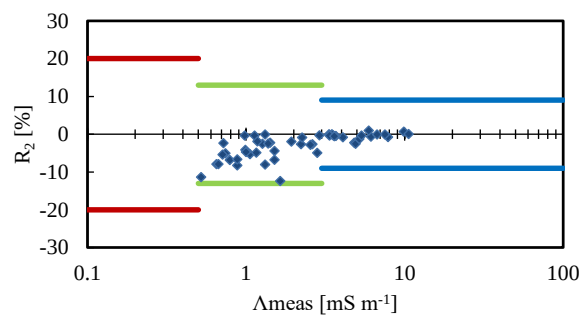


Fig. 3.21 b) Ochiishi Conductivity Agreement (R_2)

All of R_2 plots were calculated including HCO_3^- and PO_4^{3-}

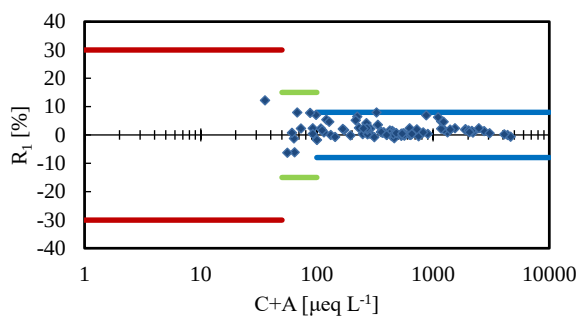


Fig. 3.22 a) Sado-seki Ion Balance (R_1)

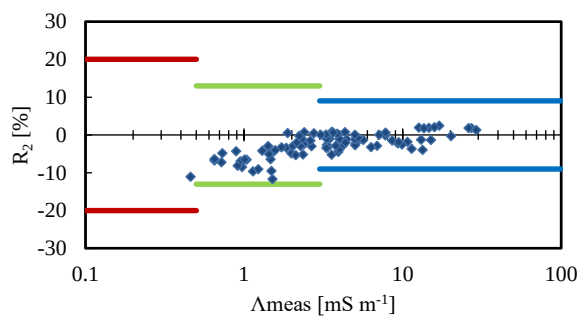


Fig. 3.22 b) Sado-seki Conductivity Agreement (R_2)

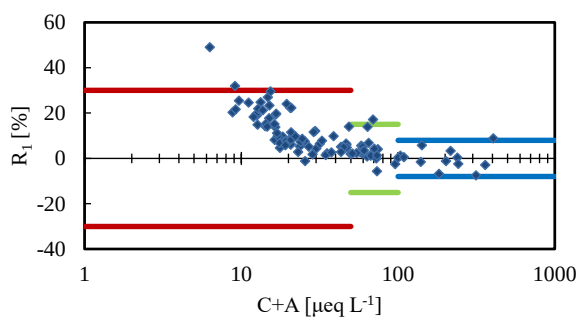


Fig. 3.23 a) Happo Ion Balance (R_1)

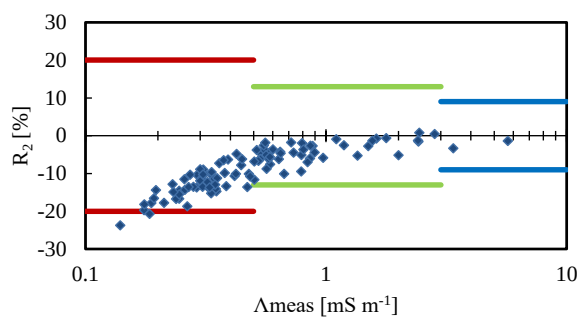


Fig. 3.23 b) Happo Conductivity Agreement (R_2)

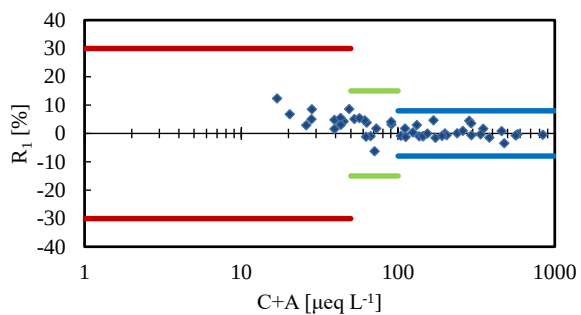


Fig. 3.24 a) Ijira Ion Balance (R_1)

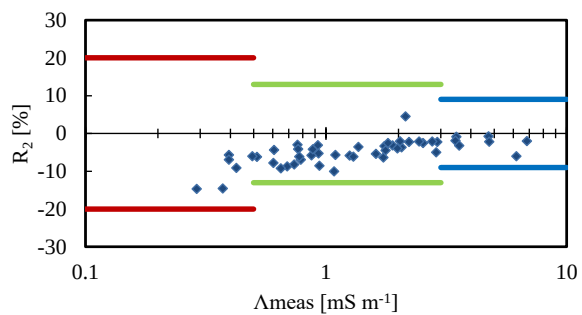


Fig. 3.24 b) Ijira Conductivity Agreement (R_2)

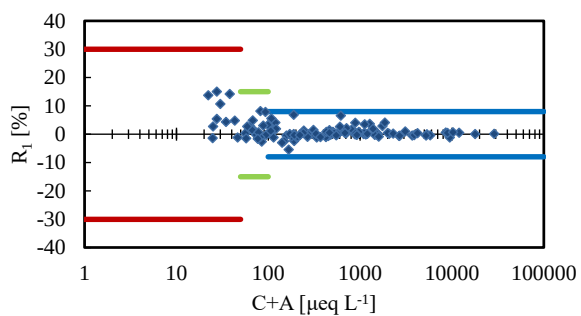


Fig. 3.25 a) Oki Ion Balance (R_1)

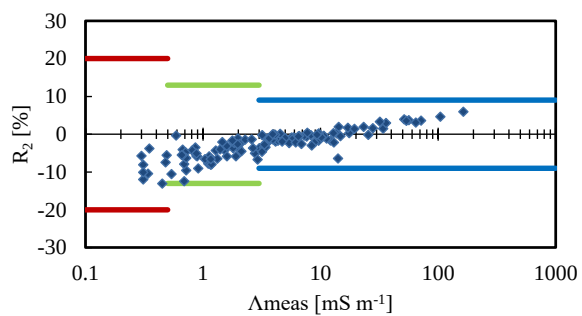


Fig. 3.25 b) Oki Conductivity Agreement (R_2)

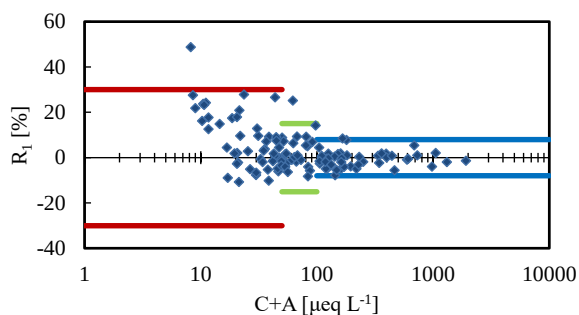


Fig. 3.26 a) Yusuhara Ion Balance (R_1)

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

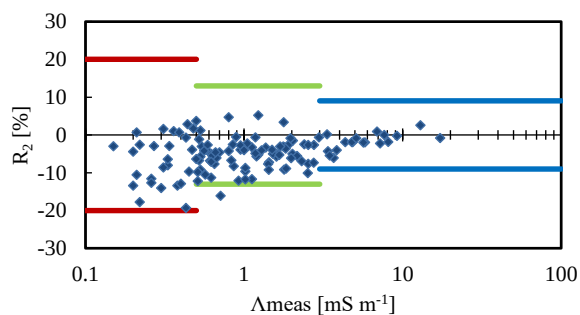


Fig. 3.26 b) Yusuhara Conductivity Agreement (R_2)

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

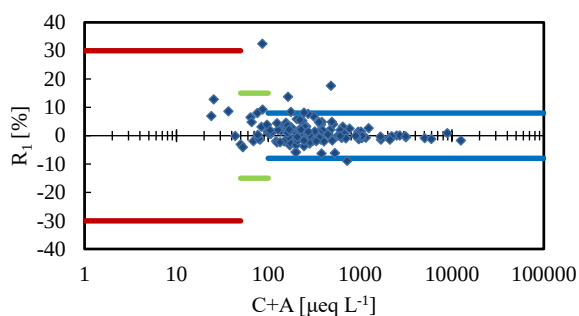


Fig. 3.27 a) Hedo Ion Balance (R_1)

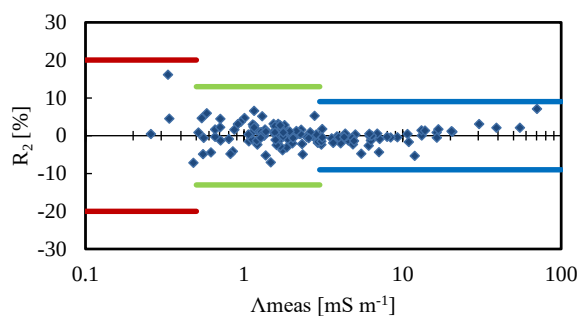


Fig. 3.27 b) Hedo Conductivity Agreement (R_2)

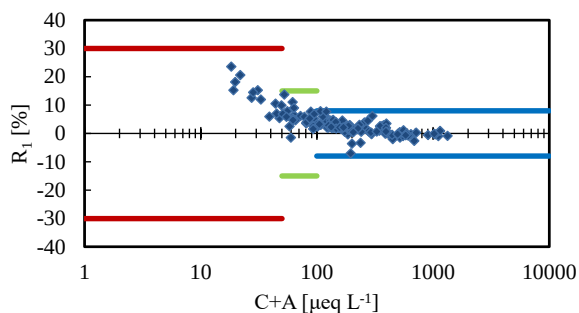


Fig. 3.28 a) Ogasawara Ion Balance (R_1)

All of R_1 plots were calculated including NO_2^-

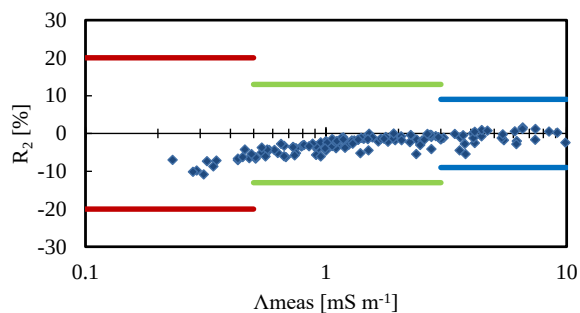


Fig. 3.28 b) Ogasawara Conductivity Agreement (R_2)

All of R_2 plots were calculated including NO_2^-

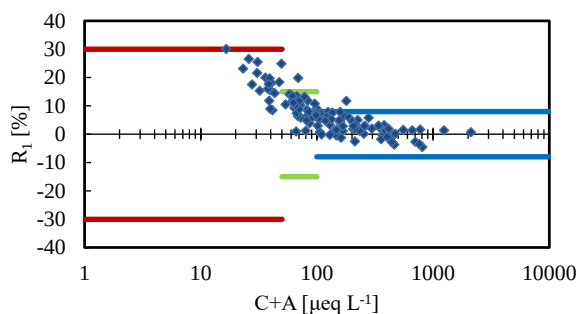


Fig. 3.29 a) Tokyo Ion Balance (R_1)

All of R_1 plots were calculated including NO_2^-

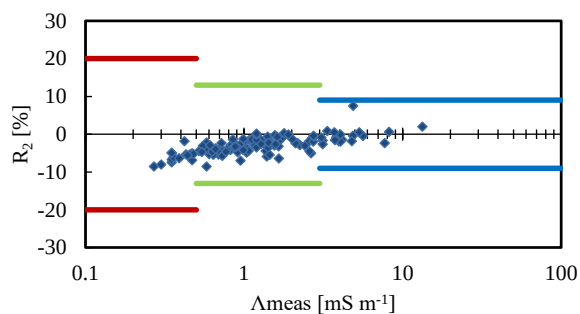


Fig. 3.29 b) Tokyo Conductivity Agreement (R_2)

All of R_2 plots were calculated including NO_2^-

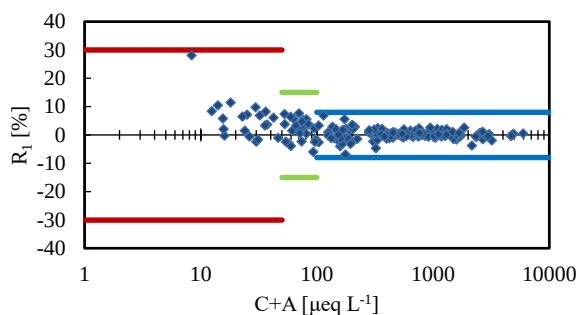


Fig. 3.30 a) Niigata-maki Ion Balance (R_1)
All of R_1 plots were calculated including HCO_3^-

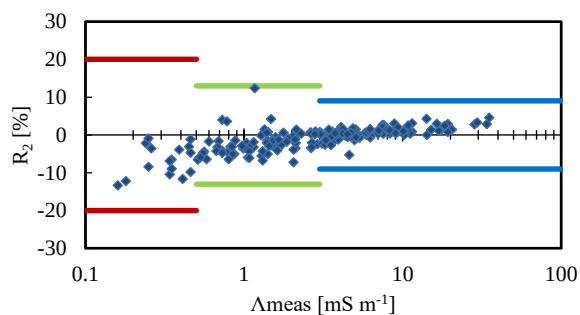


Fig. 3.30 b) Niigata-maki Conductivity Agreement (R_2)
All of R_2 plots were calculated including HCO_3^-

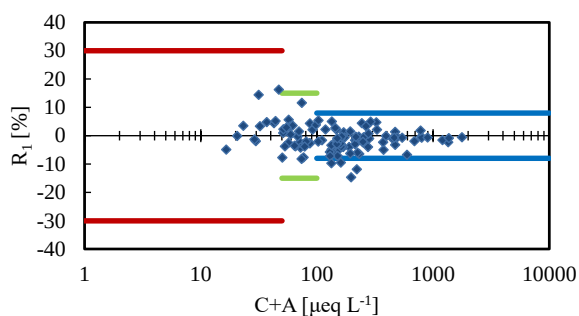


Fig. 3.31 a) Tsushima Ion Balance (R_1)

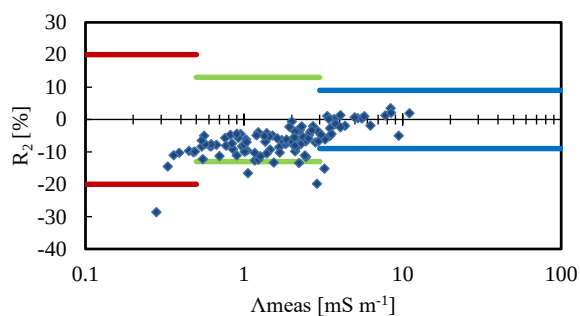


Fig. 3.31 b) Tsushima Conductivity Agreement (R_2)

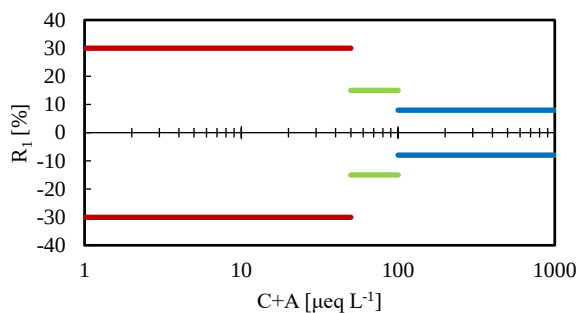


Fig. 3.32 a) Vientiane Ion Balance (R_1)

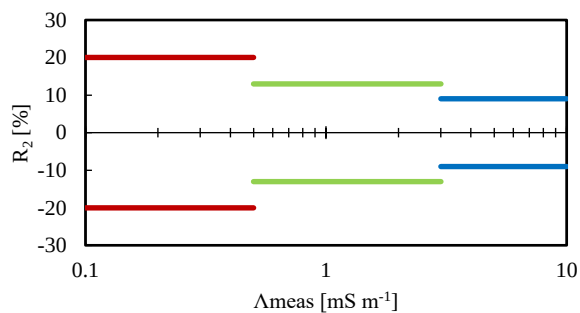


Fig. 3.32 b) Vientiane Conductivity Agreement (R_2)

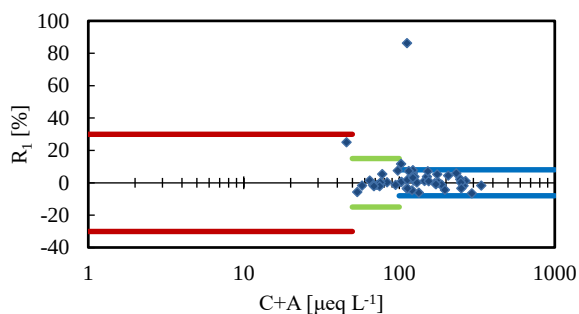


Fig. 3.33 a) Petaling Jaya Ion Balance (R_1)
All of R_1 plots were calculated including Formic, Acetic acid and Oxalic acid

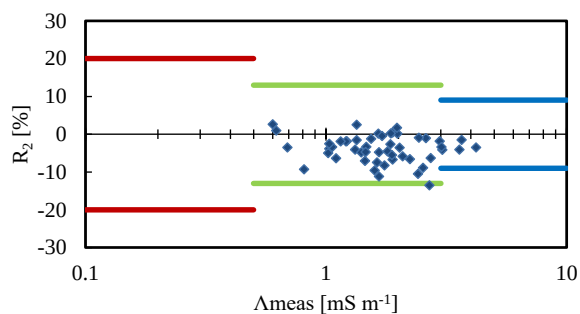


Fig. 3.33 b) Petaling Jaya Conductivity Agreement (R_2)
All of R_2 plots were calculated including Formic, Acetic acid and Oxalic acid

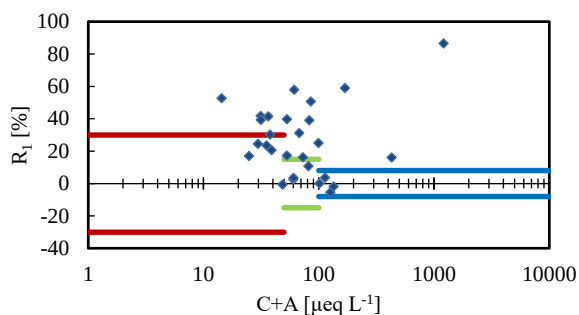


Fig. 3.34 a) Tanah Rata Ion Balance (R_1)

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

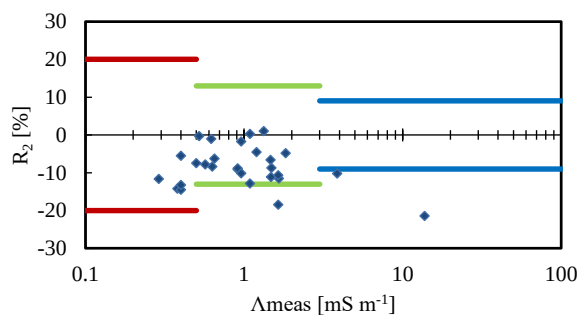


Fig. 3.34 b) Tanah Rata Conductivity Agreement (R_2)

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

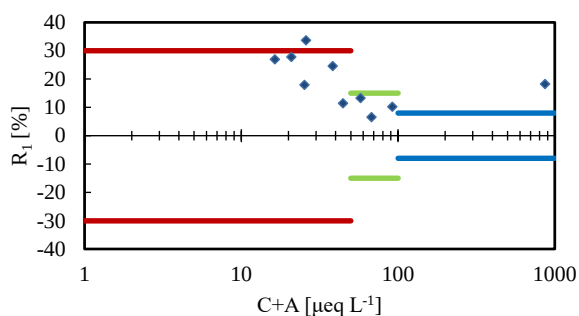


Fig. 3.35 a) Danum Valley Ion Balance (R_1)

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

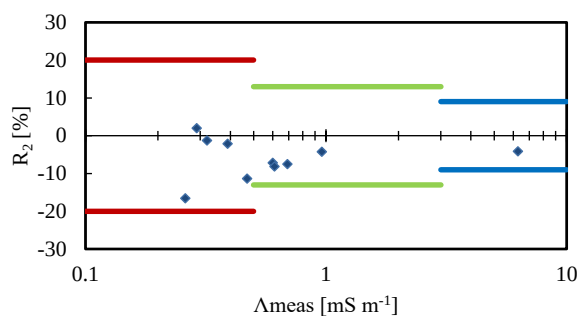


Fig. 3.35 b) Danum Valley Conductivity Agreement (R_2)

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

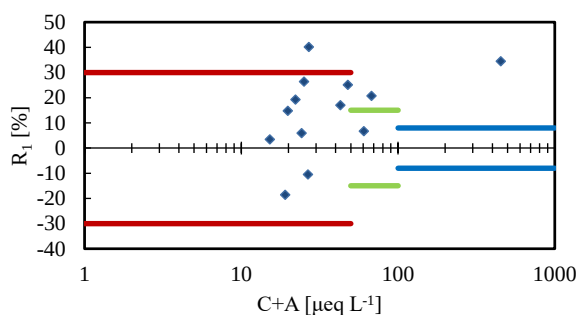


Fig. 3.36 a) Kuching Ion Balance (R_1)

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

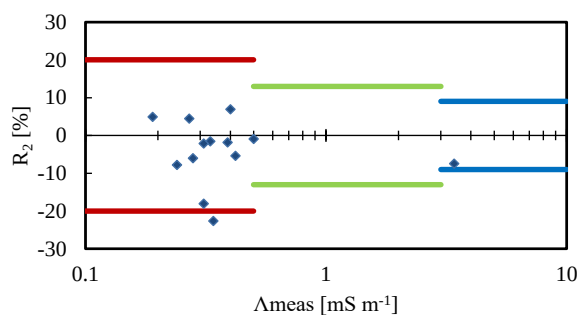


Fig. 3.36 b) Kuching Conductivity Agreement (R_2)

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

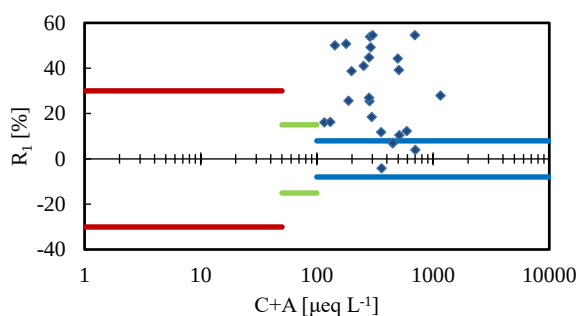


Fig. 3.37 a) Ulaanbaatar Ion Balance (R_1)

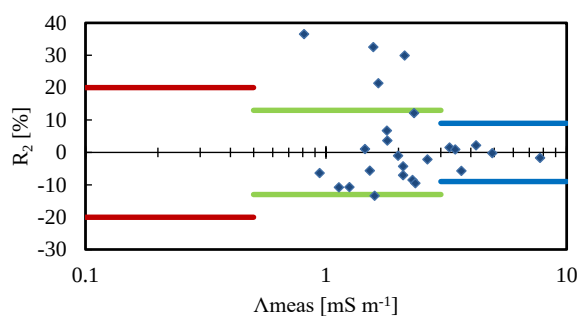


Fig. 3.37 b) Ulaanbaatar Conductivity Agreement (R_2)

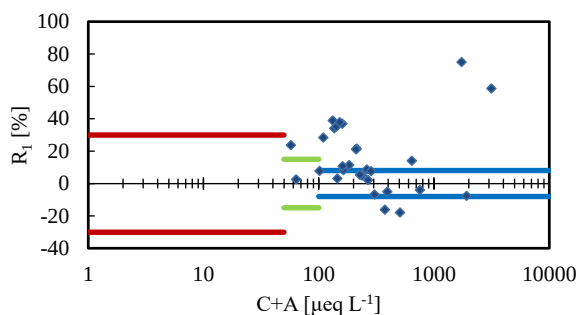


Fig. 3.38 a) Terelj Ion Balance (R_1)

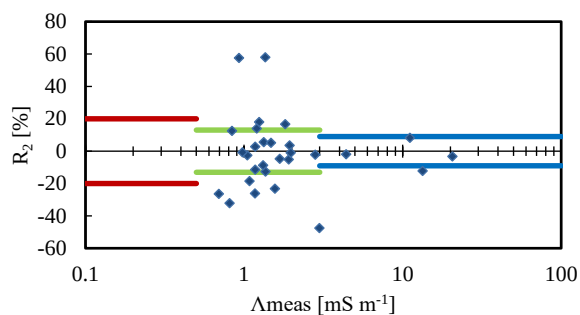


Fig. 3.38 b) Terelj Conductivity Agreement (R_2)

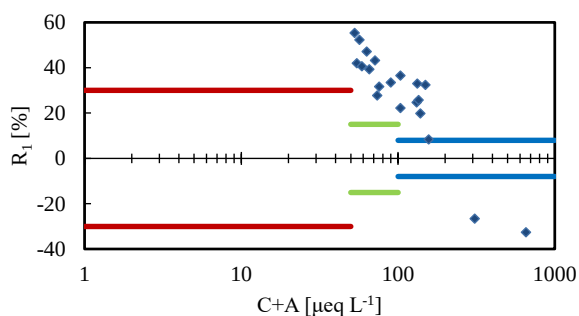


Fig. 3.39 a) Yangon Ion Balance (R_1)

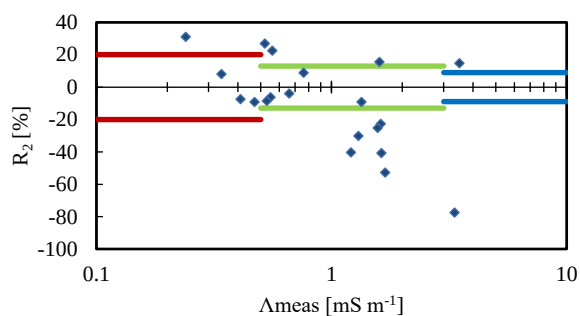


Fig. 3.39 b) Yangon Conductivity Agreement (R_2)

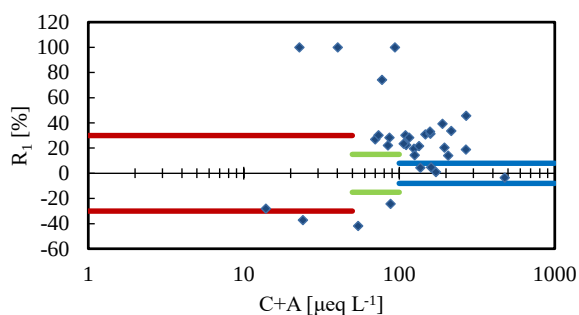
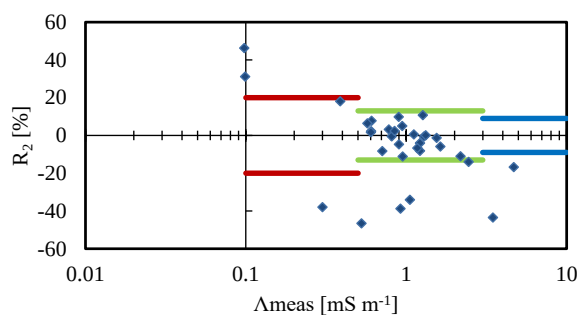


Fig. 3.40 a) Metro Manila Ion Balance (R_1)



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

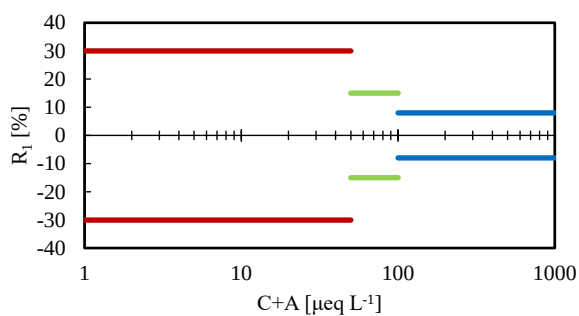
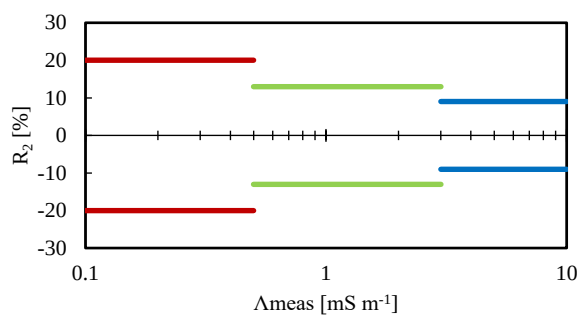


Fig. 3.41 a) Los Baños Ion Balance (R_1)



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

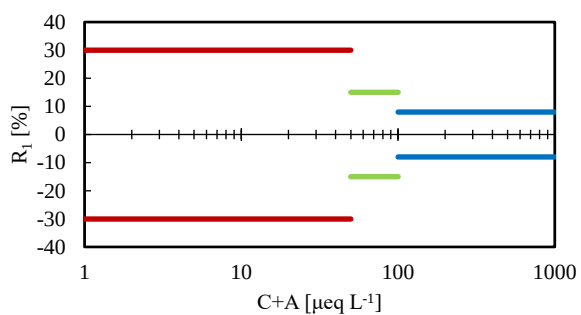


Fig. 3.42 a) Mt. Sto. Tomas Ion Balance (R₁)

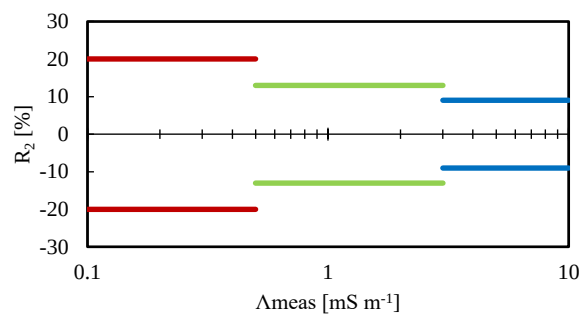


Fig. 3.42 b) Mt. Sto. Tomas Conductivity Agreement (R₂)

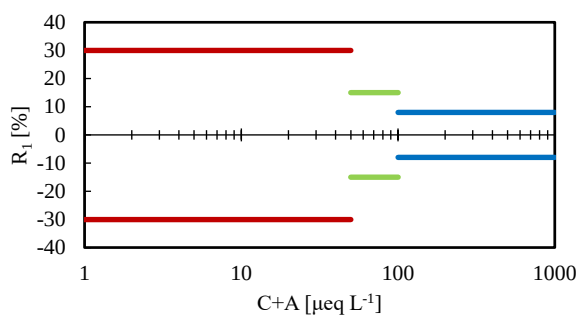


Fig. 3.43 a) Kanghwa Ion Balance (R₁)

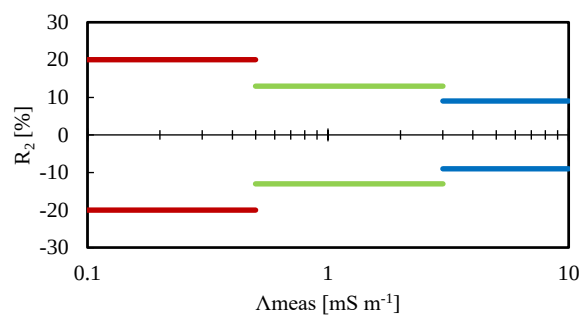


Fig. 3.43 b) Kanghwa Conductivity Agreement (R₂)

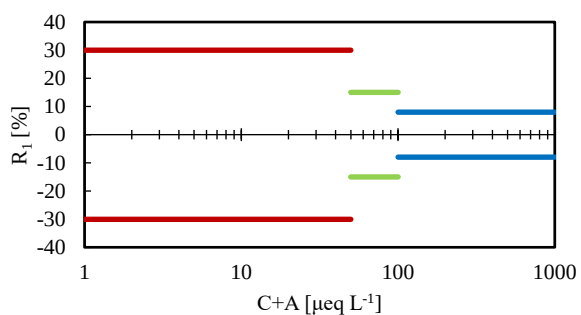


Fig. 3.44 a) Cheju Ion Balance (R₁)

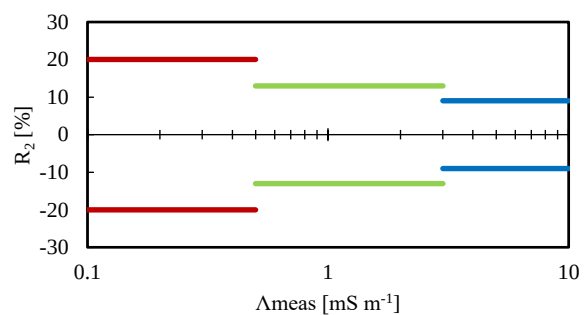


Fig. 3.44 b) Cheju Conductivity Agreement (R₂)

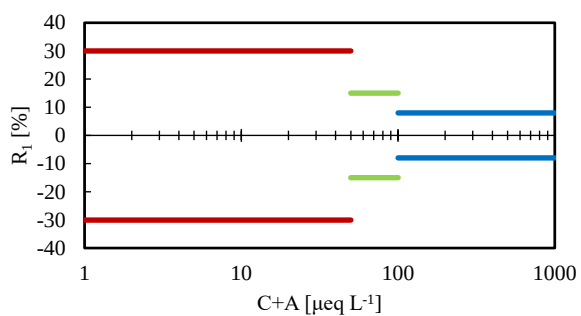


Fig. 3.45 a) Imsil Ion Balance (R₁)

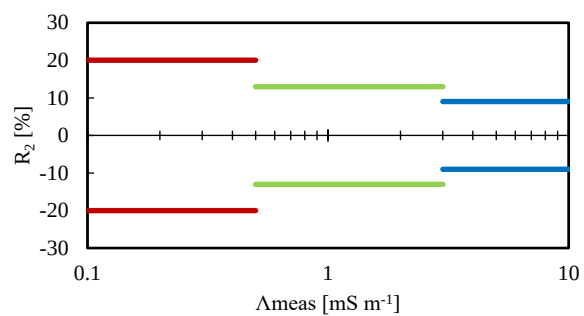


Fig. 3.45 b) Imsil Conductivity Agreement (R₂)

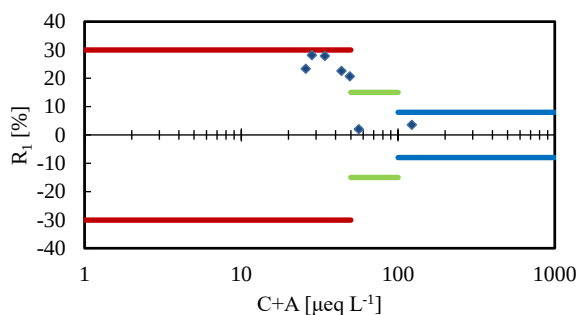


Fig. 3.46 a) Mondy Ion Balance (R_1)

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

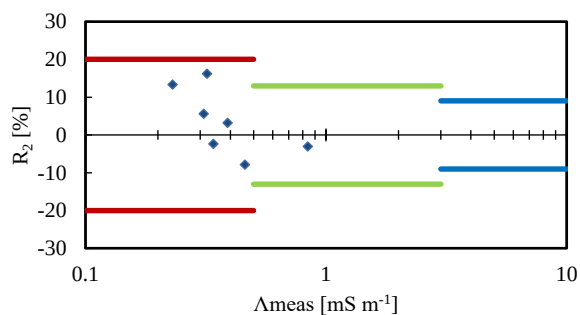


Fig. 3.46 b) Mondy Conductivity Agreement (R_2)

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

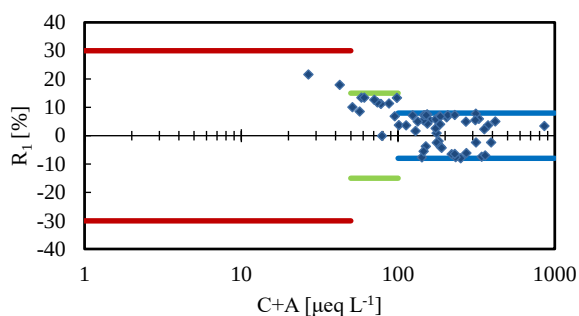


Fig. 3.47 a) Listvyanka Ion Balance (R_1)

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

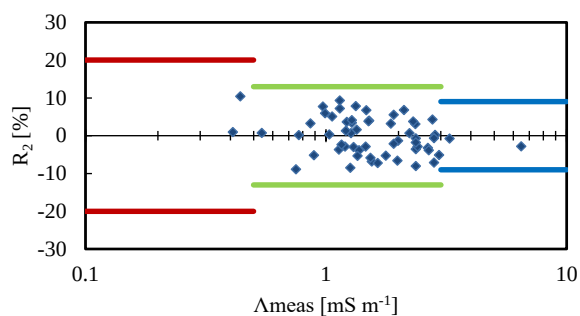


Fig. 3.47 b) Listvyanka Conductivity Agreement (R_2)

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

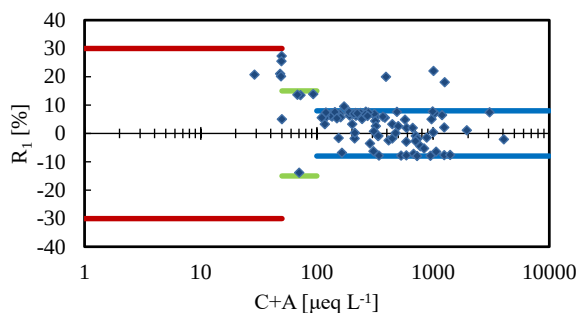


Fig. 3.48 a) Irkutsk Ion Balance (R_1)

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

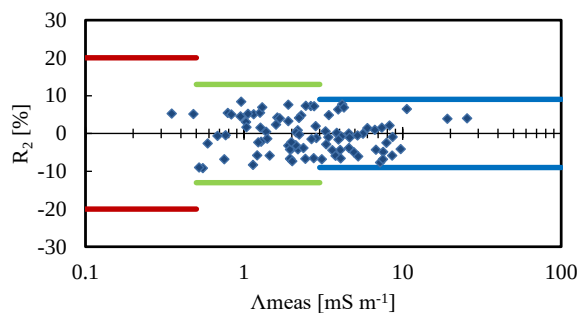


Fig. 3.48 b) Irkutsk Conductivity Agreement (R_2)

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

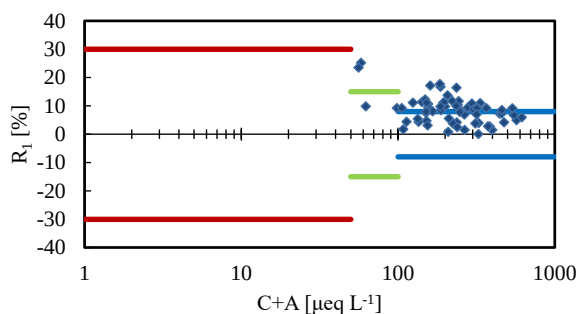


Fig. 3.49 a) Primorskaya Ion Balance (R_1)

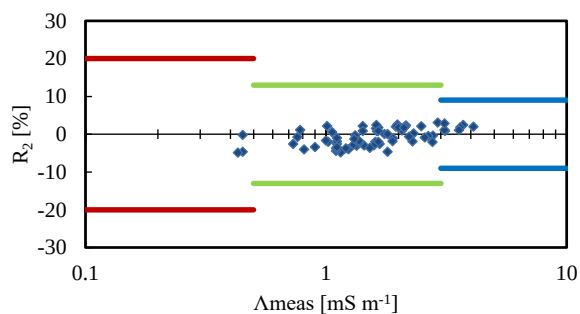


Fig. 3.49 b) Primorskaya Conductivity Agreement (R_2)

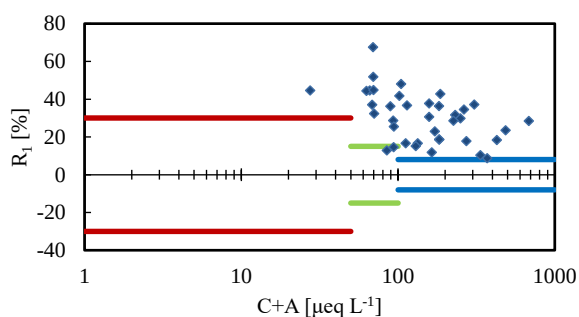


Fig. 3.50 a) Bangkok Ion Balance (R_1)

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

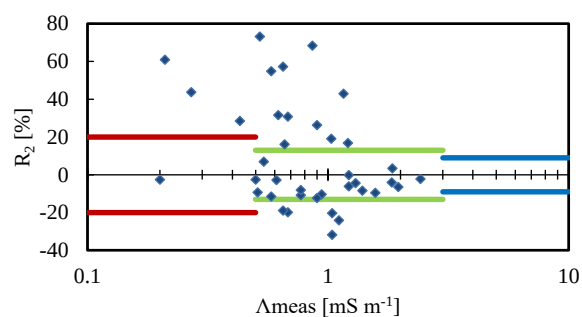


Fig. 3.50 b) Bangkok Conductivity Agreement (R_2)

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

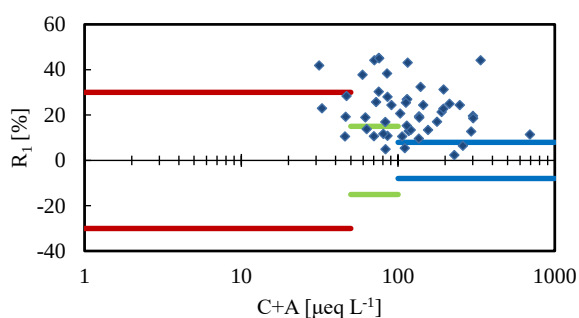


Fig. 3.51 a) Samutprakarn Ion Balance (R_1)

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

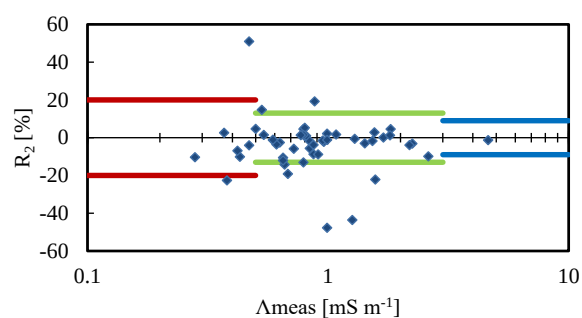


Fig. 3.51 b) Samutprakarn Conductivity Agreement (R_2)

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

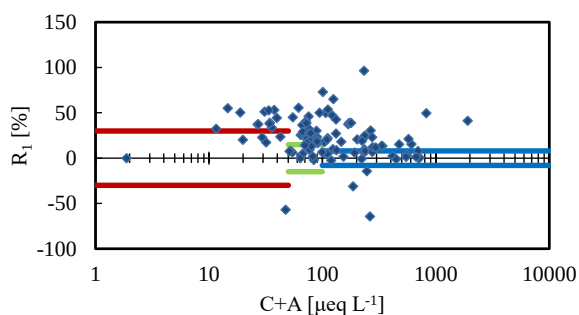


Fig. 3.52 a) Pathumthani Ion Balance (R_1)

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

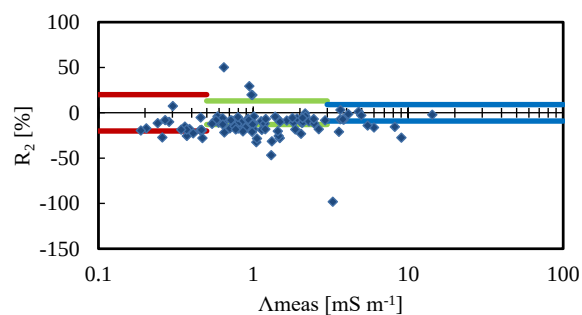


Fig. 3.52 b) Pathumthani Conductivity Agreement (R_2)

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

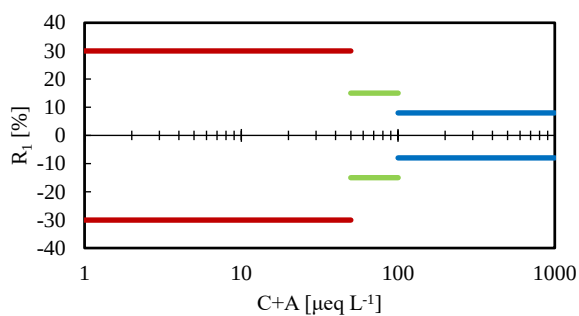


Fig. 3.53 a) Khanchanaburi Ion Balance (R_1)

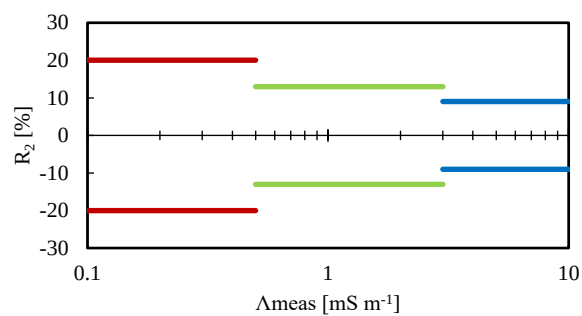


Fig. 3.53 b) Khanchanaburi Conductivity Agreement (R_2)

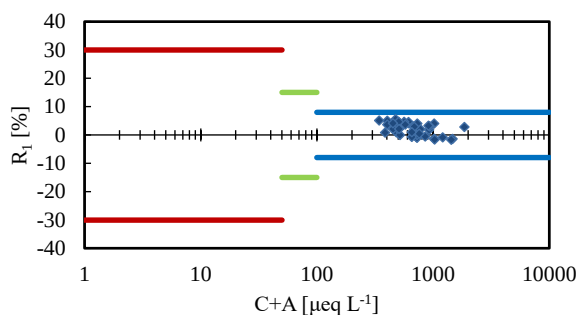


Fig. 3.54 a) Hanoi Ion Balance (R_1)

All of R_1 plots were calculated including F^-

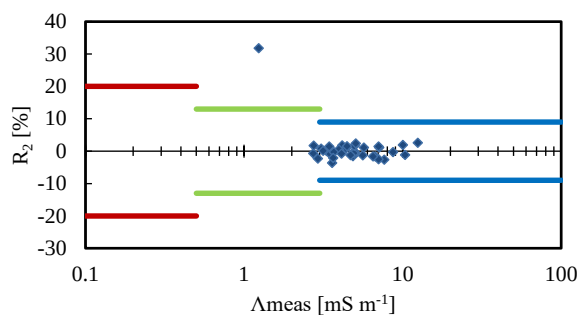


Fig. 3.54 b) Hanoi Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

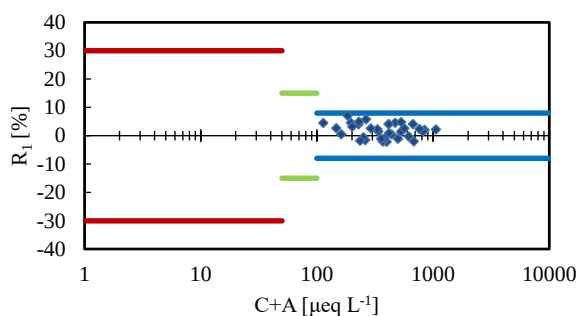


Fig. 3.55 a) Hoa Binh Ion Balance (R_1)

All of R_1 plots were calculated including F^-

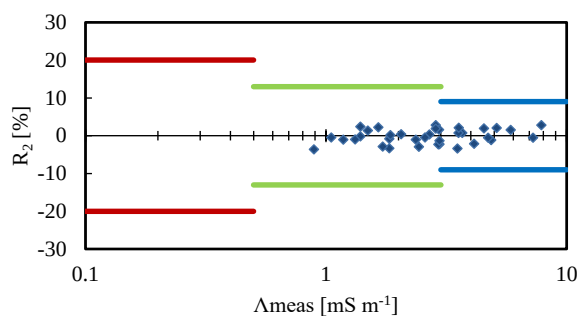


Fig. 3.55 b) Hoa Binh Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

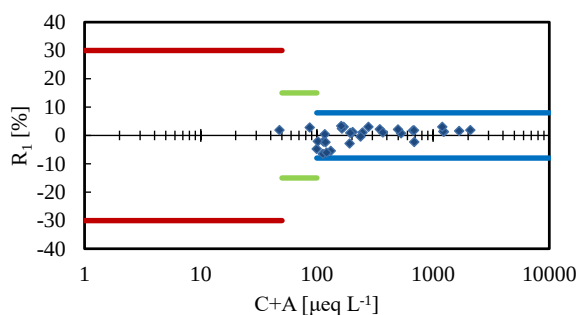


Fig. 3.56 a) Cuc Phuong Ion Balance (R_1)

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

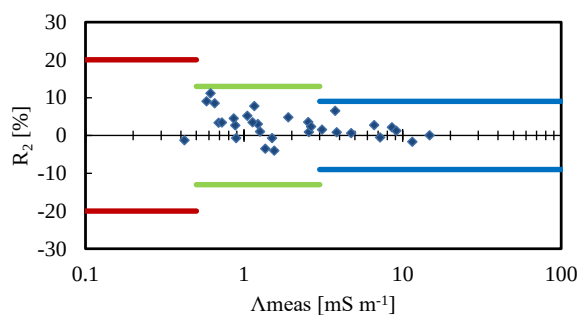


Fig. 3.56 b) Cuc Phuong Conductivity Agreement (R_2)

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

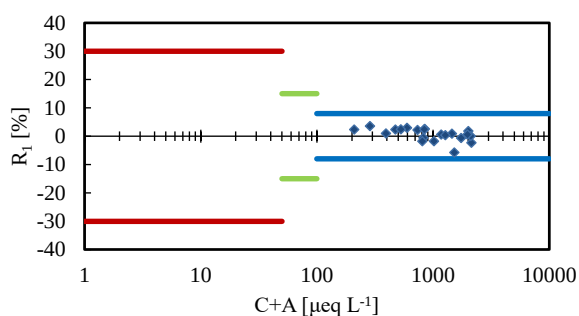


Fig. 3.57 a) Da Nang Ion Balance (R_1)

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

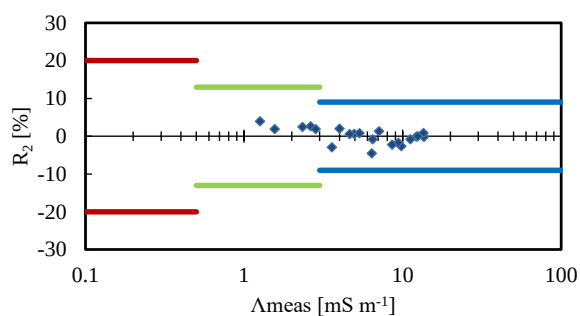


Fig. 3.57 b) Da Nang Conductivity Agreement (R_2)

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

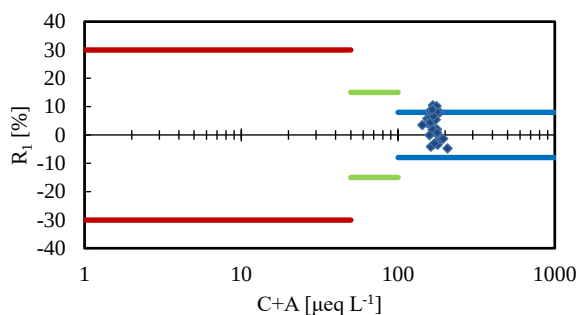


Fig. 3.58 a) Can Tho Ion Balance (R_1)

All of R_1 plots were calculated including F^-

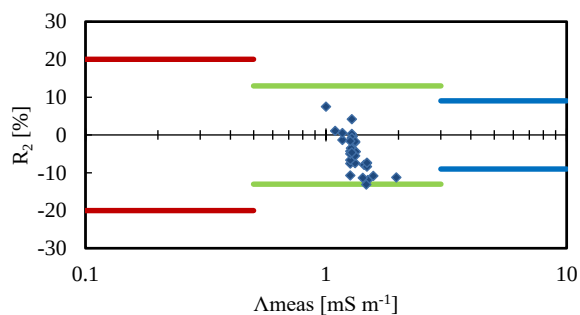


Fig. 3.58 b) Can Tho Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

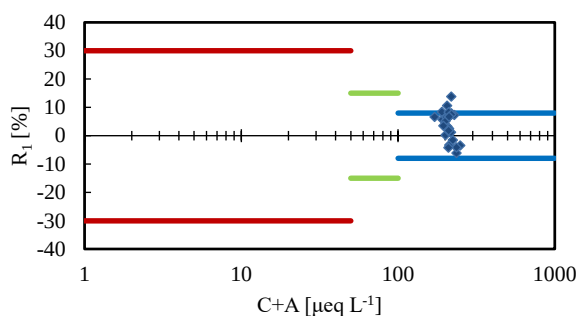


Fig. 3.59 a) Ho Chi Minh Ion Balance (R_1)

All of R_1 plots were calculated including F^-

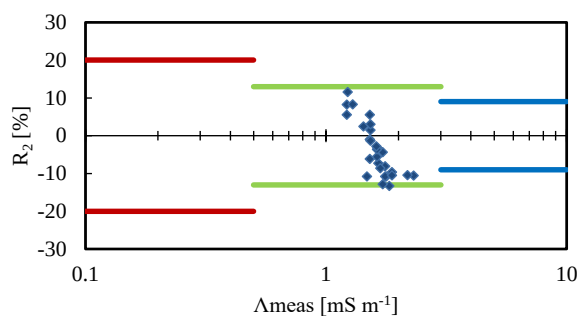


Fig. 3.59 b) Ho Chi Minh Conductivity Agreement (R_2)

All of R_2 plots were calculated including F^-

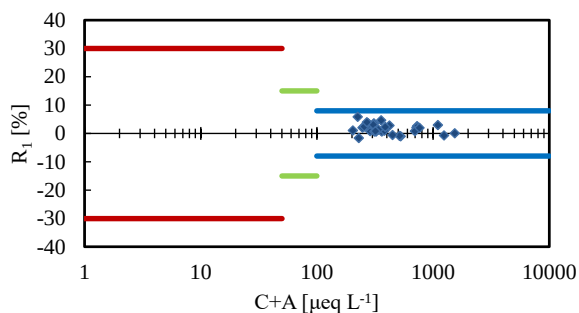


Fig. 3.60 a) Yen Bai Ion Balance (R_1)

All of R_1 plots were calculated including F^-

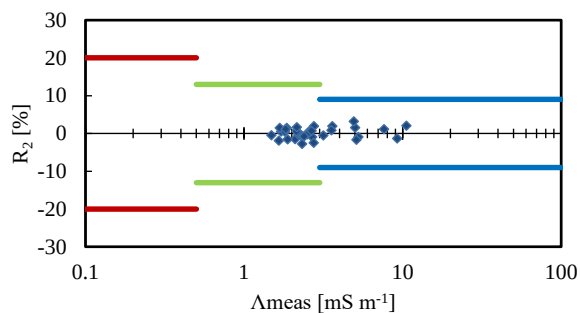


Fig. 3.60 b) Yen Bai Conductivity Agreement (R_2)

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
Japan	Ochiishi	*	*	*	*	*	22.0	*	*	*	21.1	*	*	21.2
	Niigata-maki	*	31.5	62.2	*	*	*	*	*	*	*	*	*	53.4
Russia	Mondy	--	19.7	--	--	--	--	--	<1	<1	--	--	13.1	1.74
	Listvyanka	<1	<1	11.3	9.19	1.30	5.40	<1	<1	<1	9.00	5.33	4.67	1.12
	Irkutsk	43.5	88.0	59.9	72.4	<1	10.6	<1	<1	<1	35.6	71.4	186	8.74
Vietnam	Cuc Phuong	9.98	<1	<1	<1	<1	<1	9.99	<1	12.6	4.90	50.0	320	7.57
	Da Nang	147	*	160	294	260	*	436	300	100	186	161	30.8	178
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	Ochiishi	*	*	*	*	*	4.01	*	*	*	1.33	*	*	13.5
	Niigata-maki	*	3.73	6.89	*	*	*	*	*	*	*	*	*	112
Russia	Mondy	0.00	0.0649	0.00	0.00	0.00	0.00	0.00	<0.01	<0.01	0.00	0.00	0.0367	0.102
	Listvyanka	<0.01	<0.01	0.0976	0.0358	0.0670	0.110	<0.01	0.0944	<0.01	<0.01	0.0256	0.0252	0.466
	Irkutsk	0.331	0.886	0.817	0.237	<0.01	0.241	<0.01	<0.01	0.0180	0.333	0.440	0.929	4.23
Vietnam	Cuc Phuong	1.17	<0.01	<0.01	<0.01	<0.01	<0.01	1.82	0.252	3.78	1.82	3.30	3.39	14.8
	Da Nang	7.33	*	4.85	33.7	16.7	*	28.0	17.8	30.9	324	77.7	4.46	547
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Ochiishi	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	34.1	0.0	0.0	3.6
	Niigata-maki	0.0	6.8	18.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Russia	Mondy	--	100	--	--	--	--	--	100	100	--	--	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	100	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Cuc Phuong	97.0	91.1	98.0	98.1	97.7	98.6	99.1	100	100	99.5	98.8	76.4	98.9
	Da Nang	91.8	0.0	96.0	99.4	96.9	0.0	100	96.5	99.9	99.9	100	96.5	99.3

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	3.37	4.33	4.35	2.72	2.09	1.23	1.15	1.44	1.87	2.20	4.45	6.97	2.00
	Jinyunshan	4.87	4.96	2.69	2.88	1.50	<1	1.17	2.22	1.60	2.09	3.44	5.59	1.76
	Hongwen	--	1.89	2.68	<1	2.96	10.8	17.3	3.37	2.77	--	13.5	7.10	3.87
	Xiaoping	1.44	<1	1.42	1.39	2.01	1.37	<1	1.35	2.76	--	4.62	1.52	1.81
	Xiang Zhou	--	2.50	2.28	1.16	1.88	<1	<1	2.65	1.29	<1	--	--	1.64
	Zhuxiandong	2.15	2.78	4.35	1.12	2.02	<1	2.36	2.18	1.33	<1	--	--	1.78
	Wuzhishan	1.81	--	8.50	5.15	2.87	3.20	<1	2.97	2.03	2.76	2.30	--	3.04
	Lijiang	4.25	3.90	--	3.70	3.55	1.48	<1	<1	2.85	11.4	--	--	2.95
Japan	Yusuhara	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Russia	Mondy	--	<1	--	--	--	--	--	<1	<1	--	--	<1	<1
	Listvyanka	<1	5.00	<1	<1	1.02	4.75	1.67	3.24	2.71	3.10	15.5	11.6	2.76
	Irkutsk	<1	<1	<1	12.9	1.54	<1	1.52	2.75	1.32	14.0	21.5	35.1	2.55
Vietnam	Hanoi	3.16	11.7	5.26	6.17	3.83	2.69	1.59	1.75	4.96	4.98	10.1	*	3.96
	Hoa Binh	4.71	3.68	4.52	2.09	2.67	1.27	1.40	<1	2.09	2.28	5.05	*	2.09
	Cuc Phuong	1.48	1.42	1.13	3.35	1.37	1.11	1.26	1.29	1.10	1.30	1.26	11.4	1.39
	Da Nang	5.38	*	5.53	6.22	6.79	*	6.98	6.21	7.47	6.85	6.89	7.17	6.86
	Can Tho	--	*	--	1.00	1.67	1.32	1.31	1.84	1.40	1.39	1.00	1.47	1.36
	Ho Chi Minh	--	--	--	1.09	1.02	1.25	1.14	1.11	1.06	1.10	1.73	1.12	1.14
	Yen Bai	4.79	4.16	3.45	3.21	2.53	2.78	2.18	2.85	14.5	4.13	5.47	--	5.10
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	0.0840	0.0774	0.410	0.188	0.136	0.328	0.391	0.0699	0.332	0.277	0.127	0.137	2.56
	Jinyunshan	0.0877	0.0695	0.142	0.194	0.184	0.222	0.350	0.0279	0.219	0.326	0.182	0.166	2.17
	Hongwen	0.00	0.0429	0.0602	0.0422	0.211	0.355	0.0623	0.176	0.144	0.00	0.0262	0.108	1.23
	Xiaoping	0.0353	0.0228	0.0582	0.0675	0.219	0.169	<0.01	0.251	0.518	0.00	0.0544	0.0326	1.44
	Xiang Zhou	0.00	0.129	0.0934	0.0953	0.687	0.0182	0.0600	1.33	0.498	0.0137	0.00	0.00	2.92
	Zhuxiandong	0.0571	0.233	0.300	0.101	1.06	0.107	0.143	1.20	0.516	0.0532	0.00	0.00	3.77
	Wuzhishan	0.0634	0.00	0.280	0.410	0.0657	0.275	0.0190	0.632	0.296	0.480	<0.01	0.00	2.53
	Lijiang	0.117	0.0426	0.00	0.0499	0.0929	0.0573	0.0521	0.0790	0.452	2.01	0.00	0.00	2.95
Japan	Yusuhara	0.0935	0.106	0.108	0.0836	0.139	0.131	0.197	0.0339	0.248	0.0650	0.0599	0.0207	1.26
Russia	Mondy	0.00	<0.01	0.00	0.00	0.00	0.00	0.00	0.0259	<0.01	0.00	0.00	<0.01	0.0377
	Listvyanka	<0.01	0.0270	<0.01	<0.01	0.0524	0.0970	0.113	0.477	0.242	<0.01	0.0746	0.0626	1.15
	Irkutsk	<0.01	<0.01	<0.01	0.0421	0.0740	<0.01	0.148	0.364	0.169	0.131	0.132	0.175	1.24
Vietnam	Hanoi	0.258	0.200	0.743	0.604	0.604	0.186	0.218	0.598	1.40	1.06	0.362	*	6.24
	Hoa Binh	0.384	0.0184	0.570	0.262	0.488	0.110	0.616	0.294	0.715	0.898	0.161	*	4.51
	Cuc Phuong	0.173	0.0445	0.146	0.317	0.140	0.146	0.229	0.536	0.330	0.482	0.0834	0.121	2.72
	Da Nang	0.268	*	0.167	0.713	0.436	*	0.448	0.368	2.31	11.9	3.32	1.04	21.0
	Can Tho	0.00	*	0.00	0.0542	0.0880	0.220	0.439	0.115	0.590	0.555	0.113	0.0696	2.25
	Ho Chi Minh	0.00	0.00	0.00	0.0534	0.0373	0.289	0.490	0.448	0.607	0.637	0.169	0.146	2.88
	Yen Bai	0.0603	0.0927	0.353	0.676	0.349	0.102	0.458	1.17	4.29	0.950	0.125	0.00	8.63
Data completeness														
%TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
China	Haifu	100	100	100	100	98.9	99.9	100	100	100	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	100
	Xiang Zhou	--	100	100	100	100	100	100	100	100	100	--	--	100
	Zhuxiandong	100	100	100	100	100	100	100	100	100	100	--	--	100
	Wuzhishan	100	--	100	100	100	100	100	100	100	100	100	--	100
	Lijiang	100	100	--	100	100	100	100	100	100	100	--	--	100
Japan	Yusuhara	100	99.6	99.5	100	99.8	100	100	78.2	8.0	99.1	99.4	100	83.3
Russia	Mondy	--	100	--	--	--	--	--	100	100	--	--	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	100	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	96.8	99.4	99.8	100	100	99.0	100	100	100	100	100	0.0	99.7
	Hoa Binh	98.5	66.0	100	38.9	100	97.5	100	100	100	100	97.5	0.0	96.1
	Cuc Phuong	97.0	91.1	98.0	98.1	97.7	98.6	99.1	100	100	99.5	98.8	76.4	98.9
	Da Nang	91.8	0.0	96.0	99.4	96.9	0.0	100	96.5	99.9	99.9	100	96.5	99.3
	Can Tho	--	0.0	--	93.0	100	100	100	100	100	100	100	100	99.6
	Ho Chi Minh	--	--	--	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
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
Russia	Mondy	0.00	<0.01	0.00	0.00	0.00	0.00	0.00	<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	<0.01
	Irkutsk	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.100	<0.01	<0.01	<0.01	0.102
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Russia	Mondy	--	100	--	--	--	--	--	100	100	--	--	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	100	100	100	100	100	100	100	100	100	100	100	100	100

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	1.81	2.37	1.17	<1	1.10	<1	<1	<1	2.11	<1	3.81	2.95	1.09
Philippines	Metro Manila	<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
Japan	Yusuhara	0.0353	0.0265	0.0278	0.0162	0.0131	0.0434	0.112	0.0227	0.144	0.0440	0.0356	0.0120	0.473
	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	0.0337
	Tokyo	0.224	0.0340	0.139	0.190	0.112	0.179	0.182	0.0430	0.201	0.152	0.0468	0.0339	1.53
Philippines	Metro Manila	0.0131	<0.01	*	*	0.0869	0.0273	0.0941	0.238	<0.01	<0.01	<0.01	<0.01	0.414
Russia	Mondy	0.00	<0.01	0.00	0.00	0.00	0.00	0.00	<0.01	<0.01	0.00	0.00	<0.01	<0.01
	Listvyanka	<0.01	<0.01	<0.01	<0.01	0.0182	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0445
	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	0.0497
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Yusuhara	100	99.6	99.5	100	99.8	100	100	78.2	8.0	99.1	99.4	100	83.3
	Ogasawara	98.2	97.6	100	100	99.5	95.8	99.1	98.7	99.4	99.2	98.6	90.2	97.8
	Tokyo	91.9	99.9	99.5	100	97.7	95.5	99.6	99.4	99.2	99.7	97.8	99.9	98.3
Philippines	Metro Manila	100	92.5	0.0	0.0	71.0	60.9	71.6	83.4	100	100	100	100	86.3
Russia	Mondy	--	100	--	--	--	--	--	100	100	--	--	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	100	100	100	100	100	100	100	100	100	100	100	100	100

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	Ochiishi	*	*	*	*	*	1.60	*	*	3.50	*	*	*	2.69
	Yusuhara	<1	<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	1.09	<1	<1
	Irkutsk	<1	<1	<1	2.84	<1	<1	<1	<1	<1	5.90	1.42	<1	<1
Thailand	Bangkok	--	--	--	--	--	<1	<1	<1	<1	<1	<1	--	<1
	Samutprakarn	--	--	--	<1	<1	<1	<1	<1	<1	<1	--	--	<1
	Pathumthani	--	--	1.65	<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	Ochiishi	*	*	*	*	*	0.291	*	*	0.410	*	*	*	1.71
	Yusuhara	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0255	<0.01	<0.01	0.0678
Russia	Mondy	0.00	<0.01	0.00	0.00	0.00	0.00	0.00	<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	0.0653	<0.01	<0.01	<0.01	<0.01	0.111
	Irkutsk	<0.01	<0.01	<0.01	<0.01	0.0263	<0.01	<0.01	<0.01	0.0633	0.0553	<0.01	<0.01	0.183
Thailand	Bangkok	0.00	0.00	0.00	0.00	0.00	0.0139	0.0483	<0.01	<0.01	<0.01	<0.01	0.00	0.0738
	Samutprakarn	0.00	0.00	0.00	<0.01	<0.01	<0.01	<0.01	0.0276	<0.01	<0.01	0.00	0.00	0.0284
	Pathumthani	0.00	0.00	0.0109	0.0107	<0.01	0.0598	<0.01	0.0160	<0.01	0.0710	<0.01	0.00	0.186
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Japan	Ochiishi	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	10.3	0.0	0.0	0.0	3.3
	Yusuhara	100	99.6	99.5	100	99.8	100	100	78.2	8.0	99.1	99.4	100	83.3
Russia	Mondy	--	100	--	--	--	--	--	100	100	--	--	100	100
	Listvyanka	100	100	100	100	100	100	100	100	100	100	100	100	100
	Irkutsk	100	100	100	100	100	100	100	100	100	100	100	100	100
Thailand	Bangkok	--	--	--	--	--	100	100	100	100	100	100	--	100
	Samutprakarn	--	--	--	100	100	100	100	98.4	100	100	--	--	99.6
	Pathumthani	--	--	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
Thailand	Bangkok	--	--	--	--	--	3.28	5.26	<1	<1	<1	<1	--	1.84
	Samutprakarn	--	--	--	<1	<1	<1	<1	<1	<1	<1	--	--	<1
	Pathumthani	--	--	26.8	<1	<1	<1	3.12	<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
Thailand	Bangkok	0.00	0.00	0.00	0.00	0.00	0.424	1.94	<0.01	0.154	0.0958	<0.01	0.00	2.63
	Samutprakarn	0.00	0.00	0.00	<0.01	0.0107	0.0276	<0.01	0.0210	<0.01	<0.01	0.00	0.00	0.0626
	Pathumthani	0.00	0.00	0.177	<0.01	0.0376	0.144	0.724	0.0796	0.0189	0.0338	<0.01	0.00	1.22
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Thailand	Bangkok	--	--	--	--	--	100	100	100	97.9	100	100	--	99.5
	Samutprakarn	--	--	--	100	100	100	100	100	100	100	--	--	100
	Pathumthani	--	--	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
Thailand	Bangkok	--	--	--	--	--	1.35	9.48	<1	1.05	2.88	<1	--	3.47
	Samutprakarn	--	--	--	<1	<1	<1	<1	<1	<1	<1	--	--	<1
	Pathumthani	--	--	<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
Thailand	Bangkok	0.00	0.00	0.00	0.00	0.00	0.174	3.49	0.0128	0.343	0.909	<0.01	0.00	4.95
	Samutprakarn	0.00	0.00	0.00	<0.01	<0.01	0.0164	<0.01	<0.01	<0.01	0.0284	0.00	0.00	0.0673
	Pathumthani	0.00	0.00	<0.01	0.0290	0.0447	0.0876	0.0446	0.0558	0.0144	0.0646	<0.01	0.00	0.344
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Thailand	Bangkok	--	--	--	--	--	100	100	100	97.9	100	100	--	99.5
	Samutprakarn	--	--	--	100	100	100	100	100	100	100	--	--	100
	Pathumthani	--	--	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
	Tanah Rata	<1	<1	<1	<1	<1	<1	<1	<1	*	*	*	*	<1
	Danum Valley	<1	<1	*	*	*	*	<1	<1	<1	*	*	*	<1
	Kuching	*	*	*	*	*	*	*	<1	<1	<1	<1	<1	<1
Wet deposition amount unit: $\text{mmol m}^{-2}\text{month}^{-1}$ or $\text{mmol m}^{-2}\text{year}^{-1}$														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	0.0232	0.0161	<0.01	<0.01	<0.01	<0.01	<0.01	0.0198	0.0203	<0.01	<0.01	<0.01	0.0830
	Tanah Rata	0.0215	0.0207	0.0123	0.0496	0.107	<0.01	0.0119	<0.01	*	*	*	*	0.393
	Danum Valley	<0.01	0.0142	*	*	*	*	<0.01	0.0497	<0.01	*	*	*	0.156
	Kuching	*	*	*	*	*	*	*	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Data completeness %TP														
Country	Name of sites	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Malaysia	Petaling Jaya	100	100	100	100	100	100	100	97.2	100	99.7	100	100	99.9
	Tanah Rata	74.2	99.7	92.2	100	100	100	100	62.6	0.0	0.0	0.0	0.0	56.4
	Danum Valley	18.4	54.2	0.0	0.0	0.0	0.0	67.5	29.3	33.6	0.0	0.0	0.0	18.0
	Kuching	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.9	16.2	57.1	100	100	24.1

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 2020. 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).

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. 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.

4.1.3 Monitoring Sites

The measurement methods and parameters at each monitoring site for dry deposition (air concentration) monitoring in 2020 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, Thailand and Vietnam, and the passive sampler method was used in Indonesia and Russia in 2020.

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 2020

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	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	AT*3	O ₃
Japan		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
		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*1	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Tsushima	AT	O ₃ , PM ₁₀ , PM _{2.5}
		FP*1	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
Lao PDR	Vientiane	AT*3 FP*1	NO, NO ₂ , NO _x , PM ₁₀ , PM _{2.5} SO ₂ , HNO ₃ , HCl, NH ₃ , PMC

Table 4.1.1 Sampling methods and parameters for dry deposition (air concentration) monitoring in 2020 (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* ³	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	PM _{2.5}
Philippines	Metro Manila	AT* ³	NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
		FP* ¹	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Los Baños	FP* ¹	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Mt. Sto. Tomas	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* ¹	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* ¹	HNO ₃ , HCl, NH ₃ , PMC in PM _{2.5}
	Imsil	AT	SO ₂ , NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}
		FP* ¹	HNO ₃ , HCl, NH ₃ , PMC in PM _{2.5}
Russia	Mondy	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
		PS* ⁴	O ₃
	Listvyanka	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
		PS* ⁴	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}
		FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Samutprakarn	AT	SO ₂ , NO, NO ₂ , NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	Pathumthani	FP* ¹	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	Khanchanaburi* ²	AT	SO ₂ , NO, NO _x , O ₃ , PM ₁₀ , PM _{2.5}
	(Vajiralongkorn Dam)	FP	SO ₂ , HNO ₃ , HCl, NH ₃ , PMC
	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}

Table 4.1.1 Sampling methods and parameters for dry deposition (air concentration) monitoring in 2020 (continued)

Country	Site	Method	Parameter
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.

Note:

- *1 FP monitoring data of 2020 at Phnom Penh, Vientiane, Metro Manila, Los Baños, Mt. Sto. Tomas, Kanghwa, Cheju, Imsil and Pathumthani sites were not submitted. Niigata-maki and Tsushima sites started FP monitoring in April, 2020.
- *2 2-week intensive monitoring at Khanchanaburi site is implemented 3 times per year due to monitoring availability in the remote area. However, FP monitoring in 2020 was irregularly implemented only once due to COVID-19. Although their FP results were submitted, their sampling period from March 4 to June 18 were too long, so their whole FP results were invalidated. AUTO monitoring was implemented only once in Spring.
- *3 Auto monitoring data of O₃ at Bandung site, NO, NO₂, NO_x and PM₁₀ at Vientiane, NO, NO₂, NO_x and PM₁₀ at Metro Manila were not submitted. (As an exception, PM_{2.5} monitoring data at Ulaanbaatar site were submitted, but the data were judged/verified to be invalid.)
- *4 PS monitoring data of 2020 at Mondy and Listvyanka sites were not submitted.

Table 4.1.2 Methods of automatic monitors in 2020

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
	Bandung	–	–	UVP	–	–
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
	Okii	UVF	CLD	UVP	β-ray	β-ray
	Yusuhara	UVF	CLD	UVP	β-ray	β-ray

Table 4.1.2 Methods of automatic monitors in 2020 (continued)

Country	Site	Parameter				
		SO ₂	NO _x	O ₃	PM ₁₀	PM _{2.5}
Japan	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
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
Thailand	Bangkok	–	CLD	UVP	β-ray	β-ray
	Samutprakarn	UVF	CLD	UVP	β-ray	β-ray
	Khanchanaburi	UVF	CLD	UVP	β-ray	β-ray
	(Vajiralongkorn Dam)					
	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.

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 2020 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 2020, 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
[<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 particular 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 2006 to 2020 are summarized in Table 4.21 through Table 4.38.

Monthly and annual dry deposition amounts of gaseous and particulate substances in 2020 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 observational data at neighbor meteorological stations or 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 (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Samutprakarn	Mean	1.8	1.7	0.8	***	***	***	***	***	***	***	***	***	1.5
		%	95	96	83	***	***	***	***	***	***	***	***	***	23
		Max-d	3.5	3.3	2.1	***	***	***	***	***	***	***	***	***	3.5
		Min-d	0.7	0.8	0.1	***	***	***	***	***	***	***	***	***	0.1
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Chang Phueak	Mean	0.3	0.5	1.1	0.2	<0.1	0.2	0.3	0.3	<0.1	<0.1	0.6	1.1	0.4
		%	94	94	81	95	93	93	95	94	91	95	96	95	93
		Max-d	0.8	1.0	2.3	0.9	0.8	0.7	0.9	2.0	0.6	0.3	0.9	1.5	2.3
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.9	<0.1
	Si Phum	Mean	1.2	1.3	1.7	1.8	1.4	1.1	1.0	1.0	0.9	1.0	0.7	0.9	1.2
		%	95	95	95	95	95	95	95	96	96	95	83	94	94
		Max-d	1.7	1.9	2.7	2.5	1.9	1.6	1.0	1.0	1.1	1.1	0.9	1.6	2.7
		Min-d	0.8	0.7	0.7	1.0	1.0	1.0	1.0	1.0	<0.1	1.0	0.6	0.7	<0.1
	Nai Mueang	Mean	1.0	1.3	0.9	0.2	0.1	0.8	0.6	0.4	0.2	0.2	0.3	0.6	0.6
		%	96	96	96	95	96	94	96	96	94	96	95	94	95
		Max-d	1.5	1.9	1.7	1.3	0.4	1.2	1.3	1.3	0.9	0.9	1.0	1.3	1.9
		Min-d	0.1	0.8	0.2	<0.1	<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

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	2.1	0.8	2.4	0.8	3.8	5.0	5.8	5.6	4.6	3.3	2.5	2.1	3.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.4	1.1	2.7	1.1	5.1	5.4	6.3	6.5	4.6	3.9	3.0	2.5	6.5
		Min-2w	1.9	0.4	2.1	0.4	2.1	4.6	5.3	4.8	4.6	3.0	2.0	1.6	0.4
	Serpong	Mean	1.0	0.9	0.5	0.4	0.5	0.8	1.1	1.0	1.4	1.6	0.6	0.4	0.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.1	0.9	0.6	0.5	0.6	1.1	1.1	1.3	2.2	2.3	0.7	0.6	2.3
		Min-2w	1.0	0.9	0.4	0.2	0.4	0.6	1.1	0.7	0.9	0.8	0.5	0.2	0.2
	Bandung	Mean	3.8	5.2	1.5	***	***	***	2.2	3.0	2.3	2.1	1.9	1.8	2.7
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	5.9	6.5	1.5	***	***	***	3.5	4.4	2.4	2.4	2.1	2.6	6.5
		Min-2w	0.9	4.2	1.5	***	***	***	1.1	1.7	2.1	1.8	1.8	1.2	0.9
Japan	Rishiri	Mean	0.5	0.3	0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.2	0.1	0.3	0.2
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.8	0.3	0.2	<0.1	<0.1	<0.1	<0.1	0.2	0.1	0.2	0.1	0.3	0.8
		Min-2w	0.2	0.3	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.2	<0.1
	Ochiishi	Mean	0.3	0.2	0.2	0.4	0.1	0.2	0.2	0.1	0.2	0.4	0.3	0.7	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.2	0.3	0.5	0.2	0.2	0.3	0.2	0.2	0.7	0.3	0.8	0.8
		Min-2w	0.3	0.2	0.1	0.3	<0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.7	<0.1
	Sado-seki	Mean	0.1	0.2	0.3	0.3	0.5	0.2	0.3	0.8	0.4	0.3	0.3	0.3	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.3	0.4	0.5	0.6	0.4	0.4	1.0	0.7	0.3	0.4	0.3	1.0
		Min-2w	0.1	0.2	0.2	0.2	0.5	<0.1	0.1	0.6	0.1	0.2	0.2	0.2	<0.1
	Happo* ¹	Mean	0.3	0.3	0.4	0.4	0.4	0.3	0.7	0.4	0.5	0.4	0.2	0.4	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.4	0.4	0.4	0.5	0.4	0.7	0.6	0.5	0.4	0.2	0.7	0.7
		Min-2w	0.3	0.3	0.4	0.4	0.4	0.3	0.6	0.3	0.4	0.4	0.2	0.2	0.2
	Ijira	Mean	<0.1	<0.1	0.1	0.2	0.2	0.2	0.2	0.4	<0.1	<0.1	0.2	<0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	<0.1	0.2	0.3	0.2	0.2	0.3	0.7	<0.1	<0.1	0.3	<0.1	0.7
		Min-2w	<0.1	<0.1	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Oki	Mean	0.2	0.1	0.3	0.2	0.3	0.1	0.3	0.3	0.1	0.1	0.2	0.2	0.2
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.4	0.1	0.3	0.2	0.4	0.2	0.4	0.4	0.1	0.1	0.3	0.2	0.4
		Min-2w	0.2	0.1	0.3	0.1	0.2	<0.1	0.2	0.2	0.1	0.1	<0.1	0.2	<0.1

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.3.2 SO₂ -Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	1.0	0.9	0.4	***	***	***	0.5	0.3	0.6	1.3	0.8	1.0	0.7
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	1.3	0.9	0.5	***	***	***	0.6	0.5	0.7	1.9	1.2	1.1	1.9
		Min-10d	0.7	0.8	0.3	***	***	***	0.3	0.2	0.3	0.6	0.6	0.9	0.2
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Vietnam	Hanoi	Mean	0.6	0.9	0.9	0.7	0.9	0.6	0.6	0.8	0.7	0.6	0.6	0.6	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.7	1.7	1.3	0.9	1.5	0.8	0.7	0.9	0.8	0.8	0.8	0.8	1.7
		Min-w	0.5	0.4	0.4	0.6	0.6	0.5	0.5	0.7	0.6	0.5	0.5	0.5	0.4
	Hoa Binh	Mean	0.7	0.7	0.9	0.8	0.8	0.7	0.8	1.1	1.0	0.9	1.0	0.7	0.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.1	0.9	1.3	1.3	1.0	0.9	1.0	2.0	1.3	1.1	1.1	0.9	2.0
		Min-w	0.4	0.5	0.6	0.5	0.6	0.6	0.6	0.5	0.8	0.7	0.8	0.5	0.4
	Can Tho	Mean	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.7	0.5	0.5	0.6	0.6	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.7	0.8	0.7	0.7	0.5	0.7	0.7	0.8	0.6	0.6	0.8	0.6	0.8
		Min-w	0.5	0.5	0.5	0.5	0.4	0.6	0.5	0.6	0.4	0.4	0.6	0.6	0.4
	Ho Chi Minh	Mean	0.6	0.7	0.6	0.7	0.6	0.6	0.6	0.8	0.7	0.6	0.6	0.6	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.8	0.7	0.7	0.8	0.7	0.9	0.7	0.9	0.8	0.7	0.7	0.7	0.9
		Min-w	0.4	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.4	0.5	0.6	0.6	0.4
	Yen Bai	Mean	0.5	0.5	0.9	0.6	1.0	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.6	0.6	1.6	0.7	1.5	0.5	0.4	0.3	0.3	0.3	0.3	0.6	1.6
		Min-w	0.4	0.4	0.5	0.5	0.6	0.2	0.2	0.3	0.2	0.2	0.2	<0.1	<0.1

Table 4.3.3 SO₂ -Measured by PS

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Jakarta	Mean	4.0	3.9	4.4	5.6	5.8	5.1	7.2	7.2	6.3	4.8	6.1	4.4	5.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	4.0	3.9	4.4	5.6	5.8	5.1	7.2	7.2	6.3	4.8	6.1	4.4	7.2
		Min-m	4.0	3.9	4.4	5.6	5.8	5.1	7.2	7.2	6.3	4.8	6.1	4.4	3.9
	Kototabang	Mean	2.2	1.6	1.2	2.4	2.8	1.3	1.1	1.2	1.0	1.2	0.6	0.8	1.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	2.2	1.6	1.2	2.4	2.8	1.3	1.1	1.2	1.0	1.2	0.6	0.8	2.8
		Min-m	2.2	1.6	1.2	2.4	2.8	1.3	1.1	1.2	1.0	1.2	0.6	0.8	0.6
	Bandung	Mean	2.6	3.1	***	***	***	***	1.7	2.0	1.7	1.8	2.1	1.9	2.1
		%	100	100	***	***	***	***	100	100	100	100	100	100	67
		Max-m	2.6	3.1	***	***	***	***	1.7	2.0	1.7	1.8	2.1	1.9	3.1
		Min-m	2.6	3.1	***	***	***	***	1.7	2.0	1.7	1.8	2.1	1.9	1.7

Terms and abbreviations are given in Table 4.2.

Table 4.4.1 HNO₃ - Measured by FP

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.8	0.3	1.0	0.2	0.7	1.5	1.8	1.9	1.6	1.7	1.2	0.3	1.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.0	0.4	1.5	0.3	1.1	2.1	2.1	2.6	1.6	2.3	1.6	0.3	2.6
		Min-2w	0.6	0.1	0.4	0.1	0.1	0.8	1.5	1.3	1.6	1.1	0.8	0.3	0.1
	Serpong	Mean	0.6	0.3	0.7	1.0	0.9	1.4	1.3	1.7	1.0	0.2	0.9	0.1	0.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.8	0.4	0.8	1.2	1.1	1.4	1.4	2.2	1.6	0.3	1.3	0.1	2.2
		Min-2w	0.4	0.2	0.6	0.8	0.6	1.3	1.3	1.3	0.2	0.2	0.6	<0.1	<0.1
	Bandung	Mean	0.6	0.4	0.6	***	***	***	0.4	0.6	0.5	0.3	0.2	0.3	0.4
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	0.9	0.5	0.6	***	***	***	0.5	1.1	0.6	0.5	0.2	0.5	1.1
		Min-2w	<0.1	0.2	0.6	***	***	***	0.4	0.3	0.3	0.1	0.1	<0.1	<0.1
Japan	Rishiri	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ochiishi	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	100	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
	Sado-seki	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	100	100	100	100	100	100
		Max-2w	<0.1	<0.1	0.1	<0.1	0.3	0.4	0.1	0.3	<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	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
	Happo* ¹	Mean	<0.1	<0.1	<0.1	0.4		0.3	0.2	0.4	0.1	0.1	<0.1	<0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.1	<0.1	<0.1	0.4		0.4	0.2	0.4	0.1	0.2	<0.1	<0.1	0.4
		Min-2w	<0.1	<0.1	<0.1	0.4		0.2	0.1	0.3	0.1	0.1	<0.1	<0.1	<0.1
	Ijira	Mean	<0.1	<0.1	<0.1	0.1	0.1	0.2	0.1	0.3	0.1	<0.1	<0.1	<0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	<0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.1	<0.1	0.1	<0.1	0.3
		Min-2w	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
	Oki	Mean	<0.1	<0.1	0.1	<0.1	0.1	0.2	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	<0.1	0.2	<0.1	0.1	0.4	0.2	0.2	<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	<0.1
	Yusuhara	Mean	<0.1	0.1	0.1	<0.1	0.2	0.3	0.1	0.2	0.1	0.2	0.2	0.2	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.1	0.2	0.1	0.1	0.3	0.4	0.1	0.2	0.1	0.2	0.2	0.2	0.4
		Min-2w	<0.1	<0.1	0.1	<0.1	0.2	0.2	0.1	0.2	0.1	0.2	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	0.2	<0.1	<0.1	0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.2
		Min-2w	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	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
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Tokyo	Mean	0.2	0.3	0.3	0.4	0.7	1.0	0.6	1.4	0.3	0.3	0.3	0.2	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.3	0.4	0.5	0.8	1.4	1.0	1.6	0.3	0.4	0.4	0.2	1.6
		Min-2w	0.2	0.3	0.3	0.4	0.6	0.8	0.2	1.2	0.2	0.3	0.2	0.2	0.2
	Niigata-maki	Mean				<0.1	0.2	0.2	0.1	0.4	<0.1	<0.1	<0.1	<0.1	0.1
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.1	0.3	0.4	0.2	0.5	<0.1	<0.1	0.1	<0.1	0.5
		Min-2w				<0.1	0.1	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1
	Tsushima	Mean				0.2	0.4	0.5	0.2	0.4	0.2	0.3	0.5	0.3	0.4
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.2	0.5	0.9	0.2	0.6	0.2	0.5	0.7	0.3	0.9
		Min-2w				0.2	0.4	0.4	0.2	0.2	0.1	<0.1	0.3	0.3	<0.1

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.4.1 HNO₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.6	0.4	0.7	***	0.4	0.4	0.4	0.5	0.3	0.3	0.4	0.3	0.4
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	1.0	0.9	1.1	***	0.5	0.5	0.6	0.6	0.4	0.4	0.5	0.5	1.1
		Min-w	0.4	0.2	0.5	***	0.3	0.3	0.2	0.4	0.3	0.3	0.4	0.1	0.1
	Tanah Rata	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Danum Valley	Mean	<0.1	<0.1	***	***	***	<0.1	<0.1	<0.1	<0.1	***	***	<0.1	<0.1
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	<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
Mongolia	Ulaanbaatar	Mean	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	<0.1	<0.1
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	<0.1	<0.1	<0.1	<0.1	0.3	0.2	0.3	0.2	0.2	0.3	0.3	<0.1	0.3
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Terelj	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	97	41	94
		Max-2w	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
		Min-2w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Myanmar	Yangon	Mean	0.2	0.6	0.1	1.0	4.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	1.0	0.1	1.9	4.2	0.1	0.3	<0.1	0.2	<0.1	<0.1	0.6	4.2
		Min-2w	0.2	0.2	<0.1	0.2	4.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Philippines	Metro Manila ^{*2}	Mean	0.2	0.2	0.1		0.3	0.6	0.7	0.2	0.3	0.2	0.2	0.2	0.3
		%	100	94	100		100	100	100	100	100	100	100	100	99
		Max-w	0.6	0.5	0.1		0.3	1.0	1.3	0.6	0.4	0.4	0.5	0.3	1.3
		Min-w	<0.1	<0.1	0.1		0.3	0.2	0.3	<0.1	<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 ^{*1}	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	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
		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
	Listvyanka	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.1	0.2
		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
	Irkutsk	Mean	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
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	0.6	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.6
		Min-w	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Primorskaya	Mean	<0.1	<0.1	0.1	<0.1	0.3	<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	0.2	<0.1	0.4	<0.1	0.2	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	<0.1
Thailand	Bangkok	Mean	1.1	0.8	0.3	***	***	***	0.1	0.1	0.2	0.4	0.3	0.7	0.5
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	1.5	1.2	0.5	***	***	***	0.2	0.2	0.2	0.6	0.6	1.2	1.5
		Min-10d	0.7	0.4	0.3	***	***	***	0.1	<0.1	<0.1	0.2	0.1	<0.1	<0.1
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/5/20 due to the influence of COVID-19.

Table 4.4.1 HNO₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	0.6	0.8	0.7	0.7	0.8	0.5	0.7	0.7	0.5	0.3	0.7	0.5	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.7	1.4	1.4	0.9	1.2	0.7	0.9	1.2	0.6	0.4	0.8	0.6	1.4
		Min-w	0.5	0.3	0.2	0.5	0.5	<0.1	0.6	0.5	0.4	0.2	0.6	0.4	<0.1
	Hoa Binh	Mean	0.6	0.5	0.7	0.6	0.7	0.7	0.5	0.7	0.9	0.6	0.7	0.6	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.7	0.6	0.8	1.0	0.9	0.8	0.7	1.0	1.1	0.8	0.8	0.7	1.1
		Min-w	0.4	0.4	0.6	0.4	0.5	0.5	0.4	0.4	0.8	0.4	0.6	0.4	0.4
	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	0.3	0.1	0.1	0.1	0.1	0.2	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	<0.1
	Ho Chi Minh	Mean	0.4	0.4	0.4	0.3	0.2	0.4	0.5	0.4	0.4	0.4	0.5	0.3	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.6	0.4	0.5	0.4	0.3	0.4	0.7	0.6	0.5	0.6	0.7	0.4	0.7
		Min-w	0.3	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.3	0.2	0.2
	Yen Bai	Mean	0.6	0.7	1.2	0.7	1.3	0.6	0.3	0.2	0.3	0.3	0.4	0.4	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.7	0.9	2.2	1.2	1.7	1.4	0.3	0.3	0.3	0.3	0.5	0.5	2.2
		Min-w	0.5	0.4	0.5	0.5	1.1	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1

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

Unit : ppb

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	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan) FP with PM _{2.5} cyclone	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil FP with PM _{2.5} cyclone	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.5.1 HCl - Measured by FP

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.1	0.8	0.9	<0.1	0.8	1.7	1.9	1.4	1.1	1.1	0.7	0.5	0.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.8	1.0	0.1	1.0	2.4	2.1	1.6	1.1	1.3	0.8	0.6	2.4
		Min-2w	<0.1	0.7	0.8	<0.1	0.4	1.1	1.7	1.2	1.1	0.7	0.5	0.4	<0.1
	Serpong	Mean	1.4	0.6	0.9	0.9	0.6	1.3	1.6	1.7	1.4	0.2	1.4	0.5	1.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.4	0.9	1.0	1.2	0.8	1.7	1.8	2.0	2.0	0.3	1.5	0.7	2.0
		Min-2w	1.4	0.3	0.8	0.5	0.5	0.8	1.4	1.3	0.7	0.2	1.2	0.2	0.2
	Bandung	Mean	0.5	0.8	0.8	***	***	***	0.7	0.8	0.8	0.7	0.7	0.6	0.7
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	0.9	0.9	0.8	***	***	***	0.9	1.1	0.9	0.9	0.9	0.8	1.1
		Min-2w	<0.1	0.6	0.8	***	***	***	0.4	0.5	0.7	0.5	0.6	0.3	<0.1
Japan	Rishiri	Mean	0.4	0.5	0.7	0.2	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.4
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.4	0.5	0.7	0.3	0.5	0.4	0.5	0.5	0.5	0.2	0.2	0.3	0.7
		Min-2w	0.4	0.4	0.7	0.2	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.3	0.2
	Ochiishi	Mean	0.1	0.2	0.2	0.5	0.3	0.4	0.4	0.6	0.4	0.4	0.2	0.1	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.2	0.3	0.7	0.4	0.5	0.4	0.7	0.4	0.5	0.2	0.2	0.7
		Min-2w	0.1	0.1	0.1	0.3	0.2	0.4	0.4	0.4	0.3	0.2	0.1	<0.1	<0.1
	Sado-seki	Mean	0.3	0.4	0.4	0.3	0.9	0.5	0.4	0.8	0.5	0.5	0.4	0.3	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.4	0.5	0.4	1.3	0.6	0.5	1.1	0.5	0.5	0.5	0.4	1.3
		Min-2w	0.2	0.3	0.3	0.3	0.6	0.3	0.4	0.4	0.5	0.4	0.2	0.3	0.2
	Happo* ¹	Mean	0.1	0.2	0.2	0.2	0.2	0.2	<0.1	0.2	0.1	0.2	0.2	0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.2	0.2	0.2	0.2	0.2	<0.1	0.2	0.2	0.2	0.2	0.1	0.2
		Min-2w	<0.1	0.2	0.2	0.2	0.2	0.1	<0.1	0.2	0.1	0.1	0.2	0.1	<0.1
	Ijira	Mean	0.2	0.1	0.2	0.2	0.1	0.1	<0.1	0.2	0.2	0.1	<0.1	<0.1	0.1
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.1	0.2	<0.1	0.3
		Min-2w	0.1	0.1	0.1	0.2	0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1
	Oki	Mean	0.5	0.3	0.6	0.5	0.8	0.6	0.6	1.1	0.8	0.4	0.5	0.6	0.6
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.5	0.3	0.7	0.5	0.9	0.8	0.7	1.5	1.2	0.5	0.7	0.6	1.5
		Min-2w	0.4	0.3	0.6	0.4	0.7	0.5	0.5	0.7	0.5	0.4	0.3	0.5	0.3
	Yusuhara	Mean	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.2	0.4	0.4	0.4	0.2	0.3	0.3	0.5	0.3	0.4	0.3	0.5
		Min-2w	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1
	Hedo	Mean	1.1	0.9	0.8	1.1	0.8	0.3	0.6	1.3	0.6	1.1	0.5	0.6	0.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.2	1.1	0.9	1.2	1.1	0.6	0.9	1.5	0.7	1.3	0.7	0.6	1.5
		Min-2w	1.0	0.7	0.8	0.9	0.5	0.2	0.4	1.1	0.5	1.0	0.1	0.5	0.1
	Ogasawara	Mean	0.6	0.5	0.7	0.8	0.5	0.7	1.6	1.8	0.2	0.2	0.3	0.4	0.7
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.7	0.5	0.8	0.9	0.6	1.0	1.9	2.6	0.3	0.2	0.4	0.5	2.6
		Min-2w	0.5	0.5	0.6	0.8	0.4	0.4	1.3	1.1	0.2	0.2	0.3	0.3	0.2
	Tokyo	Mean	0.4	0.5	0.6	0.7	0.9	0.8	0.7	1.0	0.7	0.7	0.6	0.4	0.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	0.5	0.6	0.8	0.9	1.0	0.8	1.2	0.7	0.8	0.7	0.4	1.2
		Min-2w	0.4	0.4	0.6	0.7	0.8	0.7	0.7	0.8	0.7	0.6	0.5	0.3	0.3
	Niigata-maki	Mean				0.4	0.7	0.5	0.4	0.7	0.4	0.5	0.5	0.2	0.5
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.6	0.7	0.5	0.4	0.9	0.4	0.5	0.6	0.2	0.9
		Min-2w				0.3	0.6	0.4	0.3	0.5	0.3	0.4	0.4	0.2	0.2
	Tsushima	Mean				0.7	0.7	0.4	0.3	0.8	0.6	0.7	0.6	0.4	0.6
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.8	0.7	0.4	0.4	0.9	0.8	0.7	0.7	0.5	0.9
		Min-2w				0.7	0.6	0.3	0.2	0.6	0.5	0.6	0.6	0.4	0.2

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.5.1 HCl - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	1.3	1.3	0.9	***	4.1	1.0	0.9	0.9	<0.1	1.2	1.1	0.7	1.2
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	2.3	2.2	0.9	***	4.4	1.1	1.2	1.5	0.2	1.3	1.6	1.5	4.4
		Min-w	0.7	0.6	0.9	***	3.7	0.8	0.7	0.4	<0.1	1.0	0.7	<0.1	<0.1
	Tanah Rata	Mean	0.2	0.3	0.2	0.9	1.6	0.3	0.2	0.3	0.1	0.3	0.1	<0.1	0.3
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	0.3	0.4	0.3	0.9	2.0	0.4	0.3	0.4	0.3	0.4	0.2	0.1	2.0
		Min-w	<0.1	0.2	0.1	0.9	1.1	0.2	<0.1	0.2	<0.1	0.1	<0.1	<0.1	<0.1
	Danum Valley	Mean	0.1	0.2	***	***	***	<0.1	0.2	0.3	0.2	***	***	0.3	0.2
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	0.2	0.3	***	***	***	<0.1	0.3	0.3	0.2	***	***	0.3	0.3
		Min-2w	<0.1	0.1	***	***	***	<0.1	<0.1	0.3	0.2	***	***	0.3	<0.1
Mongolia	Ulaanbaatar	Mean	0.6	0.8	1.0	0.5	0.6	0.5	0.5	0.7	0.3	0.8	1.3	0.2	0.7
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	1.1	1.0	2.1	0.8	0.6	0.6	0.8	1.6	0.5	2.0	4.7	0.3	4.7
		Min-w	0.1	0.5	0.6	<0.1	0.5	0.3	0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1
	Terelj	Mean	0.2	0.1	2.2	0.3	0.3	0.6	0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.4
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	0.3	0.2	5.9	0.3	0.3	0.9	0.1	0.2	<0.1	<0.1	<0.1	<0.1	5.9
		Min-2w	0.2	<0.1	0.2	0.3	0.3	0.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Myanmar	Yangon	Mean	0.4	2.0	0.4	1.3	4.0	0.2	0.5	<0.1	0.2	0.2	0.7	0.2	0.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.4	3.8	0.6	1.8	4.6	0.3	0.8	0.1	0.3	0.4	0.9	0.6	4.6
		Min-2w	0.4	0.3	0.2	0.8	3.5	<0.1	0.2	<0.1	<0.1	<0.1	0.6	<0.1	<0.1
Philippines	Metro Manila ^{*2}	Mean	0.8	0.5	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	0.2	0.4	1.4	0.5	0.4
		%	100	94	100	100	100	100	100	100	100	100	100	100	99
		Max-w	1.2	0.9	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	0.5	0.6	3.6	1.2	3.6
		Min-w	0.3	0.3	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	0.2	0.1	0.1	<0.1
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy ^{*1}	Mean	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.2	<0.1	0.2	<0.1	0.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	0.7	0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.2	0.1	0.2	<0.1	0.7
		Min-m	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.2	<0.1	0.2	<0.1	<0.1
	Listvyanka	Mean	1.1	1.5	1.1	1.1	0.9	0.5	0.8	1.3	0.4	0.5	1.9	0.5	1.0
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	2.0	1.6	1.3	1.7	1.2	0.9	0.9	2.8	0.4	1.0	5.6	1.0	5.6
		Min-w	0.6	1.2	1.0	0.5	0.6	0.2	0.5	0.5	0.4	0.2	0.4	0.3	0.2
	Irkutsk	Mean	0.2	0.5	0.3	0.4	0.2	0.3	0.5	0.4	0.2	0.2	0.2	0.3	0.3
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	0.4	0.7	0.3	0.6	0.3	0.5	0.7	0.6	0.3	0.3	0.3	0.3	0.7
		Min-w	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
	Primorskaya	Mean	1.0	0.3	0.3	0.3	0.6	0.3	1.4	1.0	0.8	0.5	0.4	0.3	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.8	0.3	0.3	0.3	1.0	0.3	1.7	1.1	0.9	0.5	0.5	0.3	1.8
		Min-2w	0.2	0.3	0.3	0.2	0.3	0.3	1.0	0.8	0.6	0.4	0.3	0.2	0.2
Thailand	Bangkok	Mean	1.7	1.8	1.2	***	***	***	0.6	0.8	1.0	1.3	1.0	1.2	1.2
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	2.6	2.2	1.5	***	***	***	0.9	0.9	1.3	1.6	1.4	1.6	2.6
		Min-10d	1.1	1.5	1.0	***	***	***	0.4	0.5	0.7	0.7	0.5	0.9	0.4
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.5.1 HCl - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	1.3	2.1	2.1	1.6	1.3	1.0	1.9	1.6	1.3	1.2	1.1	0.9	1.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.5	4.8	2.9	2.0	1.7	1.2	2.4	2.0	1.4	1.4	1.3	1.0	4.8
		Min-w	1.1	0.8	1.1	1.1	0.9	0.9	1.5	1.4	1.2	1.0	0.9	0.8	0.8
	Hoa Binh	Mean	2.1	2.6	3.0	3.1	2.2	1.8	1.7	2.4	2.4	2.2	2.3	2.0	2.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.5	3.2	3.1	3.8	2.5	1.9	2.0	3.7	2.8	2.7	2.9	2.5	3.8
		Min-w	1.9	2.0	2.8	2.5	2.0	1.7	1.6	1.5	2.2	1.7	1.8	1.6	1.5
	Can Tho	Mean	1.8	1.4	1.4	2.0	1.5	1.8	2.0	1.6	1.9	2.0	1.8	1.7	1.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.4	1.8	1.6	2.4	2.1	2.1	2.2	2.3	2.3	2.5	2.2	2.0	2.5
		Min-w	1.3	1.1	1.1	1.5	1.1	1.3	1.5	1.0	1.5	1.3	1.4	1.4	1.0
	Ho Chi Minh	Mean	1.7	1.3	1.6	1.5	1.3	1.6	1.6	1.6	1.5	1.6	1.1	1.5	1.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.0	1.9	1.7	1.9	1.8	2.0	1.9	2.3	1.9	2.2	1.3	2.3	2.3
		Min-w	1.0	0.8	1.3	1.0	0.8	1.2	1.2	1.0	1.1	1.2	0.8	1.0	0.8
	Yen Bai	Mean	1.9	1.6	2.4	1.8	2.1	2.1	2.5	1.9	2.1	1.9	1.1	1.3	1.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.5	2.0	4.2	2.3	2.5	3.0	3.7	2.8	2.7	2.3	1.2	1.4	4.2
		Min-w	1.5	1.4	1.6	1.5	1.6	1.6	1.9	1.3	1.6	1.3	1.1	1.1	1.1

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

Unit : ppb

Country	Site		2019												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.6.1 NH₃ - Measured by FP

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	7.6	7.2	9.1	6.0	11.0	11.8	8.5	12.6	10.0	9.9	10.0	6.4	9.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	7.7	7.7	9.9	6.4	11.6	12.8	12.6	12.7	10.0	10.7	11.0	6.7	12.8
		Min-2w	7.5	6.6	8.3	5.6	10.0	10.8	4.3	12.4	10.0	9.2	9.0	6.0	4.3
	Serpong	Mean	8.1	9.8	12.9	13.2	11.7	11.7	10.5	10.6	9.9	7.9	7.1	2.2	9.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	8.2	12.9	14.4	15.5	13.1	11.9	10.7	11.1	10.8	8.6	7.3	4.1	15.5
		Min-2w	8.0	6.6	11.3	10.9	10.3	11.5	10.3	10.0	8.6	7.1	6.9	0.3	0.3
	Bandung	Mean	9.1	8.0	7.7	***	***	***	11.5	13.4	10.4	11.6	9.6	7.8	10.1
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	11.1	11.3	7.7	***	***	***	12.1	15.7	11.7	13.1	12.5	9.3	15.7
		Min-2w	7.2	6.7	7.7	***	***	***	10.8	9.9	8.0	10.0	7.2	6.3	6.3
Japan	Rishiri	Mean	0.4	0.3	0.4	0.3	0.4	0.6	0.7	0.7	0.7	0.5	0.4	0.2	0.5
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.6	0.3	0.4	0.3	0.5	0.7	0.7	0.7	0.8	0.5	0.4	0.2	0.8
		Min-2w	0.2	0.3	0.4	0.3	0.3	0.5	0.7	0.7	0.6	0.4	0.3	0.2	0.2
	Ochiishi	Mean	0.1	0.1	0.2	0.3	0.3	0.5	0.4	0.7	0.4	0.7	0.6	0.4	0.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.1	0.3	0.3	0.3	0.5	0.4	0.7	0.4	0.9	0.6	0.5	0.9
		Min-2w	0.1	<0.1	0.1	0.2	0.3	0.5	0.3	0.6	0.4	0.6	0.5	0.2	<0.1
	Sado-seki	Mean	0.1	0.3	0.5	0.5	1.5	0.9	0.6	0.9	0.9	0.6	0.4	0.2	0.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.1	0.3	0.7	0.5	1.6	1.2	0.6	1.2	1.0	0.7	0.6	0.2	1.6
		Min-2w	0.1	0.2	0.3	0.4	1.4	0.6	0.6	0.6	0.7	0.5	0.1	0.2	0.1
	Happo* ¹	Mean	0.2	0.3	0.5	0.9		1.3	0.5	0.5	0.4	0.3	0.2	0.2	0.5
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-2w	0.2	0.5	0.7	0.9		1.8	0.6	0.6	0.5	0.4	0.2	0.2	1.8
		Min-2w	0.2	0.2	0.3	0.9		0.9	0.4	0.4	0.4	0.2	0.2	0.2	0.2
	Ijira	Mean	0.3	0.2	0.6	0.7	1.1	1.2	1.3	1.5	1.1	0.6	0.5	0.3	0.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.3	0.3	0.7	0.7	1.3	1.5	1.3	1.7	1.2	0.7	0.6	0.4	1.7
		Min-2w	0.2	0.1	0.5	0.7	0.9	1.0	1.3	1.2	0.9	0.5	0.4	0.2	0.1
	Oki	Mean	0.3	0.5	0.9	0.7	1.0	1.2	0.8	1.1	1.2	0.7	0.7	0.3	0.8
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.4	0.5	1.2	0.7	1.1	1.6	0.9	1.4	1.6	0.7	0.9	0.3	1.6
		Min-2w	0.3	0.5	0.6	0.6	1.0	1.0	0.8	0.7	0.8	0.6	0.3	0.3	0.3
	Yusuhara	Mean	0.2	0.3	0.5	0.4	0.6	1.0	0.6	0.5	0.5	0.5	0.4	0.2	0.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.2	0.4	0.8	0.5	0.8	1.2	0.8	0.7	0.6	0.5	0.5	0.3	1.2
		Min-2w	0.2	0.3	0.3	0.4	0.5	0.8	0.5	0.2	0.5	0.5	0.2	0.2	0.2
	Hedo	Mean	1.2	1.3	1.4	1.9	1.8	1.2	1.1	1.0	1.2	1.2	0.9	0.7	1.2
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.6	1.3	1.7	1.9	1.9	1.5	1.2	1.2	1.4	1.4	1.4	0.7	1.9
		Min-2w	0.8	1.2	1.1	1.8	1.6	1.1	1.0	0.9	1.0	0.9	0.4	0.7	0.4
	Ogasawara	Mean	0.5	0.6	0.7	0.8	0.9	0.8	0.5	0.8	0.6	0.5	0.5	0.5	0.7
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.5	0.6	0.7	1.0	1.1	0.9	0.6	0.9	0.8	0.6	0.6	0.6	1.1
		Min-2w	0.4	0.6	0.7	0.7	0.7	0.8	0.4	0.8	0.4	0.5	0.5	0.4	0.4
	Tokyo	Mean	3.2	3.2	2.9	2.6	3.5	4.2	3.7	5.5	3.8	3.5	4.3	4.0	3.7
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.2	3.6	3.1	2.7	3.5	4.6	4.6	6.4	3.9	3.7	4.9	4.3	6.4
		Min-2w	3.1	2.9	2.7	2.5	3.5	4.0	2.8	4.7	3.7	3.2	3.3	3.6	2.5
	Niigata-maki	Mean				0.7	1.5	1.7	1.0	1.3	1.4	1.2	0.8	0.3	1.1
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.7	1.6	2.0	1.1	1.8	1.6	1.4	1.0	0.3	2.0
		Min-2w				0.7	1.3	1.3	0.9	0.9	1.2	1.0	0.7	0.3	0.3
	Tsushima	Mean				0.9	1.0	1.3	0.7	0.8	0.9	0.9	0.9	0.4	0.9
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.9	1.2	1.7	0.7	1.1	1.0	1.2	1.3	0.4	1.7
		Min-2w				0.9	0.8	1.0	0.7	0.4	0.8	0.6	0.7	0.3	0.3

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.6.1 NH₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	9.0	9.3	8.7	***	8.7	7.1	6.9	4.9	6.0	6.9	6.9	6.8	7.4
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	10.1	10.2	9.5	***	14.0	8.8	7.2	6.8	7.0	7.5	8.3	7.5	14.0
		Min-w	7.6	7.6	7.1	***	6.3	5.8	6.5	4.1	4.4	6.3	5.3	5.6	4.1
	Tanah Rata	Mean	1.5	3.1	2.5	1.1	3.0	1.1	1.6	1.2	1.4	1.2	1.2	1.1	1.7
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	1.8	7.9	3.8	1.1	4.0	1.4	2.4	1.5	2.0	1.7	1.6	1.2	7.9
		Min-w	1.4	1.4	1.4	1.1	1.9	0.9	0.9	1.0	0.7	0.7	0.9	0.8	0.7
	Danum Valley	Mean	1.5	2.6	***	***	***	1.4	1.5	1.1	1.8	***	***	1.0	1.7
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	2.2	3.0	***	***	***	1.4	1.7	1.1	1.8	***	***	1.0	3.0
		Min-2w	0.8	2.2	***	***	***	1.4	1.3	1.1	1.8	***	***	1.0	0.8
Mongolia	Ulaanbaatar	Mean	3.6	4.0	3.9	5.6	5.7	7.5	9.6	7.2	6.8	5.2	6.0	3.3	5.8
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	4.9	5.2	4.6	7.0	7.1	8.4	14.6	9.6	9.7	7.1	6.5	3.8	14.6
		Min-w	2.0	3.0	3.1	4.7	4.4	6.2	7.6	5.8	4.2	3.9	5.4	2.9	2.0
	Terelj	Mean	1.0	1.3	1.0	1.0	1.2	1.0	2.0	1.5	1.5	1.1	0.9	0.6	1.2
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	1.0	1.3	1.5	1.0	1.4	1.1	2.1	2.2	1.9	1.2	1.0	0.6	2.2
		Min-2w	0.9	1.3	0.6	1.0	0.9	1.0	1.9	1.2	1.0	1.0	0.8	0.6	0.6
Myanmar	Yangon	Mean	0.5	4.1	<0.1	0.9	0.9	<0.1	3.8	0.5	0.1	<0.1	0.4	1.4	1.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.5	7.7	<0.1	1.9	0.9	<0.1	7.6	1.0	0.3	<0.1	0.6	3.8	7.7
		Min-2w	0.4	0.5	<0.1	<0.1	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1
Philippines	Metro Manila ^{*2}	Mean	19.8	12.5	3.3		18.2	13.5	8.3	4.8	2.2	9.4	8.5	9.5	9.6
		%	100	94	100		100	100	100	100	100	100	100	100	99
		Max-w	30.4	18.1	3.3		18.2	16.7	14.0	12.9	7.5	15.5	11.5	16.0	30.4
		Min-w	6.3	7.6	3.3		18.2	10.2	0.5	0.2	0.1	3.9	1.1	2.1	0.1
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy ^{*1}	Mean	0.3	1.3	2.5	0.1		0.6	1.8	0.7	1.4	1.3	0.9	0.7	1.1
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-m	0.4	2.3	2.8	0.1		0.6	1.8	0.9	1.4	2.2	0.9	0.7	2.8
		Min-m	0.3	0.3	2.1	0.1		0.5	1.8	0.6	1.4	0.4	0.9	0.7	0.1
	Listvyanka	Mean	2.2	1.5	3.1	1.2	2.8	1.0	4.6	11.9	0.9	0.2	0.7	9.7	3.3
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	4.6	2.0	6.4	1.8	2.8	1.6	10.1	27.2	1.6	0.4	1.6	26.3	27.2
		Min-w	0.7	1.1	1.6	0.6	2.7	0.3	2.3	4.2	0.1	<0.1	<0.1	2.6	<0.1
	Irkutsk	Mean	8.7	3.5	5.0	4.9	2.1	1.4	5.7	1.5	1.9	1.4	1.2	1.2	3.2
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	22.0	4.7	5.2	6.6	3.0	2.2	15.3	3.2	1.9	2.5	1.5	2.0	22.0
		Min-w	2.3	1.8	4.5	2.5	1.3	0.7	<0.1	<0.1	1.8	0.7	0.8	0.8	<0.1
	Primorskaya	Mean	1.0	0.5	1.3	1.6	2.1	1.9	2.3	2.4	1.1	1.0	1.2	0.6	1.4
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.6	0.6	1.4	1.8	2.8	2.0	2.7	3.1	1.8	1.1	2.1	1.1	3.1
		Min-2w	0.4	0.5	1.1	1.4	1.4	1.8	1.9	1.8	0.5	0.9	0.4	0.1	0.1
Thailand	Bangkok	Mean	6.7	6.3	4.7	***	***	***	8.5	7.9	7.4	9.7	7.3	9.5	7.5
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	7.5	6.6	5.5	***	***	***	9.1	8.2	8.8	13.3	11.9	13.4	13.4
		Min-10d	5.7	6.2	4.3	***	***	***	7.7	7.6	5.4	6.1	3.8	2.7	2.7
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.6.1 NH₃ - Measured by FP (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	2.7	2.7	2.7	2.7	2.9	3.0	2.8	3.0	2.8	2.8	3.0	3.0	2.8
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.9	2.8	2.9	2.8	3.0	3.3	3.1	3.2	3.0	3.1	3.2	3.3	3.3
		Min-w	2.5	2.5	2.5	2.6	2.8	2.6	2.5	3.0	2.5	2.5	2.9	2.7	2.5
	Hoa Binh	Mean	1.2	1.3	1.5	1.3	1.3	1.4	1.4	1.2	1.4	1.3	1.4	1.3	1.3
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.4	1.5	1.6	1.4	1.4	1.4	1.5	1.3	1.5	1.4	1.5	1.4	1.6
		Min-w	1.1	1.1	1.4	1.2	1.2	1.4	1.2	1.2	1.4	1.3	1.4	1.2	1.1
	Can Tho	Mean	4.8	5.1	4.0	4.3	5.9	5.4	4.9	6.0	4.2	4.1	5.2	5.3	4.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	6.5	6.1	6.1	5.2	7.0	5.9	6.4	6.5	5.1	5.8	6.0	7.2	7.2
		Min-w	3.8	4.3	2.0	4.0	4.8	4.5	3.5	5.2	3.0	2.1	4.0	3.6	2.0
	Ho Chi Minh	Mean	4.5	5.3	4.9	4.6	4.5	4.2	4.5	4.4	4.1	4.5	5.1	4.5	4.6
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	5.2	6.6	5.2	5.1	4.8	5.3	5.5	5.1	5.7	5.8	6.2	5.4	6.6
		Min-w	3.6	4.2	4.4	3.1	4.3	3.8	4.1	3.4	2.5	3.6	3.9	3.7	2.5
	Yen Bai	Mean	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.6	2.6	2.5
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.6	2.6	2.8	2.8
		Min-w	2.3	2.3	2.4	2.4	2.5	2.4	2.5	2.4	2.5	2.4	2.4	2.4	2.3

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

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.6.3 NH₃ - Measured by PS

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Bandung	Mean	21.4	21.3	***	***	***	***	18.3	20.7	30.4	18.2	20.5	14.5	20.7
		%	100	100	***	***	***	***	100	100	100	100	100	100	67
		Max-m	21.4	21.3	***	***	***	***	18.3	20.7	30.4	18.2	20.5	14.5	30.4
		Min-m	21.4	21.3	***	***	***	***	18.3	20.7	30.4	18.2	20.5	14.5	14.5

Terms and abbreviations are given in Table 4.2.

Table 4.7 NO - Measured by AT

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Mean	8.9	7.0	6.9	8.4	7.1	5.8	6.4	6.9	7.6	7.4	10.9	13.4	8.1
		%	87	97	100	100	84	100	94	100	100	97	97	100	96
		Max-d	11.3	15.2	9.6	14.2	8.5	10.1	10.1	8.7	11.5	19.8	16.4	25.8	25.8
		Min-d	6.1	5.2	4.9	6.0	4.9	3.8	3.5	4.9	4.6	3.5	7.1	8.2	3.5
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
		%	***	***	83	98	98	98	98	98	75	98	98	98	79
		Max-d	***	***	<0.1	<0.1	<0.1	0.3	0.2	0.2	0.3	<0.1	<0.1	<0.1	0.3
		Min-d	***	***	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	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
		%	96	95	96	96	96	91	96	96	96	96	91	94	95
		Max-d	<0.1	0.1	0.1	0.3	0.2	0.1	0.7	0.3	0.6	0.2	0.1	0.1	0.7
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Sado-seki	Mean	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
		%	97	98	97	97	97	97	93	87	98	97	97	97	96
		Max-d	0.1	0.2	0.1	0.2	<0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	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
	Happo	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
		%	96	97	89	77	40	75	83	31	72	98	98	98	79
		Max-d	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	<0.1	0.1	0.3	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
	Ijira	Mean	0.4	<0.1	<0.1	0.6	0.3	0.2	0.6	0.5	0.3	0.3	0.3	0.3	0.3
		%	95	89	66	79	95	83	98	98	98	94	91	92	90
		Max-d	2.6	0.4	0.3	1.8	0.8	0.9	1.0	1.1	0.6	0.9	1.8	1.3	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
	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
		%	98	89	82	83	92	98	98	98	97	98	97	98	94
		Max-d	0.1	0.2	0.3	0.2	0.2	0.1	0.4	0.2	0.2	0.1	<0.1	0.2	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
	Yusuhara	Mean	***	***	***	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		%	***	***	***	97	98	94	99	68	88	98	97	98	70
		Max-d	***	***	***	0.1	0.1	0.2	<0.1	0.1	0.2	0.1	0.2	0.2	0.2
		Min-d	***	***	***	<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	73	96	98	98	92	75	97	97	98	96	98	93
		Max-d	<0.1	0.2	0.1	<0.1	0.2	0.3	0.1	0.1	0.3	0.1	<0.1	<0.1	0.3
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ogasawara	Mean	<0.1	***	***	***	***	***	***	***	***	***	***	***	<0.1
		%	68	***	***	***	***	***	***	***	***	***	***	***	6
		Max-d	0.1	***	***	***	***	***	***	***	***	***	***	***	0.1
		Min-d	<0.1	***	***	***	***	***	***	***	***	***	***	***	<0.1
	Niigata-maki	Mean	0.1	0.1	0.2	0.1	0.1	<0.1	<0.1	0.1	0.2	0.2	0.2	0.2	0.1
		%	96	88	96	96	97	96	96	96	96	96	97	96	95
		Max-d	0.6	0.5	0.5	0.4	0.4	0.2	0.3	0.2	0.3	0.4	0.5	0.5	0.6
		Min-d	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	Mean	47.8	18.5	6.4	4.2	1.9	2.0	2.4	4.6	14.4	31.0	22.0	34.5	15.4
		%	82	100	100	100	99	100	97	99	92	100	100	100	97
		Max-d	89.5	56.4	22.5	16.7	5.2	5.3	7.4	9.2	29.3	94.8	61.5	86.8	94.8
		Min-d	12.7	1.4	0.4	0.1	0.3	0.3	0.4	0.6	2.5	2.0	0.8	1.8	0.1
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.7 NO - Measured by AT (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	4.1	2.5	1.6	1.3	1.3	3.0	4.2	4.9	4.8	3.6	3.8	5.4	3.4
		%	95	95	95	95	94	95	96	95	96	95	96	96	95
		Max-d	16.0	7.0	12.6	2.5	6.5	14.1	11.0	15.4	12.0	16.5	13.3	20.1	20.1
		Min-d	1.2	1.0	0.6	0.4	0.2	0.5	0.7	1.2	0.8	0.4	0.5	0.3	0.2
	Samutprakarn	Mean	4.0	1.8	2.2	***	***	***	***	***	***	***	***	***	2.7
		%	95	96	94	***	***	***	***	***	***	***	***	***	24
		Max-d	19.2	8.1	15.0	***	***	***	***	***	***	***	***	***	19.2
		Min-d	<0.1	<0.1	0.1	***	***	***	***	***	***	***	***	***	<0.1
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	0.6	0.2	<0.1	0.3	***	***	***	***	***	***	0.3
		%	***	***	81	96	96	54	***	***	***	***	***	***	27
		Max-d	***	***	3.4	0.5	0.3	1.0	***	***	***	***	***	***	3.4
		Min-d	***	***	<0.1	<0.1	<0.1	<0.1	***	***	***	***	***	***	<0.1
	Chang Phueak	Mean	3.3	1.4	1.0	1.1	1.1	1.0	0.8	1.0	1.5	1.0	1.6	2.2	1.4
		%	94	94	94	87	94	93	95	94	91	95	96	95	94
		Max-d	6.7	3.1	3.0	3.0	6.6	2.0	2.2	2.4	3.6	3.4	4.4	6.1	6.7
		Min-d	1.1	0.1	<0.1	<0.1	<0.1	0.3	0.2	0.2	0.3	<0.1	0.4	0.5	<0.1
	Si Phum	Mean	13.3	10.8	7.8	***	***	***	***	***	***	***	***	***	10.8
		%	94	95	76	***	***	***	***	***	***	***	***	***	22
		Max-d	24.6	17.6	15.7	***	***	***	***	***	***	***	***	***	24.6
		Min-d	6.2	5.4	2.8	***	***	***	***	***	***	***	***	***	2.8
	Nai Mueang	Mean	12.2	9.9	5.4	2.8	4.2	7.1	7.9	10.8	11.6	11.7	6.8	10.3	8.4
		%	95	95	96	95	96	95	96	84	95	95	95	94	94
		Max-d	26.9	23.7	12.0	6.0	8.1	12.1	16.0	25.0	21.9	19.4	20.4	27.7	27.7
		Min-d	1.8	3.8	1.4	1.0	0.7	3.1	2.9	3.6	2.3	2.5	2.3	1.3	0.7

Terms and abbreviations are given in Table 4.2.

Table 4.8.1 NO₂ - Measured by AT

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Hongwen	Mean	10.8	6.0	11.6	10.2	7.2	4.3	7.5	8.2	8.5	7.1	10.4	12.9	8.7
		%	100	100	100	100	100	100	100	100	100	100	100	97	99
		Max-d	26.1	17.3	30.9	26.7	11.5	10.5	12.6	16.2	16.7	10.5	20.4	24.6	30.9
		Min-d	2.6	1.0	3.7	5.8	2.1	1.6	4.7	4.2	5.2	4.7	6.3	7.3	1.0
	Haibin-Park	Mean	12.1	8.0	11.2	12.8	6.9	4.2	4.2	8.7	11.1	11.8	17.0	25.2	11.2
		%	100	100	100	100	100	100	94	100	97	100	100	100	99
		Max-d	22.5	16.7	26.1	20.9	16.7	9.4	9.4	17.3	22.5	16.7	26.1	49.2	49.2
		Min-d	1.6	2.1	5.2	5.2	3.7	2.1	2.6	3.1	6.8	6.8	9.9	11.5	1.6
	Wuzhishan	Mean	1.2	0.8	0.8	1.1	0.7	0.4	0.4	0.3	0.3	1.0	1.6	2.4	0.9
		%	100	100	100	100	100	100	100	100	73	35	100	100	92
		Max-d	2.0	1.4	1.6	2.5	1.2	0.7	0.7	1.3	1.2	2.9	4.4	4.1	4.4
		Min-d	0.6	0.2	0.4	0.4	0.3	0.2	0.1	0.1	<0.1	<0.1	0.1	0.6	<0.1
	Lijiang	Mean	0.3	0.4	0.2	0.4	0.8	2.4	1.3	1.6	1.9	1.9	1.6	1.2	1.2
		%	100	100	100	87	97	93	97	77	100	97	100	84	94
		Max-d	0.8	0.9	0.3	1.8	2.2	4.8	1.9	3.0	3.1	3.1	2.6	2.4	4.8
		Min-d	<0.1	0.1	<0.1	<0.1	<0.1	0.9	0.8	0.6	1.2	0.8	0.5	0.4	<0.1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	Mean	40.7	34.0	20.0	16.8	13.6	14.6	14.3	15.3	17.9	23.3	23.3	32.2	21.9
		%	82	100	100	100	99	100	97	99	92	100	100	100	97
		Max-d	45.1	48.0	30.6	25.5	19.6	19.5	24.3	21.6	24.2	32.4	34.9	43.6	48.0
		Min-d	33.7	10.5	8.6	7.3	7.0	9.9	8.8	7.4	10.9	11.6	10.2	10.9	7.0
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Kanghwa	Mean	5.6	6.9	6.2	4.3	3.3	2.1	2.1	2.9	2.7	3.9	6.4	8.5	4.6
		%	97	94	94	94	97	96	97	95	91	95	98	97	96
		Max-d	14.7	22.4	15.2	8.7	7.6	6.7	6.8	7.4	11.5	17.4	19.7	25.4	25.4
		Min-d	2.0	0.9	2.3	1.0	0.6	<0.1	0.9	1.1	1.1	1.8	1.6	2.5	<0.1
	Cheju (Kosan)	Mean	4.8	4.7	4.1	4.1	4.4	3.7	3.9	2.4	4.7	5.6	5.3	4.3	4.3
		%	100	100	100	100	99	99	97	94	57	100	96	99	95
		Max-d	12.2	7.7	6.2	5.9	6.7	6.1	8.2	6.0	7.1	9.4	10.3	8.2	12.2
		Min-d	2.1	2.0	2.6	2.5	2.8	2.1	1.5	1.1	2.9	2.4	1.8	1.7	1.1
	Imsil	Mean	6.0	4.1	3.5	2.8	1.6	1.4	3.3	2.7	2.3	4.9	6.8	7.6	4.0
		%	73	96	97	95	96	84	75	97	65	97	98	97	89
		Max-d	12.8	8.3	6.3	5.0	2.9	3.1	4.3	3.8	4.0	12.3	10.1	12.9	12.9
		Min-d	1.6	0.4	1.3	0.1	0.6	0.4	2.3	2.0	0.1	2.2	3.7	4.5	0.1
Thailand	Bangkok	Mean	22.5	18.2	10.0	9.3	8.3	10.2	12.3	11.8	13.7	18.6	21.1	24.4	15.1
		%	95	95	95	95	94	95	96	95	96	95	96	96	95
		Max-d	46.3	29.5	26.2	21.6	17.8	15.9	20.7	18.5	24.4	26.3	31.1	40.3	46.3
		Min-d	8.0	7.6	6.2	3.4	3.4	4.5	6.2	7.0	6.8	11.0	12.2	8.4	3.4
	Samutprakarn	Mean	21.6	17.4	7.3	***	***	***	***	***	***	***	***	***	15.4
		%	95	96	94	***	***	***	***	***	***	***	***	***	24
		Max-d	54.9	32.0	32.7	***	***	***	***	***	***	***	***	***	54.9
		Min-d	4.7	5.8	3.2	***	***	***	***	***	***	***	***	***	3.2
	Chang Phueak	Mean	15.2	15.8	17.0	9.3	5.1	4.9	4.9	4.5	3.8	2.7	7.0	9.3	8.3
		%	94	94	94	87	94	93	95	94	91	95	96	95	94
		Max-d	20.8	22.9	26.9	14.2	7.6	8.5	8.1	8.0	7.5	6.3	11.8	15.3	26.9
		Min-d	9.6	10.0	12.2	3.7	1.4	2.3	3.1	1.7	0.9	0.5	2.6	3.9	0.5
	Si Phum	Mean	25.0	25.9	21.8	***	***	***	***	***	***	***	***	***	24.4
		%	94	95	76	***	***	***	***	***	***	***	***	***	22
		Max-d	34.4	34.0	37.7	***	***	***	***	***	***	***	***	***	37.7
		Min-d	15.9	18.2	12.1	***	***	***	***	***	***	***	***	***	12.1
	Nai Mueang	Mean	25.4	22.7	19.7	12.3	15.5	12.4	12.7	11.1	15.1	16.9	17.2	20.4	16.8
		%	95	95	96	95	96	95	96	84	95	95	95	94	94
		Max-d	42.2	40.2	34.9	18.1	23.9	16.2	17.7	20.7	23.0	24.0	28.1	32.7	42.2
		Min-d	12.4	9.5	9.5	6.0	6.6	5.7	7.9	1.8	3.7	10.2	10.3	7.1	1.8

Table 4.8.2 NO₂ - Measured by PS

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Jakarta	Mean	16.2	16.4	17.3	13.5	12.0	16.5	17.5	17.3	15.9	18.3	21.7	9.6	16.0
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	16.2	16.4	17.3	13.5	12.0	16.5	17.5	17.3	15.9	18.3	21.7	9.6	21.7
		Min-m	16.2	16.4	17.3	13.5	12.0	16.5	17.5	17.3	15.9	18.3	21.7	9.6	9.6
	Kototabang	Mean	2.2	1.2	1.2	0.8	0.5	0.9	0.9	0.9	0.7	0.7	0.7	0.5	0.9
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-m	2.2	1.2	1.2	0.8	0.5	0.9	0.9	0.9	0.7	0.7	0.7	0.5	2.2
		Min-m	2.2	1.2	1.2	0.8	0.5	0.9	0.9	0.9	0.7	0.7	0.7	0.5	0.5
	Bandung	Mean	30.0	33.4	***	***	***	***	32.6	28.2	32.0	32.3	38.9	22.6	31.2
		%	100	100	***	***	***	***	100	100	100	100	100	100	67
		Max-m	30.0	33.4	***	***	***	***	32.6	28.2	32.0	32.3	38.9	22.6	38.9
		Min-m	30.0	33.4	***	***	***	***	32.6	28.2	32.0	32.3	38.9	22.6	22.6

Terms and abbreviations are given in Table 4.2.

Table 4.9 NOx - Measured by AT

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan (NOx*)	Mean	20.4	15.0	13.3	16.8	13.7	10.1	11.2	12.6	14.4	14.4	23.3	27.3	16.0
		%	87	97	100	100	84	100	94	100	100	97	97	100	96
		Max-d	25.7	25.7	18.4	28.9	20.0	16.8	20.8	17.6	25.7	44.9	34.5	45.7	45.7
		Min-d	14.4	8.8	8.0	9.6	8.0	5.6	5.6	8.0	7.2	5.6	13.6	17.6	5.6
Japan	Rishiri (NOx*)	Mean	***	***	0.6	0.5	0.4	0.5	0.4	0.3	0.4	0.5	0.6	0.7	0.5
		%	***	***	83	98	98	98	98	98	75	98	98	98	79
		Max-d	***	***	1.1	1.0	0.9	1.5	1.1	0.7	0.7	1.0	1.6	3.1	3.1
		Min-d	***	***	0.1	0.2	<0.1	0.1	<0.1	<0.1	0.1	0.2	<0.1	0.2	<0.1
	Ochiishi (NOx*)	Mean	0.7	0.7	0.9	0.9	1.0	1.0	1.1	1.1	1.3	0.9	0.8	0.8	0.9
		%	96	95	96	96	96	91	96	96	96	96	91	94	95
		Max-d	1.3	1.6	2.0	1.9	2.3	2.2	3.0	2.4	4.1	2.5	1.2	1.7	4.1
		Min-d	0.3	0.2	0.2	0.3	0.2	0.4	0.5	0.5	0.2	0.4	0.4	0.3	0.2
	Sado-seki (NOx*)	Mean	0.6	0.8	0.8	0.9	0.7	0.5	0.4	0.5	0.5	0.7	0.7	0.7	0.7
		%	97	98	97	97	97	97	93	87	98	97	97	97	96
		Max-d	1.0	1.5	2.0	2.1	1.3	1.2	1.0	1.3	1.0	1.4	1.7	1.8	2.1
		Min-d	0.3	0.3	0.3	0.4	0.2	<0.1	0.2	0.1	<0.1	0.3	0.2	0.2	<0.1
	Happo (NOx*)	Mean	0.6	0.6	0.7	0.8	0.6	0.6	0.3	0.4	0.4	0.4	0.5	0.7	0.6
		%	96	97	89	77	40	75	83	31	72	98	98	98	79
		Max-d	1.2	1.3	1.8	2.1	1.2	1.3	0.7	1.3	0.7	0.9	0.9	1.4	2.1
		Min-d	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.1	<0.1	0.1	0.2	0.4	<0.1
	Ijira (NOx*)	Mean	1.5	0.8	1.2	1.8	1.7	0.5	1.0	1.0	0.5	0.7	0.5	0.5	1.0
		%	97	92	74	84	97	82	97	97	98	93	85	89	90
		Max-d	5.2	2.3	3.2	3.6	3.4	3.8	1.6	2.0	1.1	1.8	3.2	2.5	5.2
		Min-d	<0.1	0.1	0.2	0.5	0.3	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1
	Okii (NOx*)	Mean	0.9	0.9	0.8	1.0	0.7	0.6	0.5	0.6	0.5	0.6	0.7	0.6	0.7
		%	98	89	82	83	92	98	98	97	98	97	98	98	94
		Max-d	2.1	2.1	1.8	1.9	1.5	1.3	1.2	1.4	1.2	1.4	1.7	1.5	2.1
		Min-d	<0.1	0.4	0.2	0.3	<0.1	0.2	<0.1	0.3	<0.1	0.2	<0.1	<0.1	<0.1
	Yusuhara (NOx*)	Mean	***	***	***	1.6	0.9	1.0	0.4	0.6	0.7	0.9	1.1	1.7	1.0
		%	***	***	***	97	98	94	99	68	88	98	97	98	70
		Max-d	***	***	***	4.7	1.8	4.3	1.6	1.6	1.4	2.3	2.1	3.4	4.7
		Min-d	***	***	***	0.4	0.3	0.2	<0.1	<0.1	0.2	0.3	0.3	0.8	<0.1
	Hedo (NOx*)	Mean	1.0	0.8	0.7	0.7	0.4	0.5	0.4	0.3	0.5	0.5	0.4	0.5	0.5
		%	98	74	96	98	98	92	75	97	97	98	96	98	93
		Max-d	2.3	1.2	1.3	1.6	0.9	1.0	1.2	0.4	1.1	0.8	0.8	1.0	2.3
		Min-d	0.4	0.4	0.2	0.2	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1
	Ogasawara (NOx*)	Mean	0.7	***	***	***	***	***	***	***	***	***	***	***	0.7
		%	68	***	***	***	***	***	***	***	***	***	***	***	6
		Max-d	1.9	***	***	***	***	***	***	***	***	***	***	***	1.9
		Min-d	<0.1	***	***	***	***	***	***	***	***	***	***	***	<0.1
	Niigata-maki (NOx*)	Mean	2.3	1.9	2.0	1.6	1.7	1.6	1.4	1.4	1.7	1.9	2.2	1.9	1.8
		%	96	88	96	96	97	96	96	96	96	96	97	96	95
		Max-d	9.6	4.1	5.6	3.8	3.7	3.0	3.0	2.5	2.9	4.4	4.4	5.3	9.6
		Min-d	0.6	0.4	0.8	0.8	0.9	0.6	0.3	0.5	0.6	1.0	0.6	0.4	0.3
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	Mean	88.4	52.5	26.4	21.0	15.5	16.5	16.7	19.9	32.3	54.4	45.2	66.7	37.3
		%	82	100	100	100	99	100	97	99	92	100	100	100	97
		Max-d	132.1	104.4	47.7	42.2	22.6	24.7	31.7	29.0	52.1	125.4	94.3	130.3	132.1
		Min-d	50.4	12.4	9.0	7.4	7.9	10.8	9.8	9.2	13.9	16.4	11.2	12.7	7.4
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Table 4.9 NOx - Measured by AT (continued)

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Thailand	Bangkok	Mean	26.7	20.5	11.7	10.5	9.6	13.3	16.6	16.8	18.5	22.2	24.9	29.9	18.5
		%	95	95	95	95	94	95	96	95	96	95	96	96	95
		Max-d	53.7	35.0	38.6	22.3	20.8	28.5	28.7	30.7	36.3	39.8	40.1	55.8	55.8
		Min-d	9.2	8.9	6.7	4.2	3.7	5.0	7.0	8.3	7.5	14.2	12.9	8.9	3.7
	Samutprakarn	Mean	25.6	19.2	9.5	***	***	***	***	***	***	***	***	***	18.1
		%	95	96	94	***	***	***	***	***	***	***	***	***	24
		Max-d	74.2	33.6	47.5	***	***	***	***	***	***	***	***	***	74.2
		Min-d	5.0	7.0	4.2	***	***	***	***	***	***	***	***	***	4.2
	Khanchanaburi(NOx*) (Vajiralongkorn Dam)	Mean	***	***	6.5	3.9	0.6	0.3	***	***	***	***	***	***	3.0
		%	***	***	81	96	96	54	***	***	***	***	***	***	27
		Max-d	***	***	11.0	7.8	1.4	1.1	***	***	***	***	***	***	11.0
		Min-d	***	***	3.0	1.1	<0.1	<0.1	***	***	***	***	***	***	<0.1
	Chang Phueak	Mean	18.3	16.9	16.8	10.3	6.2	5.8	5.6	5.4	5.3	3.8	8.7	11.4	9.5
		%	94	94	94	87	94	93	95	94	91	95	96	95	94
		Max-d	25.0	24.2	27.5	14.6	13.5	10.2	8.7	8.4	8.7	8.6	15.2	17.6	27.5
		Min-d	11.6	9.9	11.0	5.8	3.2	2.0	3.1	2.0	1.3	1.0	2.9	5.3	1.0
	Si Phum	Mean	38.3	36.6	29.6	***	***	***	***	***	***	***	***	***	35.2
		%	94	95	76	***	***	***	***	***	***	***	***	***	22
		Max-d	53.4	51.5	49.4	***	***	***	***	***	***	***	***	***	53.4
		Min-d	25.0	26.4	16.1	***	***	***	***	***	***	***	***	***	16.1
	Nai Mueang	Mean	37.5	32.4	25.0	14.8	19.4	19.4	20.6	21.2	26.7	28.6	24.0	30.6	25.0
		%	95	95	96	95	96	95	96	84	95	95	95	94	94
		Max-d	69.0	59.4	47.0	23.8	30.8	27.7	33.5	37.2	43.5	43.2	44.8	54.2	69.0
		Min-d	21.5	15.3	10.4	8.3	8.5	8.9	12.4	7.1	5.9	17.0	13.0	8.3	5.9

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

Terms and abbreviations are given in Table 4.2.

Table 4.10.1 O₃ - Measured by AT

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	29	33	22	16	11	9	9	8	13	20	26	29	19
		%	100	100	100	100	100	100	100	100	100	100	97	100	100
		Max-d	42	41	34	25	21	18	15	15	22	46	56	45	56
		Min-d	21	23	16	10	4	4	4	5	7	8	14	14	4
Indonesia	Bandung	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Japan	Rishiri	Mean	37	38	45	41	40	30	23	22	28	33	34	36	34
		%	99	100	91	99	99	99	100	99	76	99	99	99	97
		Max-d	41	50	52	52	63	55	39	28	38	44	49	45	63
		Min-d	29	32	40	33	29	12	15	14	12	22	26	29	12
	Ochiishi	Mean	33	36	41	43	42	38	28	29	32	37	33	32	35
		%	100	100	100	100	100	96	100	100	100	100	95	100	99
		Max-d	37	42	49	51	60	53	38	36	42	45	48	42	60
		Min-d	27	33	37	34	32	27	21	19	18	29	26	27	18
	Sado-seki	Mean	39	42	45	48	48	43	30	32	35	39	38	37	40
		%	99	98	99	99	99	99	95	88	99	99	99	99	98
		Max-d	45	49	62	69	60	66	45	46	54	46	48	45	69
		Min-d	36	36	39	40	32	29	21	19	18	31	30	31	18
	Happo	Mean	44	47	51	58	56	51	34	34	35	43	43	43	45
		%	99	98	99	99	99	99	99	99	90	99	99	99	98
		Max-d	52	55	69	78	80	73	47	55	47	50	52	51	80
		Min-d	41	38	44	44	30	33	20	17	21	31	35	34	17
	Ijira	Mean	17	***	***	***	***	***	***	***	***	***	***	***	17
		%	6	***	***	***	***	***	***	***	***	***	***	***	1
		Max-d	23	***	***	***	***	***	***	***	***	***	***	***	23
		Min-d	11	***	***	***	***	***	***	***	***	***	***	***	11
	Oki	Mean	42	45	48	56	51	46	33	29	43	42	40	41	43
		%	100	93	99	100	100	100	100	100	100	99	100	100	99
		Max-d	48	51	65	71	71	65	52	52	80	55	52	53	80
		Min-d	34	37	38	43	35	30	20	18	27	30	31	31	18
	Yusuhara	Mean	39	43	47	57	47	39	24	20	31	38	37	39	39
		%	99	99	96	98	99	96	99	69	87	99	99	99	95
		Max-d	48	51	63	77	65	59	47	39	46	57	49	46	77
		Min-d	30	35	33	45	31	14	11	11	13	26	28	34	11
	Hedo	Mean	39	40	39	48	29	11	7	10	22	38	37	38	30
		%	99	75	95	99	99	99	99	99	98	99	99	99	97
		Max-d	49	46	50	61	55	27	16	22	40	50	46	42	61
		Min-d	27	26	26	23	7	5	4	4	3	16	9	33	3
	Ogasawara	Mean	39	39	41	46	***	***	***	***	***	***	***	***	41
		%	99	93	98	73	***	***	***	***	***	***	***	***	30
		Max-d	44	45	51	70	***	***	***	***	***	***	***	***	70
		Min-d	30	26	30	23	***	***	***	***	***	***	***	***	23
	Niigata-maki	Mean	36	38	40	45	43	39	26	30	29	31	31	32	35
		%	99	91	99	99	99	99	99	96	99	99	99	99	98
		Max-d	45	47	49	62	58	57	43	43	43	42	43	39	62
		Min-d	24	33	26	35	23	24	13	16	15	19	23	25	13
	Tsushima	Mean	40	46	49	57	51	47	31	23	45	49	40	40	43
		%	96	99	96	99	99	99	99	99	98	99	99	98	98
		Max-d	48	56	62	75	72	71	49	56	72	74	53	53	75
		Min-d	34	37	37	47	37	25	12	11	17	38	31	34	11
Mongolia	Ulaanbaatar	Mean	5	11	16	20	19	19	15	10	8	6	6	3	12
		%	82	100	100	100	88	68	97	47	88	100	100	100	89
		Max-d	17	28	26	31	26	27	32	25	24	20	19	17	32
		Min-d	2	3	8	9	11	13	8	6	3	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		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	33	37	46	51	50	52	43	31	44	44	36	33	42
		%	98	96	98	97	98	97	97	95	91	95	83	81	94
		Max-d	41	48	56	68	74	84	71	55	62	66	52	43	84
		Min-d	18	21	33	39	37	35	25	15	27	31	27	19	15
	Cheju (Kosan)	Mean	39	43	47	56	48	41	31	21	45	49	40	39	42
		%	100	100	100	100	100	99	97	98	59	100	93	100	95
		Max-d	50	54	61	78	66	56	45	51	62	65	54	51	78
		Min-d	32	26	39	47	35	22	10	10	22	38	32	32	10
	Imsil	Mean	26	22	23	46	40	36	27	18	25	29	26	24	29
		%	61	97	86	96	97	96	86	97	72	98	98	97	90
		Max-d	38	40	50	71	55	63	59	38	43	36	33	32	71
		Min-d	12	10	10	35	25	13	8	9	15	15	14	15	8
Thailand	Bangkok	Mean	36	35	30	35	29	23	15	14	19	25	31	32	29
		%	95	95	95	95	93	60	10	95	78	23	96	96	77
		Max-d	52	57	52	60	46	43	17	28	34	57	51	49	60
		Min-d	22	20	19	24	15	8	9	6	8	12	11	14	6
	Samutprakarn	Mean	30	33	19	***	***	***	***	***	***	***	***	30	29
		%	95	96	55	***	***	***	***	***	***	***	***	69	26
		Max-d	40	48	28	***	***	***	***	***	***	***	***	42	48
		Min-d	21	15	11	***	***	***	***	***	***	***	***	14	11
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	23	***	***	***	***	***	***	***	***	***	23
		%	***	***	61	***	***	***	***	***	***	***	***	***	5
		Max-d	***	***	36	***	***	***	***	***	***	***	***	***	36
		Min-d	***	***	3	***	***	***	***	***	***	***	***	***	3
	Chang Phueak	Mean	30	40	40	45	36	20	18	13	15	17	21	22	26
		%	94	94	91	95	92	94	95	95	87	95	95	95	93
		Max-d	37	53	54	64	50	35	34	23	30	26	33	38	64
		Min-d	22	27	31	27	23	10	9	5	2	9	14	15	2
	Nai Mueang	Mean	26	31	38	44	30	22	13	15	16	17	29	29	26
		%	96	96	96	95	96	96	96	96	95	96	96	91	95
		Max-d	43	39	53	60	44	32	24	28	27	32	44	46	60
		Min-d	17	24	22	30	12	11	4	6	8	10	14	14	4

Table 4.10.2 O₃ - Measured by PS

Unit : ppb

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Indonesia	Bandung	Mean	17	10	***	***	***	***	12	1	12	9	8	5	9
		%	100	100	***	***	***	***	100	100	100	100	100	100	67
		Max-m	17	10	***	***	***	***	12	1	12	9	8	5	17
		Min-m	17	10	***	***	***	***	12	1	12	9	8	5	1
Russia	Mondy	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min	***	***	***	***	***	***	***	***	***	***	***	***	***
	Listvyanka	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Irkutsk	Mean	18	18	***	24	18	41	8	***	13	***	***	***	20
		%	80	100	***	100	100	100	100	***	97	***	***	***	63
		Max-2w	18	18	***	24	18	41	8	***	13	***	***	***	41
		Min-2w	18	18	***	24	18	41	8	***	13	***	***	***	8

Terms and abbreviations are given in Table 4.2.

Table 4.11 PM₁₀ - Measured by ATUnit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
China	Jinyunshan	Mean	41	45	44	36	36	26	23	29	24	23	39	56	35
		%	87	100	100	100	84	100	90	100	100	94	97	100	96
		Max-d	81	72	96	73	58	54	42	43	47	88	72	121	121
		Min-d	13	17	13	10	14	11	9	19	7	7	10	16	7
	Hongwen	Mean	45	34	44	47	25	16	19	22	30	41	40	33	33
		%	97	100	100	100	100	97	100	100	100	100	100	97	99
		Max-d	91	66	85	77	49	25	41	44	48	84	78	64	91
		Min-d	9	6	19	20	8	8	10	6	17	29	22	13	6
	Haibin-Park	Mean	35	29	31	34	21	13	12	16	20	45	51	66	31
		%	100	100	100	100	100	100	100	100	100	97	100	90	99
		Max-d	60	45	56	82	44	20	22	40	58	74	88	101	101
		Min-d	11	8	13	15	8	2	2	3	6	19	15	30	2
	Wuzhishan	Mean	12	13	13	12	12	8	7	6	6	16	15	13	11
		%	100	100	100	100	100	100	100	100	73	35	100	100	92
		Max-d	30	24	32	23	20	13	15	31	25	39	42	31	42
		Min-d	2	2	1	1	6	2	2	<1	<1	2	3	1	<1
	Lijiang	Mean	6	8	11	16	6	4	6	5	5	6	8	7	7
		%	100	100	100	93	100	100	97	77	100	97	100	87	96
		Max-d	13	16	21	49	12	8	18	15	10	16	20	16	49
		Min-d	1	3	3	3	<1	1	1	<1	1	<1	1	2	<1
Japan	Rishiri	Mean	13	17	24	19	25	9	14	17	21	17	22	15	18
		%	100	100	99	100	80	25	98	96	95	100	100	100	91
		Max-d	28	92	66	49	67	14	33	33	95	40	72	53	95
		Min-d	6	6	5	6	7	6	6	5	7	4	2	3	2
	Ochiishi	Mean	12	11	16	15	14	9	7	11	14	17	15	11	13
		%	99	100	99	100	99	99	99	99	98	99	96	98	99
		Max-d	24	24	40	31	42	23	13	31	36	35	33	32	42
		Min-d	6	7	2	6	4	3	2	3	4	8	5	5	2
	Sado-seki	Mean	15	22	23	23	21	19	11	25	15	18	26	23	20
		%	100	100	100	100	100	100	99	100	95	99	100	100	99
		Max-d	32	52	55	44	70	54	39	71	34	40	62	51	71
		Min-d	6	9	6	8	7	7	2	6	3	3	6	5	2
	Happo	Mean	2	***	***	12	11	10	3	15	4	6	5	3	7
		%	25	***	***	77	33	98	81	100	98	96	99	90	66
		Max-d	5	***	***	26	25	38	11	48	11	13	15	6	48
		Min-d	<1	***	***	<1	3	<1	<1	4	<1	1	1	<1	<1
	Ijira	Mean	6	8	10	13	15	18	14	29	15	10	11	6	13
		%	100	100	99	100	100	100	100	100	96	100	100	100	99
		Max-d	13	21	25	26	38	38	35	74	32	24	26	14	74
		Min-d	<1	3	3	3	3	6	7	13	5	4	4	<1	<1
	Okai	Mean	28	31	35	34	29	23	20	41	31	26	29	28	29
		%	100	100	100	99	99	100	100	100	99	99	96	100	99
		Max-d	65	63	59	55	67	47	42	103	65	57	67	47	103
		Min-d	10	11	15	11	10	7	8	10	14	9	11	9	7
	Yusuhara	Mean	9	13	14	18	15	15	9	20	10	11	11	11	13
		%	100	100	96	99	100	100	100	84	99	100	100	76	96
		Max-d	32	35	44	43	43	41	24	65	30	24	29	24	65
		Min-d	<1	<1	<1	2	2	1	2	3	1	<1	2	4	<1
	Hedo	Mean	24	26	28	31	29	23	21	35	32	36	34	24	29
		%	100	100	99	100	100	100	99	100	99	94	100	71	97
		Max-d	39	56	47	55	81	42	49	72	93	62	51	41	93
		Min-d	13	12	12	16	13	13	11	13	9	15	15	10	9
	Ogasawara	Mean	17	17	22	24	21	17	24	24	15	18	20	14	19
		%	100	100	100	100	100	99	99	100	99	93	99	100	99
		Max-d	33	35	35	44	128	39	43	75	34	38	48	24	128
		Min-d	10	6	12	6	6	6	10	6	6	9	2	6	2
	Niigata-maki	Mean	***	***	***	25	23	22	15	27	17	18	22	17	21
		%	***	***	***	98	99	100	56	100	100	99	100	92	70
		Max-d	***	***	***	39	46	51	33	65	28	35	56	30	65
		Min-d	***	***	***	12	4	10	6	12	8	5	9	7	4
	Tsushima	Mean	17	19	19	22	22	16	9	30	17	20	20	17	19
		%	100	100	96	47	37	99	100	100	98	99	96	99	89
		Max-d	44	55	37	40	33	45	25	92	48	40	54	34	92
		Min-d	2	5	<1	6	10	2	<1	7	4	13	11	7	<1
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

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

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mongolia	Ulaanbaatar	Mean	117	106	93	108	96	77	46	42	66	109	97	128	92
		%	82	100	100	100	99	100	65	90	100	100	100	99	94
		Max-d	204	188	240	199	158	142	167	84	139	225	173	206	240
		Min-d	43	18	36	36	33	25	18	18	18	25	32	23	18
Philippines	Metro Manila	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Republic of Korea	Kanghwa	Mean	46	42	48	46	35	33	23	20	24	39	43	36	36
		%	98	99	98	97	98	99	98	95	91	98	97	98	97
		Max-d	77	86	87	86	119	62	70	38	45	83	98	75	119
		Min-d	12	13	26	18	11	13	6	8	10	20	18	18	6
	Cheju (Kosan)	Mean	32	36	34	38	31	21	18	30	25	34	30	26	30
		%	98	97	98	95	81	97	95	86	74	97	98	97	93
		Max-d	71	94	68	66	64	44	31	65	47	65	78	50	94
		Min-d	10	13	15	24	10	7	9	16	9	22	16	15	7
	Imsil	Mean	40	37	41	43	37	38	19	22	22	35	36	35	34
		%	74	97	97	92	97	96	90	97	72	94	97	97	92
		Max-d	74	78	67	77	96	71	43	43	39	73	70	65	96
		Min-d	8	14	24	24	15	10	8	9	14	21	17	18	8
Thailand	Bangkok	Mean	54	55	34	32	26	20	21	18	17	24	35	44	32
		%	100	100	100	100	100	99	97	100	100	100	100	99	100
		Max-d	101	80	53	49	42	26	30	30	35	56	58	69	101
		Min-d	26	23	22	21	17	16	10	10	10	12	21	25	10
	Samutprakarn	Mean	62	62	31	29	23	18	19	23	20	32	42	51	34
		%	98	100	99	100	100	99	100	99	100	100	100	100	99
		Max-d	130	96	51	57	44	23	29	38	36	77	72	84	130
		Min-d	24	21	21	18	12	11	10	11	11	13	28	27	10
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	118	125	***	***	***	***	***	***	***	***	121
		%	***	***	84	80	***	***	***	***	***	***	***	***	14
		Max-d	***	***	211	234	***	***	***	***	***	***	***	***	234
		Min-d	***	***	55	29	***	***	***	***	***	***	***	***	29
	Chang Phueak	Mean	64	86	124	92	45	26	25	28	28	25	38	47	52
		%	100	99	99	100	99	98	99	99	96	99	100	100	99
		Max-d	110	129	209	173	87	35	32	37	42	38	48	55	209
		Min-d	33	60	64	23	26	20	20	18	16	16	26	31	16
	Si Phum	Mean	70	88	110	80	34	17	16	19	21	20	30	45	46
		%	99	100	99	99	100	97	98	99	99	99	88	99	98
		Max-d	112	150	209	168	66	30	24	29	33	35	40	75	209
		Min-d	34	61	65	18	16	11	11	10	11	9	18	27	9
	Nai Mueang	Mean	84	87	70	51	40	28	29	32	33	38	52	56	50
		%	100	100	100	100	100	100	100	100	99	94	100	98	99
		Max-d	134	131	97	66	59	34	36	56	45	81	82	85	134
		Min-d	29	48	41	31	22	18	23	18	13	15	28	23	13

Terms and abbreviations are given in Table 4.2.

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

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	34	34	29	22	20	13	13	12	11	14	18	18	20
		%	100	100	100	97	69	88	99	99	99	99	99	99	96
		Max-d	65	60	37	35	28	21	22	17	18	27	28	38	65
		Min-d	18	22	23	14	11	9	7	6	4	7	10	9	4
Indonesia	Jakarta	Mean	28	29	34	43	50	65	***	***	***	***	***	***	34
		%	99	92	81	64	19	3	***	***	***	***	***	***	30
		Max-d	54	62	58	200	63	65	***	***	***	***	***	***	200
		Min-d	11	8	4	15	5	65	***	***	***	***	***	***	4
Japan	Rishiri	Mean	6	7	9	7	9	4	6	6	6	4	7	7	7
		%	100	100	99	100	80	25	98	96	95	100	100	100	91
		Max-d	14	26	19	18	29	6	11	12	21	10	21	30	30
		Min-d	3	2	3	3	3	2	2	1	3	<1	<1	<1	<1
	Ochiishi	Mean	5	5	7	6	6	4	3	5	4	6	5	5	5
		%	99	100	99	100	99	99	99	98	99	99	98	99	99
		Max-d	12	11	15	11	25	10	7	18	11	10	11	17	25
		Min-d	3	2	<1	3	2	1	<1	<1	<1	2	2	2	<1
	Sado-seki	Mean	6	9	9	10	10	9	3	12	5	5	6	6	7
		%	100	100	100	100	100	100	99	100	95	99	100	100	99
		Max-d	14	25	18	20	25	21	9	47	14	13	16	14	47
		Min-d	2	3	3	4	3	2	<1	2	1	1	2	2	<1
	Happo	Mean	<1	***	***	7	7	6	2	11	3	4	3	2	5
		%	25	***	***	77	33	98	81	100	98	96	99	90	66
		Max-d	3	***	***	17	15	19	9	38	7	9	11	4	38
		Min-d	<1	***	***	<1	1	<1	<1	3	<1	<1	<1	<1	<1
	Ijira	Mean	4	5	6	8	8	8	4	10	4	5	6	4	6
		%	100	100	99	100	100	100	100	100	96	100	100	100	99
		Max-d	11	11	15	17	27	20	13	24	11	12	17	10	27
		Min-d	<1	1	1	1	1	2	1	3	<1	<1	2	<1	<1
	Oki	Mean	8	11	11	10	10	8	5	17	9	7	8	9	9
		%	100	100	100	99	99	100	100	100	99	99	96	100	99
		Max-d	25	24	20	18	21	17	11	54	30	15	20	17	54
		Min-d	3	3	3	3	3	2	2	5	3	4	3	2	2
	Yusuhara	Mean	7	9	9	11	10	9	6	13	7	7	7	8	9
		%	100	100	96	99	100	100	100	84	99	100	100	76	96
		Max-d	26	25	21	24	30	21	14	40	21	16	14	19	40
		Min-d	<1	1	<1	2	1	<1	1	2	<1	<1	1	2	<1
	Hedo	Mean	11	11	11	14	9	6	6	13	9	12	10	9	10
		%	100	100	99	100	100	100	99	100	99	94	100	71	97
		Max-d	23	21	19	23	20	8	18	31	22	26	16	15	31
		Min-d	5	6	5	8	4	3	2	3	2	3	3	5	2
	Ogasawara	Mean	7	6	8	10	6	5	8	10	4	4	5	4	6
		%	100	100	100	100	100	99	100	100	99	93	99	100	99
		Max-d	14	13	15	18	30	17	16	42	6	8	12	9	42
		Min-d	2	2	3	3	2	2	3	1	2	3	<1	2	<1
	Niigata-maki	Mean	***	***	***	7	8	8	4	11	5	5	7	4	7
		%	***	***	***	98	99	100	56	100	100	99	100	92	70
		Max-d	***	***	***	14	19	18	6	37	9	13	16	9	37
		Min-d	***	***	***	2	<1	3	<1	3	2	1	2	1	<1
	Tsushima	Mean	10	12	9	11	12	8	4	17	7	10	9	11	10
		%	100	100	96	47	37	99	100	100	98	99	96	99	89
		Max-d	29	39	19	19	20	27	14	50	24	23	17	24	50
		Min-d	1	3	<1	2	3	<1	<1	3	2	4	5	4	<1
Lao PDR	Vientiane	Mean	44	51	38	38	24	11	15	9	***	***	***	***	31
		%	100	100	100	100	100	100	100	3	***	***	***	***	58
		Max-d	72	88	100	100	53	26	26	9	***	***	***	***	100
		Min-d	14	20	5	14	7	6	5	9	***	***	***	***	5
Mongolia	Ulaanbaatar	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
Myanmar	Yangon	Mean	25	26	21	***	11	6	10	16	18	12	38	50	22
		%	94	99	61	***	37	94	90	90	92	98	100	99	79
		Max-d	40	41	33	***	21	20	19	74	64	22	64	64	74
		Min-d	13	15	13	***	4	2	1	1	7	5	14	29	1
	Mandalay	Mean	76	75	81	***	***	***	***	***	***	***	***	***	77
		%	40	43	20	***	***	***	***	***	***	***	***	***	9
		Max-d	102	146	109	***	***	***	***	***	***	***	***	***	146
		Min-d	28	20	66	***	***	***	***	***	***	***	***	***	20

Table 4.12 PM_{2.5} - Measured by AT(continued)

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila	Mean	15	11	10	10	***	11	10	11	13	12	12	14	12
		%	100	100	100	51	***	75	89	100	100	100	100	100	84
		Max-d	30	20	17	15	***	18	17	19	19	19	19	28	30
		Min-d	4	3	4	6	***	5	7	5	6	4	6	4	3
Republic of Korea	Kanghwa	Mean	30	25	23	19	17	15	12	11	10	16	22	25	19
		%	93	82	98	97	97	97	96	85	87	97	96	97	94
		Max-d	52	48	53	34	31	33	41	21	20	39	48	61	61
		Min-d	9	9	8	9	4	5	3	2	2	7	8	11	2
	Cheju (Kosan)	Mean	19	22	15	17	17	12	10	18	12	13	12	13	15
		%	94	90	96	93	88	93	94	86	73	82	98	97	90
		Max-d	46	65	32	30	44	22	21	43	23	30	24	30	65
		Min-d	5	8	8	9	8	3	3	6	4	7	4	5	3
	Imsil	Mean	23	19	14	14	12	15	6	10	12	16	20	26	16
		%	98	92	97	93	88	81	83	79	66	91	85	89	87
		Max-d	46	36	24	23	23	30	25	18	19	31	37	42	46
		Min-d	3	6	5	7	3	3	1	3	6	9	10	15	1
Thailand	Bangkok	Mean	36	38	20	19	14	10	11	9	8	14	21	28	19
		%	100	100	100	100	100	99	95	100	99	100	99	100	99
		Max-d	70	67	34	32	28	15	16	18	21	34	43	55	70
		Min-d	15	12	12	11	8	7	4	4	3	6	9	12	3
	Samutprakarn	Mean	40	38	18	18	12	9	10	10	10	16	23	28	19
		%	99	100	99	99	100	98	100	99	100	100	100	100	100
		Max-d	100	67	32	37	23	12	14	16	21	41	43	57	100
		Min-d	12	10	11	9	6	4	5	4	5	7	12	12	4
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	104	104	***	***	***	***	***	***	***	***	104
		%	***	***	84	80	***	***	***	***	***	***	***	***	14
		Max-d	***	***	195	203	***	***	***	***	***	***	***	***	203
		Min-d	***	***	48	17	***	***	***	***	***	***	***	***	17
	Chang Phueak	Mean	43	56	91	65	26	14	13	15	16	15	22	28	33
		%	100	99	92	100	99	98	99	99	95	99	100	100	98
		Max-d	86	99	174	141	46	19	21	21	26	23	29	38	174
		Min-d	23	32	42	14	14	11	11	11	9	10	16	17	9
	Si Phum	Mean	42	54	81	61	19	7	7	9	10	9	17	24	28
		%	98	99	97	98	99	95	95	99	97	99	88	99	97
		Max-d	80	86	174	143	39	15	15	16	21	18	23	32	174
		Min-d	16	33	40	8	6	4	4	4	4	4	10	12	4
	Nai Mueang	Mean	48	50	43	30	21	13	14	15	15	18	26	31	27
		%	100	100	100	99	100	100	100	100	99	99	100	98	99
		Max-d	81	82	60	44	36	18	17	24	20	38	47	51	82
		Min-d	15	24	23	18	11	9	11	8	7	8	13	14	7
Vietnam	Hoa Binh	Mean	42	55	40	31	25	16	16	14	18	22	32	47	30
		%	100	100	100	100	100	99	100	100	100	99	100	99	100
		Max-d	97	171	97	69	42	32	25	31	45	38	71	109	171
		Min-d	8	9	9	10	11	10	11	7	6	6	17	17	6

Terms and abbreviations are given in Table 4.2.

Table 4.13.1 Particulate matter component: SO₄²⁻ Measured by FP

Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	3.93	0.64	4.37	1.20	3.81	6.85	3.91	8.80	7.93	4.04	4.19	1.31	4.07
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	4.83	1.15	5.34	1.88	7.42	7.92	7.11	9.40	7.93	6.57	5.86	1.39	9.40
		Min-2w	3.03	0.13	3.40	0.53	0.17	5.77	0.71	8.20	7.93	1.86	2.52	1.22	0.13
	Serpong	Mean	3.98	3.17	4.29	5.74	4.22	7.48	8.47	7.59	4.83	4.35	5.14	1.05	4.99
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	5.28	3.25	4.93	6.09	5.66	8.53	8.69	9.80	7.25	6.88	6.54	1.39	9.80
		Min-2w	2.69	3.08	3.82	5.39	2.79	6.43	8.24	5.39	1.01	1.81	3.74	0.72	0.72
	Bandung	Mean	6.06	6.11	4.24	***	***	***	3.47	8.16	5.22	4.61	4.24	3.43	5.03
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	9.88	7.83	4.24	***	***	***	5.32	13.05	5.83	5.81	4.90	3.87	13.05
		Min-2w	1.08	5.10	4.24	***	***	***	0.36	5.89	4.49	3.90	3.49	2.99	0.36
Japan	Rishiri	Mean	2.99	3.68	4.97	1.69	2.45	1.53	1.82	1.55	1.83	1.63	1.72	1.67	2.13
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	3.49	4.55	4.97	1.75	3.34	1.72	1.97	1.65	2.00	1.69	2.21	1.78	4.97
		Min-2w	2.50	2.80	4.97	1.62	1.57	1.28	1.66	1.44	1.66	1.57	1.23	1.61	1.23
	Ochiishi	Mean	2.04	1.75	1.57	1.39	2.08	1.65	1.51	2.22	1.15	0.88	1.92	1.68	1.67
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.25	1.84	1.84	1.93	3.22	1.73	1.58	3.05	1.84	1.09	2.19	1.94	3.22
		Min-2w	1.83	1.65	1.30	0.85	1.19	1.57	1.44	1.39	0.47	0.66	1.64	1.42	0.47
	Sado-seki	Mean	1.15	1.95	2.33	2.38	3.26	1.99	1.27	2.93	1.90	1.91	1.66	2.44	2.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.53	2.93	2.53	2.79	4.14	3.38	1.33	2.93	1.99	1.95	2.42	2.53	4.14
		Min-2w	0.78	0.98	2.12	1.97	2.38	1.05	1.21	2.93	1.82	1.88	0.69	2.36	0.69
	Happo* ¹	Mean	0.52	1.16	1.11	1.22		2.56	0.89	4.90	0.78	1.61	1.25	0.34	1.54
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-2w	0.66	1.54	1.42	1.22		3.86	1.18	5.63	0.82	1.93	1.25	0.34	5.63
		Min-2w	0.37	0.78	0.79	1.22		1.26	0.61	4.17	0.75	1.29	1.25	0.34	0.34
	Ijira	Mean	1.94	1.56	1.63	1.72	1.37	1.91	1.34	4.24	1.39	1.02	0.84	1.01	1.64
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.52	1.87	1.86	1.88	1.71	3.42	2.17	6.69	1.69	1.28	1.69	1.30	6.69
		Min-2w	1.36	1.25	1.39	1.56	1.03	0.69	0.52	1.79	1.09	0.76	0.41	0.72	0.41
	Oki	Mean	3.51	2.99	4.06	3.05	3.44	2.56	4.34	5.94	3.50	2.42	2.59	3.83	3.47
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	4.03	2.99	4.22	3.27	3.93	3.84	6.88	6.74	4.80	2.64	2.94	4.61	6.88
		Min-2w	3.20	2.99	3.90	2.84	2.95	1.76	1.81	5.14	2.21	2.21	2.00	3.05	1.76
	Yusuhara	Mean	1.74	1.90	2.45	2.49	3.56	2.99	2.28	4.64	2.21	1.72	2.14	2.16	2.53
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.79	2.31	2.84	2.75	5.23	4.47	2.36	6.17	2.36	1.94	2.24	2.28	6.17
		Min-2w	1.69	1.49	2.06	2.24	1.89	2.19	2.20	3.10	2.05	1.51	1.95	2.03	1.49
	Hedo	Mean	4.75	4.66	4.21	5.10	3.62	1.63	2.98	5.57	3.14	5.10	2.81	3.47	3.79
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	5.03	4.86	4.27	5.46	4.54	2.22	4.54	6.88	3.94	5.70	3.90	3.85	6.88
		Min-2w	4.46	4.45	4.15	4.74	2.69	1.23	1.42	4.27	2.34	4.50	1.27	3.09	1.23
	Ogasawara	Mean	2.37	2.59	3.16	3.80	2.02	2.17	5.31	9.62	1.19	1.20	1.71	1.83	3.01
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	2.76	2.59	3.40	4.19	2.40	3.60	5.92	15.20	1.30	1.33	2.41	1.93	15.20
		Min-2w	1.97	2.59	2.93	3.41	1.65	1.27	4.69	4.04	1.09	1.07	1.32	1.73	1.07
	Tokyo	Mean	1.48	2.03	2.10	2.34	3.71	3.64	2.70	5.70	1.91	1.65	1.80	1.10	2.53
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.52	2.38	2.34	2.43	4.65	4.76	3.36	7.32	2.02	1.80	2.03	1.14	7.32
		Min-2w	1.44	1.67	1.86	2.24	2.78	2.87	2.03	4.09	1.80	1.49	1.50	1.06	1.06
	Niigata-maki	Mean				1.92	2.40	2.01	1.14	5.38	1.05	1.50	1.20	1.11	1.93
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				2.06	3.18	2.26	1.35	7.30	1.34	1.53	1.97	1.31	7.30
		Min-2w				1.77	1.62	1.56	0.93	3.47	0.76	1.47	0.13	0.92	0.13
	Tsushima	Mean				2.80	3.31	2.90	2.48	6.88	2.90	2.36	2.61	2.92	3.19
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				3.05	3.54	3.75	3.58	7.42	4.02	2.63	3.07	2.94	7.42
		Min-2w				2.55	3.09	2.43	1.37	6.34	1.78	2.09	2.10	2.90	1.37

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

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

 Unit : µg/m³

Country	Site		2020												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	2.38	2.44	3.49	***	3.00	2.54	2.80	3.45	2.47	2.67	2.19	1.99	2.65
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	4.45	2.97	4.41	***	4.38	2.85	3.32	4.68	2.69	3.26	3.19	2.82	4.68
		Min-w	1.13	2.04	2.31	***	2.24	1.97	2.12	2.30	2.16	2.22	1.44	1.23	1.13
	Tanah Rata	Mean	1.09	0.76	1.95	0.85	2.08	1.87	1.45	2.90	1.51	1.29	0.83	0.60	1.42
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	1.76	1.53	3.39	0.85	2.52	2.21	2.19	3.51	1.87	1.86	1.41	0.80	3.51
		Min-w	0.45	0.08	1.31	0.85	1.65	1.53	0.99	2.25	1.10	0.27	0.19	0.28	0.08
	Danum Valley	Mean	0.72	0.47	***	***	***	0.73	0.98	1.30	0.73	***	***	0.62	0.77
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	0.92	0.51	***	***	***	0.73	1.95	1.30	0.73	***	***	0.62	1.95
		Min-2w	0.52	0.42	***	***	***	0.73	<0.01	1.30	0.73	***	***	0.62	<0.01
Mongolia	Ulaanbaatar	Mean	2.53	1.52	0.89	0.51	0.16	0.18	2.01	0.23	0.16	0.22	0.19	2.67	0.95
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	7.53	3.59	1.82	0.68	0.38	0.43	9.19	0.59	0.31	0.35	0.64	6.43	9.19
		Min-w	0.14	0.21	0.25	0.17	0.06	0.02	0.09	0.08	0.06	0.14	<0.01	0.46	<0.01
	Terelj	Mean	0.17	0.07	0.23	0.09	0.05	0.07	0.14	0.07	0.10	0.07	0.14	0.10	0.11
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	0.28	0.09	0.64	0.16	0.08	0.08	0.22	0.11	0.13	0.12	0.15	0.10	0.64
		Min-2w	0.06	0.05	0.02	0.03	0.02	0.07	0.07	0.05	0.08	0.03	0.13	0.10	0.02
	Yangon	Mean	2.63	12.85	0.45	8.34	1.41	0.63	0.04	1.44	0.29	<0.01	1.73	0.75	2.40
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
Philippines	Metro Manila * ²	Max-2w	5.04	23.11	0.70	16.09	2.12	1.79	0.06	1.77	0.58	0.02	2.50	2.13	23.11
		Min-2w	0.23	2.58	0.20	0.59	0.69	0.01	0.02	1.11	<0.01	<0.01	0.97	0.06	<0.01
		Mean	3.87	2.71	1.23		3.04	2.39	2.86	8.73	2.13	2.28	1.14	1.38	3.18
		%	100	94	100		100	100	100	100	100	100	100	100	99
	Los Baños	Max-w	6.14	4.05	1.23		3.04	3.48	3.72	23.69	3.70	3.58	1.70	2.21	23.69
		Min-w	1.10	1.33	1.23		3.04	1.30	2.08	1.94	1.11	1.61	0.24	0.43	0.24
		Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy* ¹	Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Mean	0.10	0.09	0.07	0.02		0.29	0.09	0.04	0.19	0.04	0.03	0.02	0.09
		%	100	100	100	100		100	100	100	100	100	100	100	100
	Listvyanka	Max-m	0.15	0.11	0.11	0.02		0.54	0.09	0.05	0.19	0.04	0.03	0.02	0.54
		Min-m	0.06	0.08	0.04	0.02		0.03	0.09	0.02	0.19	0.03	0.03	0.02	0.02
		Mean	0.63	0.44	0.35	0.22	0.20	0.14	0.52	0.41	0.17	0.11	0.13	0.44	0.31
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
	Irkutsk	Max-w	1.25	0.61	0.44	0.36	0.28	0.20	1.08	0.68	0.23	0.13	0.22	0.74	1.25
		Min-w	0.31	0.22	0.31	0.13	0.12	0.04	0.06	0.15	0.09	0.08	0.06	0.11	0.04
		Mean	2.29	1.20	0.72	0.26	0.43	0.33	0.92	0.75	0.33	0.69	1.65	2.99	1.00
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
	Primorskaya	Max-w	4.84	1.51	1.18	0.39	0.84	0.67	1.72	2.01	0.45	1.28	2.96	4.16	4.84
		Min-w	0.97	0.88	0.18	0.15	0.12	0.10	0.35	0.15	0.17	0.35	0.98	1.00	0.10
		Mean	0.53	1.18	1.46	2.42	0.52	0.14	0.15	0.14	0.13	0.08	0.17	0.12	0.59
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
Thailand	Bangkok	Max-2w	0.55	2.22	2.77	4.71	0.84	0.15	0.19	0.17	0.15	0.09	0.17	0.13	4.71
		Min-2w	0.51	0.14	0.16	0.12	0.20	0.14	0.11	0.12	0.10	0.06	0.16	0.11	0.06
		Mean	4.70	3.70	1.76	***	***	***	0.67	0.27	0.91	1.93	1.86	3.34	2.12
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
	Pathumthani	Max-10d	7.16	4.88	4.54	***	***	***	0.91	0.38	2.30	2.97	3.39	4.23	7.16
		Min-10d	3.11	2.35	0.03	***	***	***	0.20	0.21	0.16	1.06	0.30	2.87	0.03
		Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.13.1 Particulate matter component: SO₄²⁻ - Measured by FP (continued)Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	8.38	8.74	7.37	6.73	6.37	4.36	8.31	5.31	4.73	5.42	10.28	7.10	6.95
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	9.89	10.44	9.84	8.81	8.56	5.89	9.79	6.74	6.19	6.96	11.13	8.93	11.13
		Min-w	6.07	5.73	5.79	5.11	4.17	1.70	6.57	3.70	4.00	2.77	9.31	5.07	1.70
	Hoa Binh	Mean	4.33	2.93	3.69	3.66	4.09	3.62	2.62	3.59	4.02	2.57	2.00	2.18	3.26
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.80	3.90	4.63	4.45	4.91	4.81	3.17	4.68	5.29	3.22	2.10	2.37	5.29
		Min-w	3.82	1.81	2.81	2.67	3.36	2.35	2.08	2.50	3.21	1.81	1.83	1.83	1.81
	Can Tho	Mean	5.90	5.83	5.24	5.74	5.61	6.01	5.16	5.03	5.09	5.46	4.79	5.56	5.46
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	7.10	6.33	5.99	7.10	6.77	6.65	5.60	5.67	5.24	6.05	5.32	6.25	7.10
		Min-w	5.32	5.14	4.44	4.44	4.68	5.40	4.37	4.15	4.86	4.78	4.44	5.18	4.15
	Ho Chi Minh	Mean	7.50	6.31	6.93	7.50	7.66	8.48	6.50	6.53	6.21	7.75	8.01	7.42	7.24
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	8.35	6.75	8.21	7.94	9.38	10.18	7.44	7.36	7.00	8.13	8.19	8.97	10.18
		Min-w	6.94	5.69	6.41	6.61	6.71	7.52	5.85	5.73	5.60	7.02	7.60	6.61	5.60
	Yen Bai	Mean	7.63	6.72	11.13	8.01	5.12	5.56	7.18	5.09	3.47	2.66	3.23	2.37	5.67
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	8.73	9.17	14.54	10.74	6.50	7.05	8.79	6.80	4.15	3.11	3.70	3.68	14.54
		Min-w	6.60	4.06	7.82	5.45	3.00	2.95	5.55	2.50	2.66	1.91	2.44	1.85	1.85

Table 4.13.2 Particulate matter component: SO₄²⁻ Measured by FP with PM2.5 cycloneUnit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.14.1 Particulate matter component: NO₃⁻Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	1.66	0.52	1.64	0.18	0.89	2.37	1.41	1.98	1.61	1.51	1.83	1.32	1.39
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.00	0.95	2.06	0.26	2.27	3.21	2.40	3.36	1.61	2.75	2.25	1.34	3.36
		Min-2w	1.33	0.09	1.22	0.09	0.10	1.52	0.42	0.59	1.61	0.81	1.42	1.30	0.09
	Serpong	Mean	0.54	0.64	0.51	1.19	0.79	1.33	1.98	1.34	0.75	0.54	0.25	0.32	0.83
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.63	0.64	0.61	1.77	0.97	1.53	2.34	2.00	1.67	0.69	0.31	0.39	2.34
		Min-2w	0.45	0.64	0.31	0.62	0.62	1.13	1.62	0.68	0.17	0.40	0.20	0.26	0.17
	Bandung	Mean	1.74	2.18	1.60	***	***	***	1.43	2.39	1.78	1.82	1.10	1.01	1.66
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	3.20	2.57	1.60	***	***	***	2.78	3.26	2.03	3.02	1.55	1.52	3.26
		Min-2w	0.26	1.68	1.60	***	***	***	0.09	1.58	1.55	0.52	0.77	0.69	0.09
Japan	Rishiri	Mean	0.53	0.94	1.41	0.49	1.14	0.66	0.50	0.32	0.70	0.53	0.97	0.99	0.74
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.58	1.40	1.41	0.50	1.55	0.86	0.50	0.39	0.84	0.63	1.45	1.35	1.55
		Min-2w	0.48	0.47	1.41	0.49	0.72	0.50	0.49	0.25	0.56	0.44	0.49	0.70	0.25
	Ochiishi	Mean	0.53	0.47	0.48	0.58	1.10	0.67	0.30	0.55	0.51	0.28	0.83	0.67	0.60
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.57	0.64	0.77	0.80	1.97	0.96	0.32	0.56	0.88	0.35	1.00	0.93	1.97
		Min-2w	0.49	0.31	0.19	0.36	0.65	0.38	0.27	0.54	0.14	0.21	0.66	0.42	0.14
	Sado-seki	Mean	0.21	0.55	0.83	1.19	1.89	0.95	0.59	1.03	1.00	1.04	0.81	1.00	0.92
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.26	0.96	0.99	1.49	1.89	1.62	0.62	1.44	1.02	1.07	1.44	1.17	1.89
		Min-2w	0.15	0.15	0.67	0.89	1.89	0.46	0.55	0.61	0.98	1.00	0.31	0.83	0.15
	Happo* ¹	Mean	0.05	0.37	0.49	0.25		0.99	0.05	0.04	0.09	0.20	0.53	0.04	0.27
		%	100	100	100		100	100	100	100	100	100	100	100	100
		Max-2w	0.08	0.67	0.66	0.25		1.64	0.07	0.06	0.10	0.31	0.53	0.04	1.64
		Min-2w	0.03	0.07	0.32	0.25		0.35	0.02	<0.01	0.09	0.09	0.53	0.04	<0.01
	Ijira	Mean	0.40	0.30	0.67	0.75	0.33	0.18	0.08	0.04	0.30	0.28	0.28	0.28	0.32
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.43	0.31	0.84	0.85	0.48	0.27	0.08	0.05	0.33	0.37	0.51	0.38	0.85
		Min-2w	0.37	0.29	0.50	0.64	0.18	0.08	0.07	0.03	0.26	0.18	0.14	0.18	0.03
	Oki	Mean	1.66	1.41	2.45	1.90	1.94	1.18	0.74	0.93	1.38	1.35	1.70	2.31	1.58
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	2.09	1.41	2.84	2.29	2.06	1.50	0.75	1.26	1.70	1.37	2.09	2.45	2.84
		Min-2w	1.42	1.41	2.06	1.51	1.83	0.90	0.73	0.61	1.06	1.33	1.29	2.18	0.61
	Yusuhara	Mean	0.60	0.54	0.99	1.23	0.27	0.14	0.07	0.05	0.17	0.40	0.94	1.36	0.56
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.61	0.56	1.29	1.28	0.49	0.22	0.09	0.09	0.18	0.56	1.10	1.46	1.46
		Min-2w	0.58	0.52	0.69	1.18	0.05	0.08	0.04	<0.01	0.17	0.25	0.82	1.26	<0.01
	Hedo	Mean	1.58	1.77	2.45	3.28	1.50	0.71	0.34	0.35	1.18	1.67	1.14	1.18	1.39
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.68	2.05	2.60	3.39	1.79	1.19	0.41	0.37	1.32	1.81	1.53	1.25	3.39
		Min-2w	1.48	1.48	2.31	3.18	1.21	0.46	0.28	0.33	1.03	1.52	0.39	1.11	0.28
	Ogasawara	Mean	0.55	1.04	1.09	1.34	0.50	0.26	0.20	0.19	0.16	0.17	0.51	0.77	0.53
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.58	1.04	1.16	1.64	0.54	0.32	0.23	0.30	0.18	0.18	0.56	0.83	1.64
		Min-2w	0.51	1.04	1.02	1.04	0.46	0.22	0.16	0.07	0.14	0.15	0.43	0.71	0.07
	Tokyo	Mean	2.97	3.71	2.80	2.65	2.28	2.33	1.66	2.05	2.01	2.17	3.47	3.49	2.65
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.38	3.79	2.95	2.72	2.51	2.98	1.91	2.26	2.07	2.47	3.63	3.75	3.79
		Min-2w	2.56	3.63	2.65	2.59	2.05	1.87	1.41	1.84	1.95	1.88	3.36	3.22	1.41
	Niigata-maki	Mean				1.11	1.29	0.75	0.48	0.58	0.60	0.84	0.80	0.56	0.78
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				1.21	1.35	0.88	0.51	0.64	0.76	0.93	1.34	0.79	1.35
		Min-2w				1.01	1.22	0.68	0.44	0.52	0.43	0.76	0.07	0.32	0.07
	Tsushima	Mean				3.14	0.92	0.51	0.32	0.25	0.86	1.79	2.84	3.45	1.57
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				3.55	0.96	0.64	0.32	0.37	1.02	2.07	3.35	3.59	3.59
		Min-2w				2.72	0.88	0.37	0.32	0.12	0.69	1.50	2.25	3.30	0.12

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.14.1 Particulate matter component: NO₃⁻ (continued)Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	1.56	2.25	1.16	***	0.63	1.21	1.25	1.85	1.09	1.50	1.21	1.23	1.37
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	1.89	3.54	1.52	***	0.67	1.86	1.83	2.39	1.28	2.05	1.55	1.47	3.54
		Min-w	0.97	1.17	0.63	***	0.56	0.88	0.98	1.42	0.89	1.09	0.80	1.01	0.56
	Tanah Rata	Mean	0.41	0.34	0.12	0.08	0.19	0.05	0.11	0.11	0.05	0.09	0.10	0.14	0.16
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	0.60	0.91	0.17	0.08	0.35	0.05	0.37	0.20	0.10	0.23	0.18	0.22	0.91
		Min-w	0.21	0.02	0.06	0.08	0.03	0.04	0.02	0.02	0.02	0.02	0.04	0.06	0.02
	Danum Valley	Mean	0.18	0.17	***	***	***	0.01	<0.01	0.06	0.04	***	***	0.02	0.08
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	0.20	0.17	***	***	***	0.01	0.01	0.06	0.04	***	***	0.02	0.20
		Min-2w	0.15	0.17	***	***	***	0.01	<0.01	0.06	0.04	***	***	0.02	<0.01
Mongolia	Ulaanbaatar	Mean	0.16	0.02	0.05	0.08	<0.01	0.20	0.41	0.21	0.04	0.18	0.05	0.22	0.14
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.54	0.08	0.16	0.14	<0.01	0.56	1.79	0.56	0.07	0.58	0.07	0.58	1.79
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	0.03	<0.01	<0.01	0.03	<0.01
	Terelj	Mean	0.12	0.01	<0.01	<0.01	<0.01	0.03	0.01	<0.01	<0.01	0.01	0.02	0.01	0.02
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	0.20	0.02	0.01	<0.01	<0.01	0.06	0.01	0.02	<0.01	0.02	0.03	0.01	0.20
		Min-2w	0.04	0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01
Myanmar	Yangon	Mean	1.32	5.40	0.10	0.30	3.92	0.02	0.07	0.60	0.12	<0.01	0.03	<0.01	0.91
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.56	10.05	0.15	0.57	7.36	0.05	0.11	0.62	0.22	<0.01	0.05	<0.01	10.05
		Min-2w	0.09	0.74	0.04	0.02	0.48	<0.01	0.02	0.59	0.02	<0.01	0.01	<0.01	<0.01
Philippines	Metro Manila ^{*2}	Mean	3.56	1.70	0.82		0.79	0.84	1.75	2.25	1.24	1.01	1.02	1.66	1.66
		%	100	94	100		100	100	100	100	100	100	100	100	99
		Max-w	5.11	2.66	0.82		0.79	1.29	2.02	4.97	2.08	1.52	1.36	2.92	5.11
		Min-w	1.18	0.81	0.82		0.79	0.39	1.58	0.82	0.46	<0.01	0.08	0.64	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy ^{*1}	Mean	0.02	<0.01	<0.01	<0.01		0.05	0.01	<0.01	0.05	<0.01	<0.01	<0.01	0.01
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-m	0.04	<0.01	<0.01	<0.01		0.10	0.01	<0.01	0.05	<0.01	<0.01	<0.01	0.10
		Min-m	<0.01	<0.01	<0.01	<0.01		<0.01	0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01
	Listvyanka	Mean	0.01	0.01	0.04	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	0.01
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	0.04	0.04	0.17	0.09	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.11	0.17
		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	0.62	0.23	0.16	0.04	0.06	0.04	0.05	0.04	0.07	0.20	0.58	1.20	0.25
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	1.06	0.36	0.25	0.05	0.12	0.10	0.11	0.13	0.08	0.37	0.98	1.74	1.74
		Min-w	0.23	0.13	0.03	0.02	0.01	<0.01	<0.01	<0.01	0.05	0.11	0.35	0.33	<0.01
	Primorskaya	Mean	1.28	1.87	1.83	1.99	0.67	0.90	0.93	0.82	0.64	0.46	0.75	0.80	1.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.38	2.52	2.73	3.29	0.89	1.09	1.07	0.93	0.73	0.54	0.91	0.80	3.29
		Min-2w	1.17	1.22	0.93	0.69	0.44	0.70	0.79	0.71	0.55	0.38	0.59	0.79	0.38
Thailand	Bangkok	Mean	4.19	3.36	1.60	***	***	***	0.83	0.71	1.13	2.06	1.93	4.53	2.26
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	4.60	3.75	3.34	***	***	***	1.22	0.90	2.63	2.61	3.63	7.29	7.29
		Min-10d	3.67	2.85	0.06	***	***	***	0.31	0.60	0.30	1.70	0.49	2.67	0.06
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.14.1 Particulate matter component: NO₃⁻ (continued)

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	7.89	8.75	6.75	4.91	5.53	2.86	6.99	3.11	3.70	4.42	9.40	6.39	5.91
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	9.64	10.80	11.46	8.18	8.11	4.19	7.89	4.12	5.15	6.34	9.96	8.42	11.46
		Min-w	5.24	5.59	2.45	3.44	3.93	1.06	5.70	1.66	2.51	2.00	8.65	4.00	1.06
	Hoa Binh	Mean	3.25	2.47	3.18	3.11	3.49	2.64	2.20	2.93	3.52	2.75	2.80	2.14	2.85
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.30	2.80	4.25	3.77	4.34	3.10	2.51	3.85	4.59	3.52	3.21	2.73	4.59
		Min-w	2.13	2.05	1.91	2.18	2.77	1.93	1.91	1.94	2.97	1.84	2.46	1.75	1.75
	Can Tho	Mean	2.09	2.50	2.12	1.92	2.23	2.49	1.80	1.87	2.15	2.00	2.10	2.66	2.15
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.74	3.19	2.34	2.78	2.82	3.10	2.02	2.12	2.42	3.10	2.84	3.89	3.89
		Min-w	1.81	2.16	1.79	1.33	1.61	1.61	1.49	1.73	1.67	1.31	1.57	1.51	1.31
	Ho Chi Minh	Mean	5.37	5.86	5.15	5.87	5.72	5.60	6.15	5.13	6.56	6.73	4.94	5.67	5.75
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	5.87	6.43	5.83	6.67	6.87	6.96	7.90	5.65	9.07	9.19	6.25	7.02	9.19
		Min-w	3.89	5.56	3.89	3.45	3.89	4.40	4.60	4.52	4.60	4.38	3.85	4.64	3.45
	Yen Bai	Mean	6.79	6.76	9.05	6.51	3.68	3.46	6.08	4.09	2.38	2.72	2.77	1.92	4.70
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	7.75	8.38	11.44	9.28	4.32	4.14	6.62	5.02	3.41	3.30	3.37	2.84	11.44
		Min-w	5.79	4.64	7.09	4.91	2.97	2.78	5.75	3.26	1.74	2.27	2.26	1.41	1.41

Table 4.14.2 Particulate matter component: NO₃⁻ - Measured by FP with PM2.5 cyclone

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.15.1 Particulate matter component: CI¹Unit : $\mu\text{g}/\text{m}^3$

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.82	0.28	0.11	0.03	0.26	1.94	0.76	0.18	0.18	0.59	0.24	0.83	0.52
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.96	0.53	0.13	0.06	0.32	3.33	0.79	0.25	0.18	1.35	0.29	1.06	3.33
		Min-2w	0.68	0.04	0.09	<0.01	0.19	0.56	0.73	0.11	0.18	0.14	0.19	0.60	<0.01
	Serpong	Mean	0.19	0.29	0.26	0.47	0.32	0.55	0.32	0.18	0.13	0.13	0.03	0.60	0.28
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.19	0.40	0.31	0.66	0.38	0.85	0.45	0.29	0.29	0.14	0.06	0.85	0.85
		Min-2w	0.18	0.18	0.20	0.28	0.26	0.26	0.19	0.07	0.01	0.12	<0.01	0.34	<0.01
	Bandung	Mean	0.19	0.36	0.30	***	***	***	0.33	0.39	0.44	0.38	0.38	0.43	0.36
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	0.34	0.70	0.30	***	***	***	0.69	0.63	0.67	0.68	0.52	0.54	0.70
		Min-2w	0.09	0.21	0.30	***	***	***	0.02	0.24	0.33	0.19	0.28	0.36	0.02
Japan	Rishiri	Mean	1.72	3.26	6.26	3.01	2.20	1.24	0.61	0.93	3.60	5.14	4.71	2.05	2.66
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	2.17	4.19	6.26	3.81	2.78	2.00	0.61	1.14	3.87	6.87	5.81	2.76	6.87
		Min-2w	1.28	2.32	6.26	2.21	1.62	0.77	0.61	0.73	3.33	3.41	3.60	1.61	0.61
	Ochiishi	Mean	4.63	2.94	4.91	3.44	2.76	1.24	0.30	1.42	3.49	3.97	6.27	2.51	3.14
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	5.86	3.33	5.32	4.47	4.18	1.37	0.31	1.58	5.04	6.04	7.51	2.70	7.51
		Min-2w	3.41	2.55	4.50	2.41	1.01	1.10	0.28	1.26	1.94	1.91	5.04	2.32	0.28
	Sado-seki	Mean	4.27	6.07	7.16	6.07	1.78	0.78	0.63	0.85	2.95	3.92	5.03	6.23	3.74
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	5.45	7.96	8.82	6.13	2.09	1.35	1.01	1.28	3.73	4.13	6.78	6.25	8.82
		Min-2w	3.09	4.17	5.50	6.02	1.46	0.25	0.24	0.42	2.17	3.71	1.96	6.21	0.24
	Happo* ¹	Mean	0.01	0.06	0.03	<0.01		0.04	<0.01	<0.01	0.02	0.10	0.02	<0.01	0.03
		%	100	100	100		100	100	100	100	100	100	100	100	100
		Max-2w	0.02	0.11	0.05	<0.01		0.06	0.02	0.01	0.02	0.17	0.02	<0.01	0.17
		Min-2w	<0.01	<0.01	0.02	<0.01		0.02	<0.01	<0.01	0.02	0.02	0.02	<0.01	<0.01
	Ijira	Mean	0.09	0.15	0.18	0.10	0.03	0.01	<0.01	<0.01	0.10	0.06	0.07	0.05	0.07
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.12	0.19	0.18	0.11	0.05	0.02	<0.01	<0.01	0.17	0.08	0.11	0.06	0.19
		Min-2w	0.07	0.11	0.18	0.10	0.02	<0.01	<0.01	<0.01	0.04	0.03	0.04	0.04	<0.01
	Oki	Mean	9.68	7.05	8.32	7.73	2.55	1.46	1.10	1.29	4.27	3.65	4.48	12.49	5.26
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	14.38	7.05	8.63	7.96	2.76	2.66	1.82	1.87	4.58	3.84	5.28	17.68	17.68
		Min-2w	6.78	7.05	8.02	7.51	2.35	0.16	0.38	0.71	3.95	3.45	3.77	7.30	0.16
	Yusuhara	Mean	0.07	0.12	0.16	0.17	0.03	<0.01	<0.01	<0.01	0.04	0.05	0.13	0.20	0.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.08	0.16	0.16	0.24	0.06	<0.01	<0.01	0.01	0.04	0.08	0.17	0.21	0.24
		Min-2w	0.06	0.08	0.15	0.09	<0.01	<0.01	<0.01	<0.01	0.03	0.03	0.07	0.20	<0.01
	Hedo	Mean	8.61	8.05	7.52	7.74	3.58	4.72	2.77	2.20	10.84	11.36	8.99	9.97	7.17
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	9.43	8.19	8.36	7.98	3.90	6.64	3.21	2.84	15.38	12.22	12.94	11.10	15.38
		Min-2w	7.79	7.90	6.68	7.50	3.25	2.52	2.33	1.56	6.30	10.49	4.77	8.83	1.56
	Ogasawara	Mean	4.74	5.29	5.18	3.73	2.35	1.98	1.84	0.98	3.89	5.68	5.58	4.53	3.75
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	4.91	5.29	5.37	4.17	3.10	2.48	2.73	1.85	5.80	7.22	9.60	5.27	9.60
		Min-2w	4.56	5.29	4.98	3.29	1.59	1.10	0.95	0.11	1.99	4.13	3.01	3.79	0.11
	Tokyo	Mean	0.56	0.60	0.78	0.45	0.49	0.32	0.20	0.16	0.97	0.47	0.66	0.55	0.52
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.70	0.73	0.89	0.55	0.54	0.61	0.26	0.27	1.23	0.54	0.85	0.57	1.23
		Min-2w	0.43	0.47	0.66	0.35	0.44	0.16	0.14	0.05	0.71	0.40	0.47	0.53	0.05
	Niigata-maki	Mean				2.79	0.48	0.67	0.22	0.18	0.65	1.61	1.65	1.79	1.12
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				3.42	0.48	0.99	0.30	0.23	0.80	1.82	2.50	2.01	3.42
		Min-2w				2.15	0.48	0.18	0.14	0.13	0.49	1.40	0.18	1.56	0.13
	Tsushima	Mean				0.87	0.16	0.10	0.15	0.09	4.37	1.20	0.57	0.39	0.82
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.94	0.21	0.17	0.15	0.15	7.32	2.16	0.85	0.41	7.32
		Min-2w				0.80	0.12	0.02	0.15	0.03	1.43	0.23	0.38	0.36	0.02

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.15 Particulate matter component: Cl⁻ (continued)Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.12	0.43	0.13	***	0.07	0.09	0.10	0.13	0.09	0.17	0.29	0.23	0.17
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	0.23	1.34	0.20	***	0.12	0.19	0.14	0.18	0.16	0.25	0.83	0.31	1.34
		Min-w	0.04	0.08	0.04	***	0.04	0.04	0.06	0.10	0.06	0.12	0.07	0.13	0.04
	Tanah Rata	Mean	0.17	0.15	0.03	0.02	0.06	0.02	0.02	0.02	<0.01	0.02	0.03	0.14	0.06
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	0.53	0.34	0.08	0.02	0.12	0.04	0.05	0.02	<0.01	0.03	0.05	0.35	0.53
		Min-w	0.03	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Danum Valley	Mean	0.13	0.51	***	***	***	<0.01	<0.01	0.02	0.01	***	***	0.02	0.13
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	0.18	0.69	***	***	***	<0.01	<0.01	0.02	0.01	***	***	0.02	0.69
		Min-2w	0.09	0.32	***	***	***	<0.01	<0.01	0.02	0.01	***	***	0.02	<0.01
Mongolia	Ulaanbaatar	Mean	0.11	0.08	0.14	0.07	0.03	0.13	0.46	0.10	0.04	0.03	0.03	0.09	0.12
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.16	0.13	0.30	0.10	0.06	0.27	1.89	0.24	0.06	0.08	0.06	0.20	1.89
		Min-w	0.04	0.02	0.06	0.02	<0.01	0.02	<0.01	0.03	<0.01	<0.01	<0.01	0.02	<0.01
	Terelj	Mean	0.02	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	0.03	0.02	<0.01	<0.01	<0.01	0.04	0.01	0.02	0.02	<0.01	<0.01	<0.01	0.04
		Min-2w	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Myanmar	Yangon	Mean	0.88	0.85	<0.01	0.30	0.44	1.13	0.25	0.93	0.02	0.02	0.85	<0.01	0.48
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.64	1.66	<0.01	0.56	0.46	3.31	0.36	1.47	0.05	0.05	1.25	<0.01	3.31
		Min-2w	0.11	0.03	<0.01	0.03	0.42	<0.01	0.14	0.40	<0.01	<0.01	0.45	<0.01	<0.01
Philippines	Metro Manila ^{*2}	Mean	2.57	1.96	0.26		0.07	0.02	0.18	0.68	0.14	1.11	1.72	0.87	1.05
		%	100	94	100		100	100	100	100	100	100	100	100	99
		Max-w	5.66	2.72	0.26		0.07	0.03	0.34	1.01	0.34	3.23	4.30	1.32	5.66
		Min-w	0.59	1.34	0.26		0.07	<0.01	0.07	0.15	0.03	0.25	<0.01	0.43	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy ^{*1}	Mean	<0.01	0.01	<0.01	<0.01		0.04	0.03	<0.01	0.12	<0.01	<0.01	<0.01	0.02
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-m	<0.01	0.02	<0.01	<0.01		0.07	0.03	<0.01	0.12	<0.01	<0.01	<0.01	0.12
		Min-m	<0.01	<0.01	<0.01	<0.01		<0.01	0.03	<0.01	0.12	<0.01	<0.01	<0.01	<0.01
	Listvyanka	Mean	0.02	0.02	0.04	0.05	0.02	0.01	0.08	0.06	0.02	0.01	0.02	0.06	0.03
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	0.04	0.03	0.09	0.05	0.02	0.03	0.18	0.09	0.03	0.02	0.04	0.11	0.18
		Min-w	<0.01	0.02	0.01	0.04	0.02	<0.01	0.02	0.01	<0.01	<0.01	<0.01	0.03	<0.01
	Irkutsk	Mean	0.10	0.06	0.25	0.02	0.01	0.02	0.23	0.16	0.01	0.15	0.26	0.30	0.13
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	0.19	0.09	0.43	0.04	0.02	0.03	0.79	0.60	0.01	0.34	0.55	0.44	0.79
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01	0.04	0.14	0.08	<0.01
	Primorskaya	Mean	0.32	0.47	0.43	1.08	0.48	0.46	0.45	0.42	0.54	0.34	0.48	0.43	0.49
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.33	0.59	0.56	1.75	0.49	0.52	0.48	0.43	0.68	0.42	0.50	0.45	1.75
		Min-2w	0.31	0.36	0.31	0.41	0.46	0.40	0.42	0.41	0.40	0.27	0.46	0.41	0.27
Thailand	Bangkok	Mean	0.16	0.33	0.49	***	***	***	0.07	0.18	0.22	0.12	0.10	0.29	0.22
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	0.25	0.41	0.86	***	***	***	0.08	0.26	0.52	0.18	0.17	0.65	0.86
		Min-10d	0.11	0.26	0.02	***	***	***	0.05	0.14	<0.01	0.09	0.03	0.08	<0.01
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.15.1 Particulate matter component: Cl⁻ (continued)

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	5.25	3.49	2.65	1.98	2.25	2.29	6.09	3.08	2.55	3.41	8.20	5.25	3.92
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	8.32	8.19	5.66	2.66	3.76	3.76	7.62	4.27	4.27	5.54	8.75	7.44	8.75
		Min-w	2.72	1.14	1.13	1.17	1.38	0.94	4.06	1.61	1.47	1.72	7.85	3.62	0.94
	Hoa Binh	Mean	2.37	1.98	2.66	2.34	2.56	2.43	2.07	2.71	3.47	3.03	3.57	2.32	2.61
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.93	3.01	4.04	2.96	2.82	2.87	2.32	3.60	3.94	3.53	4.15	3.66	4.15
		Min-w	1.73	1.19	1.77	1.83	2.33	1.82	1.70	2.09	2.80	2.47	3.02	1.41	1.19
	Can Tho	Mean	2.07	2.07	2.20	2.42	2.50	1.85	2.56	2.23	2.27	2.48	2.71	2.79	2.36
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.50	2.30	2.62	2.96	3.35	2.04	2.96	2.52	2.96	2.96	2.96	3.17	3.35
		Min-w	1.13	1.75	1.43	1.43	1.83	1.45	1.92	1.90	1.85	1.92	2.38	2.44	1.13
	Ho Chi Minh	Mean	4.60	4.81	4.85	4.32	4.59	4.20	4.74	4.73	4.47	4.04	4.52	3.73	4.45
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	6.07	5.10	5.30	5.38	5.95	5.56	5.30	5.06	5.38	4.98	5.65	5.10	6.07
		Min-w	2.70	4.40	4.25	3.63	3.45	3.17	4.07	4.52	3.23	2.94	3.73	2.18	2.18
	Yen Bai	Mean	3.40	1.81	2.73	3.01	2.93	2.50	4.11	2.91	3.12	3.10	3.06	2.09	2.92
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	5.47	3.14	4.66	4.60	3.83	3.03	5.49	3.55	3.43	3.69	3.66	3.68	5.49
		Min-w	0.79	0.67	1.67	0.89	2.44	1.97	2.09	1.91	2.94	2.48	2.00	1.02	0.67

Table 4.15.2 Particulate matter component: Cl⁻ - Measured by FP with PM2.5 cyclone

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.16.1 Particulate matter component: NH₄⁺Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.58	0.18	0.79	0.37	0.49	0.94	0.62	1.14	1.12	1.08	0.87	0.26	0.69
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.61	0.32	0.96	0.56	1.06	1.12	1.08	1.42	1.12	1.19	1.19	0.29	1.42
		Min-2w	0.55	0.05	0.62	0.17	0.07	0.76	0.17	0.86	1.12	0.88	0.56	0.24	0.05
	Serpong	Mean	0.88	0.51	1.11	1.78	1.06	1.54	1.63	1.22	0.72	0.81	0.78	0.16	1.01
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.21	0.52	1.41	1.94	1.38	1.67	1.76	1.62	1.06	1.20	1.10	0.22	1.94
		Min-2w	0.55	0.50	0.75	1.62	0.74	1.42	1.50	0.83	0.17	0.41	0.47	0.10	0.10
	Bandung	Mean	2.11	1.39	1.10	***	***	***	1.10	2.18	1.37	1.04	0.89	0.57	1.29
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	3.53	1.65	1.10	***	***	***	1.54	4.09	1.91	1.24	1.13	0.85	4.09
		Min-2w	0.46	1.24	1.10	***	***	***	0.18	1.12	0.96	0.83	0.73	0.39	0.18
Japan	Rishiri	Mean	0.66	0.91	1.15	0.27	0.60	0.24	0.30	0.15	0.21	0.21	0.35	0.48	0.42
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.73	1.27	1.15	0.28	0.91	0.27	0.36	0.17	0.22	0.22	0.48	0.57	1.27
		Min-2w	0.58	0.55	1.15	0.27	0.29	0.20	0.25	0.13	0.19	0.20	0.22	0.39	0.13
	Ochiishi	Mean	0.35	0.36	0.18	0.14	0.32	0.24	0.22	0.22	0.09	0.06	0.29	0.47	0.25
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.36	0.42	0.24	0.26	0.67	0.26	0.22	0.30	0.14	0.06	0.33	0.56	0.67
		Min-2w	0.35	0.31	0.12	0.03	0.09	0.21	0.21	0.14	0.03	0.05	0.25	0.38	0.03
	Sado-seki	Mean	0.11	0.25	0.28	0.34	0.31	0.32	0.13	0.53	0.21	0.18	0.17	0.40	0.27
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.14	0.40	0.28	0.43	0.40	0.77	0.17	0.65	0.23	0.21	0.24	0.45	0.77
		Min-2w	0.08	0.10	0.27	0.25	0.22	0.09	0.10	0.41	0.19	0.14	0.06	0.35	0.06
	Happo* ¹	Mean	0.14	0.20	0.18	0.23		0.71	0.25	1.16	0.19	0.42	0.24	0.05	0.36
		%	100	100	100		100	100	100	100	100	100	100	100	100
		Max-2w	0.17	0.20	0.21	0.23		1.06	0.36	1.19	0.21	0.48	0.24	0.05	1.19
		Min-2w	0.11	0.19	0.16	0.23		0.37	0.19	1.13	0.16	0.36	0.24	0.05	0.05
	Ijira	Mean	0.56	0.42	0.43	0.50	0.40	0.51	0.35	1.15	0.26	0.24	0.21	0.35	0.44
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.77	0.53	0.45	0.52	0.52	0.96	0.55	1.82	0.38	0.31	0.40	0.48	1.82
		Min-2w	0.35	0.30	0.41	0.47	0.28	0.21	0.15	0.49	0.13	0.18	0.11	0.23	0.11
	Oki	Mean	0.64	0.43	0.72	0.38	0.61	0.46	0.40	0.97	0.42	0.39	0.47	0.61	0.54
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.75	0.43	0.72	0.45	0.63	0.89	0.58	1.20	0.63	0.41	0.56	0.62	1.20
		Min-2w	0.47	0.43	0.71	0.32	0.59	0.21	0.22	0.74	0.22	0.38	0.38	0.59	0.21
	Yusuhara	Mean	0.55	0.47	0.58	0.69	0.82	0.78	0.46	0.73	0.43	0.32	0.52	0.82	0.60
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.56	0.71	0.65	0.73	1.37	1.25	0.46	0.74	0.51	0.42	0.65	0.91	1.37
		Min-2w	0.55	0.23	0.52	0.65	0.27	0.52	0.46	0.73	0.36	0.22	0.44	0.73	0.22
	Hedo	Mean	0.43	0.51	0.51	0.81	0.25	0.12	0.26	0.43	0.17	0.27	0.22	0.25	0.34
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.45	0.60	0.58	0.87	0.30	0.25	0.45	0.59	0.19	0.29	0.28	0.28	0.87
		Min-2w	0.41	0.43	0.43	0.75	0.20	0.06	0.07	0.27	0.15	0.25	0.11	0.21	0.06
	Ogasawara	Mean	0.26	0.22	0.40	0.47	0.08	0.15	0.37	0.73	0.07	0.06	0.09	0.19	0.25
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.31	0.22	0.46	0.53	0.09	0.27	0.47	1.14	0.09	0.08	0.10	0.21	1.14
		Min-2w	0.22	0.22	0.34	0.40	0.08	0.07	0.28	0.33	0.05	0.04	0.07	0.17	0.04
	Tokyo	Mean	0.95	1.11	0.76	0.75	0.88	0.88	0.65	1.32	0.42	0.49	0.88	1.04	0.85
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.07	1.14	0.77	0.85	1.13	1.32	0.78	1.68	0.52	0.56	1.17	1.17	1.68
		Min-2w	0.83	1.07	0.74	0.66	0.62	0.60	0.53	0.96	0.33	0.42	0.59	0.92	0.33
	Niigata-maki	Mean				0.35	0.37	0.33	0.18	1.18	0.14	0.20	0.17	0.27	0.34
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.41	0.55	0.52	0.22	1.61	0.19	0.21	0.28	0.38	1.61
		Min-2w				0.29	0.19	0.21	0.14	0.75	0.09	0.19	0.03	0.16	0.03
	Tsushima	Mean				0.81	0.56	0.72	0.28	0.95	0.36	0.50	0.97	1.51	0.75
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.95	0.63	0.97	0.33	1.46	0.54	0.65	1.17	1.56	1.56
		Min-2w				0.66	0.49	0.55	0.22	0.44	0.18	0.35	0.83	1.45	0.18

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.16.1 Particulate matter component: NH₄⁺ (continued)Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.88	0.76	1.11	***	1.01	0.82	0.93	0.91	0.69	0.73	0.53	0.51	0.80
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	1.17	1.22	1.26	***	1.29	0.89	1.10	1.24	0.75	0.96	0.64	0.72	1.29
		Min-w	0.50	0.40	1.01	***	0.80	0.70	0.69	0.63	0.57	0.52	0.38	0.32	0.32
	Tanah Rata	Mean	0.32	0.23	0.62	0.20	0.53	0.49	0.42	0.80	0.34	0.33	0.25	0.16	0.39
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	0.53	0.32	1.23	0.20	0.56	0.56	0.54	1.01	0.44	0.50	0.42	0.22	1.23
		Min-w	0.11	0.09	0.37	0.20	0.50	0.42	0.27	0.53	0.23	0.09	0.07	0.07	0.07
	Danum Valley	Mean	0.05	0.04	***	***	***	0.11	0.28	0.23	0.17	***	***	0.04	0.13
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	0.06	0.05	***	***	***	0.11	0.56	0.23	0.17	***	***	0.04	0.56
		Min-2w	0.04	0.04	***	***	***	0.11	<0.01	0.23	0.17	***	***	0.04	<0.01
Mongolia	Ulaanbaatar	Mean	0.45	0.23	0.06	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.04	0.76	0.12
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	1.32	0.60	0.12	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	0.18	2.05	2.05
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.11	<0.01
	Terelj	Mean	0.08	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.01	0.01
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	0.16	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.04	0.01	0.16
		Min-2w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01
Myanmar	Yangon	Mean	0.31	1.76	0.10	1.07	0.49	1.23	0.10	0.04	0.07	0.02	0.33	1.02	0.59
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.46	2.51	0.10	2.07	0.72	3.66	0.13	0.05	0.12	0.02	0.34	2.99	3.66
		Min-2w	0.15	1.00	0.10	0.07	0.26	<0.01	0.07	0.03	0.03	0.02	0.32	0.04	<0.01
Philippines	Metro Manila *2	Mean	0.05	0.09	0.02		0.27	0.12	0.12	<0.01	0.13	<0.01	0.32	0.07	0.09
		%	100	94	100		100	100	100	100	100	100	100	100	99
		Max-w	0.21	0.15	0.02		0.27	0.19	0.20	<0.01	0.42	0.02	1.24	0.17	1.24
		Min-w	<0.01	0.05	0.02		0.27	0.04	0.07	<0.01	<0.01	<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*1	Mean	0.02	0.03	0.02	<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
		Max-m	0.04	0.05	0.03	<0.01		0.02	<0.01	0.01	<0.01	0.01	<0.01	<0.01	0.05
		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
	Listvyanka	Mean	0.15	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.23	0.04
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	0.36	0.05	0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.90	0.90
		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	0.83	0.30	0.14	0.05	0.10	0.09	0.03	0.03	0.07	0.17	0.63	1.24	0.28
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	1.25	0.53	0.26	0.14	0.25	0.26	0.06	0.16	0.10	0.35	1.23	1.73	1.73
		Min-w	0.50	0.15	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.07	0.31	0.46	<0.01
	Primorskaya	Mean	0.60	1.02	1.12	0.45	0.27	0.35	0.32	0.35	0.25	0.22	0.23	0.26	0.45
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.63	1.52	1.73	0.47	0.40	0.43	0.36	0.38	0.28	0.23	0.24	0.27	1.73
		Min-2w	0.56	0.53	0.51	0.44	0.14	0.28	0.28	0.31	0.22	0.22	0.23	0.26	0.14
Thailand	Bangkok	Mean	1.28	0.76	0.40	***	***	***	0.10	0.05	0.11	0.57	0.49	1.27	0.56
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	1.68	1.09	0.99	***	***	***	0.13	0.08	0.14	0.83	0.80	2.17	2.17
		Min-10d	1.05	0.58	0.05	***	***	***	0.03	0.02	0.10	0.41	0.14	0.77	0.02
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/5/20 due to the influence of COVID-19.

Table 4.16.1 Particulate matter component: NH₄⁺ (continued)

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	2.02	2.80	1.69	0.92	0.58	0.26	0.71	0.65	0.84	0.87	1.23	1.64	1.19
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.47	4.93	2.69	1.75	0.75	0.65	1.11	1.32	1.53	1.45	1.64	1.99	4.93
		Min-w	0.93	1.43	1.20	0.46	0.44	0.05	0.33	0.41	0.41	0.41	0.60	1.16	0.05
	Hoa Binh	Mean	0.79	0.63	0.73	0.70	0.68	0.61	0.61	0.81	1.01	0.90	0.75	0.60	0.73
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.12	0.72	1.21	0.89	1.00	0.92	0.78	1.14	1.23	1.24	1.00	0.87	1.24
		Min-w	0.68	0.51	0.49	0.38	0.48	0.38	0.42	0.46	0.61	0.72	0.52	0.32	0.32
	Can Tho	Mean	1.32	1.17	1.02	1.12	1.09	0.89	1.31	0.96	0.64	1.15	1.18	1.10	1.09
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.77	1.33	1.23	1.33	1.35	1.13	1.63	1.21	0.83	1.33	1.77	1.69	1.77
		Min-w	1.05	0.99	0.83	0.89	0.89	0.54	1.05	0.65	0.48	0.75	0.65	0.77	0.48
	Ho Chi Minh	Mean	1.67	1.48	0.99	1.27	1.31	0.68	1.32	1.23	1.67	1.58	1.55	1.08	1.33
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.28	1.75	1.39	1.81	1.69	1.03	1.53	1.63	2.10	2.10	2.00	1.55	2.28
		Min-w	0.26	1.13	0.46	0.63	1.07	0.26	1.17	0.95	1.33	1.13	1.15	0.56	0.26
	Yen Bai	Mean	2.02	1.55	2.13	2.34	0.91	0.33	0.37	0.62	0.93	0.95	0.88	0.61	1.15
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.31	2.94	3.36	3.51	1.33	0.72	0.73	0.78	1.11	1.15	1.05	1.14	3.51
		Min-w	1.75	0.28	1.13	1.32	0.63	0.12	0.08	0.41	0.75	0.77	0.63	0.15	0.08

Table 4.16.2 Particulate matter component: NH₄⁺ - Measured by FP with PM2.5 cyclone

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

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

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.91	0.32	0.86	0.06	0.45	2.34	1.03	1.31	1.24	0.54	0.61	0.70	0.82
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.06	0.63	0.89	0.06	0.88	3.37	1.43	1.43	1.24	0.90	0.80	0.89	3.37
		Min-2w	0.76	<0.01	0.83	0.05	0.05	1.32	0.63	1.18	1.24	0.29	0.42	0.51	<0.01
	Serpong	Mean	0.61	0.59	0.40	0.19	0.31	0.66	1.01	0.83	0.61	0.24	0.34	0.49	0.52
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.65	0.66	0.75	0.19	0.41	0.83	1.02	1.07	1.21	0.42	0.36	0.67	1.21
		Min-2w	0.58	0.52	0.16	0.18	0.21	0.49	1.00	0.59	0.01	0.06	0.31	0.32	0.01
	Bandung	Mean	0.29	0.55	0.39	***	***	***	0.56	0.67	0.53	0.50	0.33	0.42	0.48
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	0.47	0.76	0.39	***	***	***	1.12	0.84	0.64	0.63	0.39	0.53	1.12
		Min-2w	0.11	0.32	0.39	***	***	***	0.01	0.40	0.49	0.38	0.20	0.24	0.01
Japan	Rishiri	Mean	1.41	2.37	4.15	1.92	1.81	1.11	0.78	0.98	2.26	3.39	2.95	1.44	1.90
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	1.64	3.02	4.15	2.27	2.29	1.57	0.79	1.05	2.46	4.66	3.64	1.88	4.66
		Min-2w	1.17	1.71	4.15	1.57	1.34	0.71	0.77	0.90	2.07	2.12	2.27	1.13	0.71
	Ochiishi	Mean	2.88	1.89	2.99	2.21	2.10	1.25	0.61	1.51	2.26	2.31	3.72	1.57	2.11
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.57	2.05	3.10	2.89	3.13	1.33	0.62	1.83	3.36	3.40	4.41	1.74	4.41
		Min-2w	2.18	1.73	2.89	1.53	0.99	1.17	0.59	1.20	1.16	1.22	3.03	1.40	0.59
	Sado-seki	Mean	2.47	3.53	4.33	3.86	2.04	0.94	0.78	1.20	2.24	2.77	3.14	4.04	2.57
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	3.21	4.71	5.30	3.98	2.18	1.33	0.99	1.69	2.62	2.78	4.28	4.05	5.30
		Min-2w	1.73	2.35	3.36	3.74	1.90	0.70	0.56	0.70	1.85	2.76	1.25	4.04	0.56
	Happo ^{*1}	Mean	0.04	0.12	0.14	0.06	0.07	0.03	0.07	0.08	0.15	0.29	0.05	0.09	0.09
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.05	0.18	0.16	0.06	0.08	0.05	0.09	0.10	0.24	0.29	0.05	0.29	0.29
		Min-2w	0.03	0.06	0.12	0.06	0.06	0.02	0.05	0.05	0.06	0.29	0.05	0.05	0.02
	Ijira	Mean	0.28	0.31	0.37	0.36	0.17	0.14	0.07	0.33	0.29	0.18	0.19	0.10	0.23
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.28	0.32	0.44	0.45	0.20	0.18	0.09	0.57	0.35	0.22	0.36	0.11	0.57
		Min-2w	0.28	0.30	0.30	0.28	0.15	0.07	0.06	0.10	0.23	0.14	0.07	0.09	0.06
	Oki	Mean	5.96	4.36	5.36	5.04	2.35	1.46	1.28	2.03	3.39	2.66	3.12	7.60	3.67
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	8.58	4.36	5.50	5.09	2.43	2.09	1.60	2.89	3.56	2.89	3.61	10.44	10.44
		Min-2w	4.44	4.36	5.23	4.99	2.27	0.82	0.97	1.17	3.22	2.43	2.87	4.76	0.82
	Yusuhara	Mean	0.22	0.26	0.42	0.49	0.35	0.15	0.21	0.26	0.36	0.36	0.45	0.38	0.32
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.26	0.28	0.43	0.65	0.35	0.16	0.31	0.36	0.51	0.39	0.57	0.38	0.65
		Min-2w	0.18	0.23	0.41	0.34	0.34	0.14	0.11	0.15	0.20	0.33	0.36	0.37	0.11
	Hedo	Mean	5.98	5.47	5.23	5.50	3.09	3.02	2.14	2.51	6.53	7.49	5.51	6.20	4.84
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	6.32	5.62	5.63	5.73	3.25	3.95	2.16	2.71	9.05	7.68	7.88	6.80	9.05
		Min-2w	5.65	5.31	4.84	5.26	2.93	2.08	2.13	2.30	4.01	7.29	2.86	5.60	2.08
	Ogasawara	Mean	3.05	3.56	3.69	2.96	1.90	1.73	2.51	2.16	2.32	3.29	3.44	2.99	2.75
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	3.33	3.56	3.76	3.05	2.24	2.30	2.86	2.32	3.27	4.14	5.69	3.31	5.69
		Min-2w	2.78	3.56	3.61	2.87	1.55	1.16	2.15	2.01	1.37	2.44	2.06	2.67	1.16
	Tokyo	Mean	0.40	0.53	0.88	0.86	1.06	0.92	0.71	0.85	1.09	0.79	0.71	0.32	0.76
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.45	0.73	0.97	0.98	1.17	1.19	0.76	1.03	1.18	0.87	1.07	0.41	1.19
		Min-2w	0.36	0.34	0.79	0.74	0.95	0.74	0.65	0.67	0.99	0.70	0.42	0.23	0.23
	Niigata-maki	Mean				2.01	0.93	0.88	0.46	0.83	0.68	1.37	1.28	1.19	1.07
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				2.30	1.03	1.22	0.47	1.15	0.85	1.42	2.04	1.29	2.30
		Min-2w				1.73	0.84	0.45	0.46	0.52	0.51	1.31	0.12	1.08	0.12
	Tsushima	Mean				1.28	0.73	0.40	0.43	0.91	3.05	1.35	0.87	0.53	1.02
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				1.47	0.78	0.44	0.56	1.18	4.71	1.91	1.09	0.57	4.71
		Min-2w				1.09	0.69	0.34	0.31	0.64	1.38	0.79	0.67	0.50	0.31

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

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

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.83	1.13	0.58	***	0.22	0.32	0.36	0.50	0.27	0.35	0.35	0.30	0.47
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	1.06	1.98	0.67	***	0.30	0.65	0.60	0.82	0.39	0.45	0.85	0.50	1.98
		Min-w	0.68	0.36	0.52	***	0.17	0.19	0.14	0.24	0.17	0.23	0.15	0.14	0.14
	Tanah Rata	Mean	0.47	0.42	0.28	0.11	0.17	0.09	0.08	0.12	0.07	0.10	0.07	0.15	0.19
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	0.52	0.66	0.42	0.11	0.30	0.12	0.15	0.18	0.13	0.17	0.12	0.30	0.66
		Min-w	0.39	0.03	0.18	0.11	0.03	0.05	0.01	0.06	0.03	0.03	0.03	0.03	0.01
	Danum Valley	Mean	0.28	1.08	***	***	***	0.06	0.03	0.14	0.05	***	***	0.15	0.32
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	0.30	1.25	***	***	***	0.06	0.06	0.14	0.05	***	***	0.15	1.25
		Min-2w	0.27	0.91	***	***	***	0.06	<0.01	0.14	0.05	***	***	0.15	<0.01
Mongolia	Ulaanbaatar	Mean	0.44	0.23	0.27	0.13	0.06	0.12	0.48	0.04	0.03	0.02	0.02	0.10	0.17
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	1.38	0.46	0.45	0.19	0.06	0.23	2.02	0.06	0.04	0.02	0.02	0.24	2.02
		Min-w	0.08	0.07	0.11	0.06	0.06	0.06	0.08	0.02	0.02	0.02	0.02	0.02	0.02
	Terelj	Mean	0.02	<0.01	<0.01	<0.01	<0.01	0.02	0.02	<0.01	<0.01	0.01	<0.01	<0.01	0.01
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	0.03	<0.01	<0.01	<0.01	0.01	0.04	0.04	0.01	<0.01	0.02	<0.01	<0.01	0.04
		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	0.17	1.36	0.06	0.71	0.46	13.61	0.16	0.71	0.05	0.02	0.30	0.04	1.88
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.33	2.67	0.12	1.33	0.72	34.46	0.31	0.93	0.10	0.03	0.47	0.12	34.46
		Min-2w	<0.01	0.04	<0.01	0.08	0.19	<0.01	<0.01	0.49	<0.01	<0.01	0.12	<0.01	<0.01
Philippines	Metro Manila ^{*2}	Mean	1.42	1.44	0.50		0.41	0.28	0.32	0.81	0.24	0.44	1.01	0.85	0.77
		%	100	94	100		100	100	100	100	100	100	100	100	99
		Max-w	2.85	1.82	0.50		0.41	0.38	0.41	1.20	0.36	0.75	2.44	2.35	2.85
		Min-w	0.45	1.02	0.50		0.41	0.17	0.18	0.31	0.15	0.31	<0.01	0.26	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy ^{*1}	Mean	<0.01	0.02	0.01	<0.01		0.09	0.04	<0.01	0.17	<0.01	<0.01	<0.01	0.03
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-m	<0.01	0.02	0.02	<0.01		0.17	0.04	0.01	0.17	0.01	<0.01	<0.01	0.17
		Min-m	<0.01	0.01	<0.01	<0.01		<0.01	0.04	<0.01	0.17	<0.01	<0.01	<0.01	<0.01
	Listvyanka	Mean	0.04	0.04	0.03	0.05	0.02	0.03	0.14	0.07	0.03	0.02	0.01	0.21	0.06
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	0.09	0.06	0.04	0.07	0.02	0.07	0.40	0.13	0.04	0.02	0.02	0.69	0.69
		Min-w	<0.01	0.02	0.02	0.01	0.01	<0.01	0.02	0.02	0.01	<0.01	<0.01	0.04	<0.01
	Irkutsk	Mean	0.08	0.10	0.22	0.02	0.03	0.04	0.21	0.43	0.05	0.13	0.22	0.14	0.15
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	0.18	0.14	0.40	0.05	0.06	0.06	0.49	1.21	0.09	0.26	0.35	0.24	1.21
		Min-w	0.03	0.05	0.02	0.01	<0.01	0.02	0.03	0.19	0.02	0.04	0.14	0.05	<0.01
	Primorskaya	Mean	0.05	0.13	0.13	0.62	0.20	0.05	0.04	0.04	0.05	0.03	0.02	0.03	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.06	0.22	0.21	1.19	0.30	0.06	0.04	0.04	0.07	0.03	0.03	0.04	1.19
		Min-2w	0.05	0.05	0.04	0.05	0.11	0.04	0.03	0.04	0.03	0.02	0.02	0.02	0.02
Thailand	Bangkok	Mean	1.04	1.47	0.91	***	***	***	0.14	0.23	0.26	0.30	0.21	0.35	0.54
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	1.29	1.67	1.74	***	***	***	0.15	0.46	0.38	0.67	0.43	0.38	1.74
		Min-10d	0.65	1.26	0.13	***	***	***	0.13	0.11	0.11	0.08	0.04	0.33	0.04
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.17.1 Particulate matter component: Na⁺ (continued)

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	1.08	0.81	0.47	0.39	0.80	0.37	1.01	0.56	0.94	0.92	0.67	1.37	0.80
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.56	1.33	0.64	0.79	1.28	0.62	1.43	0.84	1.47	1.65	0.83	2.28	2.28
		Min-w	0.67	0.46	0.31	0.15	0.42	0.13	0.67	0.43	0.56	0.51	0.44	0.78	0.13
	Hoa Binh	Mean	0.62	0.50	0.75	0.59	0.62	0.66	0.50	0.60	0.88	0.87	0.69	0.53	0.65
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.74	0.88	1.05	0.74	0.64	0.74	0.56	0.79	1.03	1.20	0.92	0.82	1.20
		Min-w	0.52	0.31	0.57	0.41	0.59	0.54	0.42	0.46	0.50	0.57	0.47	0.31	0.31
	Can Tho	Mean	0.23	0.19	0.21	0.23	0.21	0.16	0.22	0.10	0.32	0.25	0.33	0.18	0.22
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.34	0.28	0.34	0.28	0.26	0.28	0.32	0.24	0.54	0.40	0.67	0.28	0.67
		Min-w	0.08	0.08	0.06	0.16	0.14	0.08	0.14	0.02	0.18	0.12	0.12	0.08	0.02
	Ho Chi Minh	Mean	1.18	1.15	1.15	1.19	1.47	1.39	1.53	0.78	0.97	1.08	1.20	1.09	1.18
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.39	1.45	1.39	1.43	1.96	1.61	2.24	1.05	1.25	1.29	1.43	1.43	2.24
		Min-w	0.83	0.91	0.83	1.03	1.07	1.07	0.65	0.60	0.79	0.83	0.83	0.75	0.60
	Yen Bai	Mean	0.76	0.48	1.05	0.74	0.44	0.52	1.33	0.60	0.83	0.88	0.94	0.64	0.78
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.98	0.83	1.58	1.40	0.75	0.85	2.23	0.76	1.12	1.23	1.10	0.86	2.23
		Min-w	0.45	0.29	0.63	0.49	0.31	0.33	0.69	0.37	0.60	0.57	0.61	0.46	0.29

Table 4.17.2 Particulate matter component: Na⁺ - Measured by FP with PM2.5 cyclone

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.18.1 Particulate matter component: K⁺Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.16	0.07	0.48	0.06	0.27	0.63	0.46	0.65	0.56	0.37	0.33	0.13	0.34
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.19	0.15	0.68	0.08	0.43	0.65	0.64	0.73	0.56	0.45	0.44	0.14	0.73
		Min-2w	0.13	<0.01	0.28	0.05	0.11	0.61	0.29	0.57	0.56	0.28	0.22	0.12	<0.01
	Serpong	Mean	0.34	0.27	0.36	0.38	0.39	0.96	0.89	0.80	0.50	0.34	0.43	0.17	0.48
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.41	0.27	0.43	0.44	0.46	1.45	0.93	0.98	0.87	0.47	0.49	0.19	1.45
		Min-2w	0.28	0.27	0.24	0.32	0.33	0.48	0.85	0.61	0.03	0.21	0.38	0.16	0.03
	Bandung	Mean	0.28	0.32	0.31	***	***	***	0.33	0.65	0.54	0.46	0.33	0.25	0.39
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	0.39	0.40	0.31	***	***	***	0.51	0.80	0.57	0.54	0.36	0.30	0.80
		Min-2w	0.09	0.25	0.31	***	***	***	0.04	0.56	0.51	0.41	0.29	0.17	0.04
Japan	Rishiri	Mean	0.15	0.25	0.40	0.10	0.14	0.09	0.08	0.08	0.12	0.18	0.18	0.14	0.15
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.16	0.34	0.40	0.11	0.19	0.10	0.08	0.08	0.12	0.26	0.21	0.15	0.40
		Min-2w	0.15	0.16	0.40	0.10	0.09	0.09	0.07	0.08	0.11	0.11	0.14	0.13	0.07
	Ochiishi	Mean	0.11	0.07	0.11	0.07	0.08	0.07	0.03	0.06	0.07	0.08	0.15	0.08	0.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.15	0.08	0.11	0.11	0.12	0.07	0.03	0.08	0.11	0.11	0.18	0.09	0.18
		Min-2w	0.07	0.07	0.10	0.04	0.05	0.06	0.03	0.04	0.04	0.04	0.13	0.06	0.03
	Sado-seki	Mean	0.09	0.16	0.19	0.19	0.11	0.06	0.04	0.05	0.09	0.12	0.14	0.17	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.13	0.22	0.23	0.23	0.13	0.08	0.05	0.06	0.10	0.13	0.20	0.18	0.23
		Min-2w	0.06	0.09	0.15	0.15	0.10	0.04	0.02	0.03	0.07	0.11	0.06	0.17	0.02
	Happo* ¹	Mean	<0.01	0.02	0.03	0.03		0.04	0.02	0.03	0.01	0.02	0.04	<0.01	0.02
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-2w	<0.01	0.03	0.04	0.03		0.06	0.02	0.03	0.02	0.02	0.04	<0.01	0.06
		Min-2w	<0.01	0.01	0.02	0.03		0.02	0.01	0.03	<0.01	0.02	0.04	<0.01	<0.01
	Ijira	Mean	0.07	0.06	0.07	0.09	0.05	0.08	0.06	0.08	0.09	0.05	0.05	0.03	0.06
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.09	0.06	0.09	0.09	0.06	0.13	0.09	0.11	0.10	0.07	0.09	0.04	0.13
		Min-2w	0.06	0.05	0.06	0.08	0.05	0.03	0.02	0.04	0.08	0.03	0.02	0.03	0.02
	Oki	Mean	0.26	0.19	0.26	0.24	0.12	0.12	0.11	0.11	0.17	0.15	0.17	0.31	0.18
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.35	0.19	0.28	0.25	0.13	0.14	0.11	0.14	0.19	0.15	0.20	0.42	0.42
		Min-2w	0.19	0.19	0.24	0.22	0.11	0.09	0.11	0.08	0.15	0.14	0.13	0.20	0.08
	Yusuhara	Mean	0.04	0.04	0.07	0.05	0.04	0.06	0.03	0.04	0.05	0.06	0.07	0.05	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.04	0.05	0.08	0.05	0.04	0.09	0.04	0.04	0.06	0.07	0.09	0.05	0.09
		Min-2w	0.03	0.03	0.05	0.05	0.03	0.04	0.03	0.04	0.04	0.05	0.05	0.05	0.03
	Hedo	Mean	0.29	0.28	0.26	0.30	0.21	0.20	0.13	0.14	0.29	0.31	0.22	0.26	0.24
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.31	0.29	0.26	0.31	0.22	0.21	0.13	0.15	0.40	0.32	0.32	0.28	0.40
		Min-2w	0.28	0.26	0.26	0.29	0.20	0.19	0.12	0.12	0.19	0.31	0.11	0.24	0.11
	Ogasawara	Mean	0.13	0.15	0.17	0.18	0.12	0.08	0.11	0.11	0.10	0.15	0.15	0.12	0.13
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.14	0.15	0.17	0.20	0.12	0.10	0.12	0.11	0.13	0.17	0.23	0.13	0.23
		Min-2w	0.11	0.15	0.17	0.17	0.12	0.06	0.10	0.10	0.07	0.12	0.10	0.12	0.06
	Tokyo	Mean	0.10	0.10	0.11	0.14	0.13	0.13	0.10	0.14	0.12	0.10	0.15	0.11	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.10	0.10	0.13	0.14	0.15	0.15	0.11	0.17	0.13	0.11	0.17	0.12	0.17
		Min-2w	0.10	0.10	0.09	0.14	0.12	0.11	0.08	0.11	0.11	0.10	0.11	0.10	0.08
	Niigata-maki	Mean				0.11	0.08	0.07	0.04	0.07	0.06	0.10	0.10	0.07	0.08
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.13	0.09	0.08	0.04	0.08	0.08	0.10	0.18	0.07	0.18
		Min-2w				0.10	0.06	0.05	0.04	0.06	0.04	0.09	<0.01	0.06	<0.01
	Tsushima	Mean				0.13	0.05	0.09	0.05	0.07	0.18	0.11	0.11	0.09	0.10
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.14	0.06	0.12	0.06	0.07	0.29	0.12	0.15	0.09	0.29
		Min-2w				0.12	0.05	0.07	0.04	0.06	0.07	0.10	0.09	0.08	0.04

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.18.1 Particulate matter component: K⁺ (continued)Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.37	0.35	0.41	***	0.46	0.30	0.33	0.35	0.24	0.29	0.47	0.26	0.35
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	0.40	0.54	0.49	***	0.80	0.41	0.59	0.40	0.32	0.34	1.18	0.29	1.18
		Min-w	0.34	0.21	0.36	***	0.29	0.22	0.23	0.31	0.21	0.25	0.19	0.21	0.19
	Tanah Rata	Mean	0.13	0.11	0.25	0.11	0.13	0.15	0.16	0.18	0.09	0.07	0.07	0.08	0.13
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	0.19	0.16	0.33	0.11	0.14	0.20	0.25	0.21	0.13	0.12	0.10	0.12	0.33
		Min-w	0.06	0.03	0.21	0.11	0.12	0.11	0.10	0.15	0.06	<0.01	0.04	0.05	<0.01
	Danum Valley	Mean	0.10	0.22	***	***	***	0.20	0.08	0.14	0.11	***	***	0.19	0.14
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	0.12	0.31	***	***	***	0.20	0.15	0.14	0.11	***	***	0.19	0.31
		Min-2w	0.08	0.13	***	***	***	0.20	<0.01	0.14	0.11	***	***	0.19	<0.01
Mongolia	Ulaanbaatar	Mean	0.12	0.02	0.04	0.04	0.03	0.08	0.19	0.03	0.01	<0.01	<0.01	0.03	0.06
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.20	0.05	0.09	0.07	0.05	0.13	0.71	0.09	0.03	<0.01	<0.01	0.06	0.71
		Min-w	<0.01	<0.01	<0.01	0.03	0.03	0.05	0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Terelj	Mean	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.03	<0.01	0.04	0.03	<0.01	0.01
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.02	0.10	0.01	0.04	0.03	<0.01	0.10
		Min-2w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.04	0.02	<0.01	<0.01
Myanmar	Yangon	Mean	0.92	3.04	0.07	0.79	0.14	<0.01	0.12	0.60	0.60	0.04	0.58	1.17	0.67
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	1.83	5.96	0.15	1.59	0.28	<0.01	0.24	0.83	1.21	0.07	0.75	2.31	5.96
		Min-2w	<0.01	0.12	<0.01	<0.01	<0.01	<0.01	<0.01	0.36	<0.01	<0.01	0.40	0.51	<0.01
Philippines	Metro Manila ^{*2}	Mean	0.83	0.24	0.12		2.27	0.19	0.18	7.12	0.21	0.02	<0.01	0.48	1.25
		%	100	94	100		100	100	100	100	100	100	100	100	99
		Max-w	2.54	0.33	0.12		2.27	0.35	0.27	22.99	0.40	0.12	<0.01	1.36	22.99
		Min-w	0.05	0.16	0.12		2.27	0.04	0.09	<0.01	0.11	<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 ^{*1}	Mean	0.03	0.02	<0.01	<0.01		0.11	0.06	<0.01	0.15	<0.01	0.01	<0.01	0.04
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-m	0.05	0.02	0.01	<0.01		0.23	0.06	0.01	0.15	<0.01	0.01	<0.01	0.23
		Min-m	0.01	0.01	<0.01	<0.01		<0.01	0.06	<0.01	0.15	<0.01	0.01	<0.01	<0.01
	Listvyanka	Mean	0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.22	0.04	<0.01	<0.01	0.05	0.38	0.06
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	0.03	0.02	0.02	0.06	<0.01	0.01	0.54	0.16	0.03	<0.01	0.21	0.45	0.54
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.24	<0.01
	Irkutsk	Mean	0.83	0.30	0.14	0.05	0.10	0.09	0.03	0.03	0.07	0.17	0.63	1.24	0.28
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	1.26	0.53	0.26	0.14	0.25	0.26	0.06	0.16	0.10	0.35	1.23	1.73	1.73
		Min-w	0.50	0.15	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.07	0.31	0.46	<0.01
	Primorskaya	Mean	0.05	0.11	0.11	0.59	0.04	0.05	0.03	0.02	0.01	0.01	<0.01	<0.01	0.09
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.07	0.19	0.18	1.15	0.05	0.07	0.04	0.02	0.01	0.01	0.01	<0.01	1.15
		Min-2w	0.03	0.04	0.03	0.04	0.04	0.04	0.02	0.01	0.01	<0.01	<0.01	<0.01	<0.01
Thailand	Bangkok	Mean	0.90	0.92	0.23	***	***	***	0.13	0.05	0.16	0.34	0.30	0.81	0.43
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	1.18	1.07	0.56	***	***	***	0.20	0.09	0.25	0.41	0.54	0.85	1.18
		Min-10d	0.60	0.68	0.05	***	***	***	0.03	0.02	0.11	0.28	0.09	0.77	0.02
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.18.1 Particulate matter component: K⁺ (continued)

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	0.31	0.39	0.24	0.17	0.08	0.11	0.21	0.24	0.34	0.40	0.87	1.61	0.43
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.54	0.72	0.35	0.24	0.21	0.17	0.30	0.31	0.39	0.50	0.99	2.49	2.49
		Min-w	0.05	0.05	0.10	0.09	0.03	0.04	0.06	0.12	0.25	0.27	0.76	0.76	0.03
	Hoa Binh	Mean	0.21	0.17	0.16	0.14	0.14	0.11	0.09	0.11	0.20	0.18	0.16	0.13	0.15
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.39	0.38	0.31	0.19	0.18	0.14	0.12	0.17	0.23	0.22	0.23	0.25	0.39
		Min-w	0.09	0.09	0.06	0.09	0.12	0.09	0.05	0.05	0.15	0.13	0.10	0.07	0.05
	Can Tho	Mean	0.13	0.36	0.24	0.18	0.30	0.08	0.23	0.19	0.15	0.33	0.22	0.27	0.23
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.18	0.54	0.48	0.26	0.54	0.12	0.50	0.28	0.26	0.52	0.42	0.30	0.54
		Min-w	0.10	0.18	0.12	0.08	0.18	0.04	0.14	0.08	0.08	0.12	0.12	0.24	0.04
	Ho Chi Minh	Mean	1.24	1.54	0.86	1.15	0.97	1.09	1.10	0.91	0.75	1.20	1.15	1.11	1.10
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.63	1.88	1.17	1.41	1.21	1.31	1.63	1.15	0.99	1.65	1.69	1.61	1.88
		Min-w	0.93	0.99	0.54	0.97	0.67	0.63	0.65	0.46	0.56	0.83	0.81	0.69	0.46
	Yen Bai	Mean	0.40	0.40	0.62	0.43	0.26	0.32	0.25	0.23	0.20	0.22	0.24	0.15	0.31
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.64	0.60	0.88	0.53	0.38	0.77	0.36	0.41	0.27	0.30	0.30	0.25	0.88
		Min-w	0.06	0.08	0.51	0.27	0.16	0.13	0.10	0.05	0.12	0.12	0.16	0.07	0.05

Table 4.18.2 Particulate matter component: K⁺ - Measured by FP with PM2.5 cyclone

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.19.1 Particulate matter component: Mg²⁺Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.19	0.04	0.11	0.03	0.08	0.17	0.12	0.24	0.16	0.10	0.12	0.11	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.26	0.08	0.13	0.06	0.16	0.21	0.22	0.24	0.16	0.15	0.15	0.13	0.26
		Min-2w	0.13	<0.01	0.09	<0.01	0.02	0.12	0.02	0.24	0.16	0.07	0.09	0.09	<0.01
	Serpong	Mean	0.09	0.10	0.10	0.04	0.04	0.11	0.17	0.15	0.11	0.06	0.08	0.08	0.09
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.10	0.11	0.16	0.04	0.07	0.15	0.17	0.19	0.20	0.09	0.08	0.11	0.20
		Min-2w	0.08	0.09	0.02	0.04	<0.01	0.08	0.16	0.11	0.03	0.02	0.08	0.05	<0.01
	Bandung	Mean	0.10	0.14	0.13	***	***	***	0.10	0.15	0.14	0.13	0.10	0.10	0.12
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	0.14	0.20	0.13	***	***	***	0.16	0.18	0.16	0.18	0.10	0.13	0.20
		Min-2w	0.02	0.10	0.13	***	***	***	0.02	0.12	0.13	0.12	0.09	0.08	0.02
Japan	Rishiri	Mean	0.16	0.28	0.56	0.23	0.22	0.13	0.09	0.11	0.26	0.39	0.35	0.17	0.23
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.19	0.36	0.56	0.27	0.28	0.19	0.09	0.12	0.28	0.54	0.44	0.22	0.56
		Min-2w	0.13	0.20	0.56	0.18	0.16	0.08	0.09	0.11	0.24	0.25	0.26	0.14	0.08
	Ochiishi	Mean	0.33	0.22	0.35	0.26	0.24	0.15	0.07	0.18	0.26	0.26	0.44	0.18	0.24
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.42	0.24	0.36	0.33	0.36	0.16	0.07	0.21	0.39	0.39	0.52	0.21	0.52
		Min-2w	0.25	0.20	0.33	0.18	0.11	0.13	0.07	0.14	0.13	0.14	0.35	0.15	0.07
	Sado-seki	Mean	0.28	0.42	0.49	0.45	0.26	0.13	0.09	0.13	0.26	0.33	0.36	0.45	0.30
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.36	0.56	0.59	0.47	0.27	0.17	0.12	0.19	0.30	0.33	0.51	0.45	0.59
		Min-2w	0.20	0.28	0.39	0.43	0.25	0.09	0.06	0.08	0.21	0.32	0.13	0.45	0.06
	Happo* ¹	Mean	<0.01	0.03	0.03	0.02		0.03	<0.01	0.02	<0.01	0.02	0.04	<0.01	0.02
		%	100	100	100	100		100	100	100	100	100	100	100	100
		Max-2w	<0.01	0.05	0.04	0.02		0.04	<0.01	0.03	0.01	0.03	0.04	<0.01	0.05
		Min-2w	<0.01	<0.01	0.02	0.02		0.02	<0.01	0.02	<0.01	0.01	0.04	<0.01	<0.01
	Ijira	Mean	0.04	0.04	0.06	0.05	0.03	0.02	<0.01	0.03	0.04	0.03	0.02	0.01	0.03
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.04	0.04	0.07	0.07	0.03	0.04	0.01	0.05	0.05	0.04	0.05	0.01	0.07
		Min-2w	0.04	0.04	0.05	0.04	0.02	<0.01	<0.01	0.02	0.04	0.01	<0.01	<0.01	<0.01
	Oki	Mean	0.70	0.52	0.62	0.60	0.29	0.18	0.15	0.24	0.40	0.32	0.38	0.92	0.44
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	1.03	0.52	0.64	0.60	0.30	0.25	0.19	0.34	0.42	0.35	0.45	1.28	1.28
		Min-2w	0.52	0.52	0.61	0.60	0.27	0.12	0.12	0.14	0.38	0.30	0.34	0.57	0.12
	Yusuhara	Mean	0.03	0.05	0.07	0.08	0.06	0.04	0.02	0.04	0.04	0.05	0.06	0.05	0.05
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.03	0.07	0.09	0.09	0.06	0.05	0.04	0.05	0.06	0.06	0.07	0.05	0.09
		Min-2w	0.03	0.04	0.05	0.06	0.06	0.02	0.01	0.02	0.03	0.04	0.05	0.05	0.01
	Hedo	Mean	0.83	0.77	0.72	0.75	0.44	0.38	0.27	0.31	0.81	0.93	0.68	0.78	0.63
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.87	0.78	0.77	0.77	0.45	0.51	0.28	0.33	1.12	0.96	0.96	0.86	1.12
		Min-2w	0.78	0.76	0.67	0.73	0.42	0.26	0.26	0.28	0.49	0.91	0.36	0.70	0.26
	Ogasawara	Mean	0.37	0.45	0.45	0.40	0.25	0.21	0.31	0.30	0.28	0.40	0.40	0.36	0.34
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.40	0.45	0.45	0.41	0.29	0.27	0.35	0.34	0.39	0.51	0.65	0.40	0.65
		Min-2w	0.35	0.45	0.45	0.40	0.22	0.15	0.27	0.25	0.17	0.28	0.23	0.32	0.15
	Tokyo	Mean	0.06	0.09	0.12	0.12	0.16	0.14	0.10	0.14	0.15	0.11	0.10	0.05	0.11
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.06	0.11	0.14	0.14	0.17	0.16	0.11	0.17	0.16	0.13	0.14	0.06	0.17
		Min-2w	0.06	0.06	0.10	0.11	0.15	0.11	0.10	0.12	0.14	0.10	0.06	0.04	0.04
	Niigata-maki	Mean				0.24	0.12	0.11	0.05	0.10	0.08	0.16	0.16	0.14	0.13
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.27	0.13	0.15	0.05	0.13	0.11	0.17	0.25	0.14	0.27
		Min-2w				0.21	0.11	0.07	0.05	0.07	0.05	0.16	0.01	0.13	0.01
	Tsushima	Mean				0.17	0.10	0.06	0.05	0.12	0.36	0.17	0.13	0.08	0.13
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.19	0.12	0.07	0.07	0.15	0.56	0.23	0.15	0.09	0.56
		Min-2w				0.16	0.09	0.05	0.04	0.08	0.17	0.12	0.09	0.07	0.04

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.19.1 Particulate matter component: Mg²⁺ (continued)Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.08	0.13	0.08	***	0.04	0.05	0.05	0.06	0.04	0.04	0.04	0.03	0.06
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	0.09	0.18	0.09	***	0.09	0.09	0.08	0.09	0.05	0.06	0.10	0.04	0.18
		Min-w	0.07	0.04	0.07	***	0.02	0.04	0.03	0.03	0.02	0.03	0.02	0.03	0.02
	Tanah Rata	Mean	0.04	0.03	0.03	<0.01	0.02	0.01	0.02	0.02	<0.01	0.01	<0.01	<0.01	0.02
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	0.06	0.06	0.05	<0.01	0.03	0.02	0.04	0.02	0.02	0.02	0.01	0.01	0.06
		Min-w	0.03	<0.01	0.02	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Danum Valley	Mean	0.02	0.10	***	***	***	0.01	<0.01	0.02	<0.01	***	***	0.02	0.03
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	0.02	0.12	***	***	***	0.01	0.01	0.02	<0.01	***	***	0.02	0.12
		Min-2w	0.02	0.09	***	***	***	0.01	<0.01	0.02	<0.01	***	***	0.02	<0.01
Mongolia	Ulaanbaatar	Mean	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	0.01	<0.01
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.03	0.02	<0.01	0.06	0.02	<0.01	0.04	0.06	0.02	0.02	<0.01	0.03	0.06
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	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	97	41	94
		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	0.10	0.39	0.01	0.14	0.05	9.09	0.03	0.09	<0.01	<0.01	0.05	0.07	1.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.19	0.73	0.03	0.27	0.10	19.61	0.05	0.11	<0.01	<0.01	0.07	0.21	19.61
		Min-2w	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	<0.01	<0.01	0.04	<0.01	<0.01
Philippines	Metro Manila ^{*2}	Mean	0.25	0.22	0.07		0.12	0.07	0.09	0.12	0.10	0.10	0.13	0.05	0.13
		%	100	94	100		100	100	100	100	100	100	100	100	99
		Max-w	0.36	0.25	0.07		0.12	0.10	0.10	0.21	0.11	0.15	0.28	0.15	0.36
		Min-w	0.12	0.18	0.07		0.12	0.04	0.08	0.04	0.08	0.07	<0.01	<0.01	<0.01
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy ^{*1}	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
		%	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
		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
	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	38	100	100	90	100	100	100	100	93
		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	<0.01	0.02	<0.01	0.02	0.01	0.01	<0.01	0.01	0.03	0.04	0.04	0.02
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	0.02	0.02	0.02	<0.01	0.04	0.02	0.02	0.03	0.02	0.06	0.07	0.06	0.07
		Min-w	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.01	<0.01
	Primorskaya	Mean	<0.01	0.02	0.02	0.13	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.01	0.03	0.04	0.26	0.04	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.26
		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
Thailand	Bangkok	Mean	0.11	0.17	0.09	***	***	***	0.02	0.02	0.04	0.04	0.05	0.08	0.07
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	0.14	0.23	0.18	***	***	***	0.03	0.03	0.05	0.05	0.09	0.10	0.23
		Min-10d	0.08	0.13	0.02	***	***	***	0.02	0.02	0.03	0.03	<0.01	0.06	<0.01
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.19.1 Particulate matter component: Mg²⁺ (continued)

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	0.37	0.31	0.26	0.23	0.26	0.20	0.35	0.17	0.11	0.16	0.35	0.12	0.24
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.61	0.37	0.43	0.30	0.40	0.28	0.37	0.25	0.13	0.21	0.38	0.17	0.61
		Min-w	0.30	0.19	0.13	0.11	0.15	0.12	0.33	0.09	0.09	0.10	0.30	0.04	0.04
	Hoa Binh	Mean	0.10	0.05	0.09	0.05	0.06	0.07	0.06	0.08	0.10	0.07	0.10	0.09	0.08
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.17	0.07	0.12	0.06	0.08	0.09	0.09	0.10	0.13	0.09	0.14	0.16	0.17
		Min-w	0.06	0.03	0.05	0.05	0.05	0.05	0.04	0.06	0.07	0.05	0.06	0.06	0.03
	Can Tho	Mean	0.51	0.44	0.42	0.23	0.30	0.42	0.51	0.48	0.44	0.44	0.44	0.45	0.42
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.63	0.60	0.71	0.28	0.36	0.60	0.62	0.63	0.62	0.63	0.63	0.67	0.71
		Min-w	0.26	0.32	0.24	0.20	0.22	0.18	0.40	0.36	0.34	0.32	0.26	0.26	0.18
	Ho Chi Minh	Mean	0.75	0.68	0.63	0.72	0.61	0.63	0.58	0.64	0.71	0.62	0.73	0.78	0.68
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.93	0.83	0.81	0.97	0.62	0.69	0.89	0.81	0.81	0.81	0.91	0.91	0.97
		Min-w	0.62	0.62	0.44	0.54	0.60	0.54	0.42	0.48	0.65	0.44	0.50	0.60	0.42
	Yen Bai	Mean	0.26	0.15	0.29	0.17	0.15	0.23	0.45	0.19	0.09	0.06	0.08	0.06	0.18
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	0.36	0.24	0.38	0.24	0.21	0.37	0.51	0.30	0.11	0.09	0.11	0.09	0.51
		Min-w	0.16	0.08	0.26	0.12	0.08	0.11	0.40	0.09	0.07	0.04	0.06	0.03	0.03

Table 4.19.2 Particulate matter component: Mg²⁺ - Measured by FP with PM2.5 cyclone

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.20.1 Particulate matter component: Ca²⁺Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Cambodia	Phnom Penh	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
Indonesia	Jakarta	Mean	0.45	0.14	0.26	0.11	0.68	1.12	0.60	1.11	0.83	0.71	0.86	0.55	0.61
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.48	0.27	0.49	0.17	1.19	1.17	0.93	1.19	0.83	0.94	1.07	0.56	1.19
		Min-2w	0.43	<0.01	0.02	0.05	0.14	1.07	0.28	1.04	0.83	0.45	0.64	0.53	<0.01
	Serpong	Mean	0.34	0.34	0.27	0.36	0.34	0.63	0.83	0.86	0.52	0.35	0.37	0.17	0.44
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.45	0.35	0.34	0.41	0.48	0.73	0.84	1.16	0.92	0.46	0.40	0.21	1.16
		Min-2w	0.22	0.34	0.21	0.31	0.21	0.53	0.82	0.55	0.13	0.23	0.35	0.13	0.13
	Bandung	Mean	0.58	1.14	1.02	***	***	***	0.79	1.30	1.00	0.83	0.81	0.75	0.89
		%	100	100	23	***	***	***	100	100	100	100	100	100	69
		Max-2w	0.81	1.33	1.02	***	***	***	1.20	1.77	1.19	1.14	0.90	0.84	1.77
		Min-2w	0.12	0.97	1.02	***	***	***	0.15	1.09	0.84	0.66	0.75	0.68	0.12
Japan	Rishiri	Mean	0.09	0.16	0.36	0.12	0.15	0.08	0.04	0.05	0.12	0.21	0.22	0.10	0.13
		%	100	100	50	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.11	0.19	0.36	0.13	0.16	0.10	0.05	0.07	0.12	0.29	0.31	0.11	0.36
		Min-2w	0.07	0.13	0.36	0.10	0.13	0.05	0.02	0.03	0.11	0.12	0.12	0.10	0.02
	Ochiishi	Mean	0.12	0.09	0.14	0.11	0.13	0.06	0.03	0.07	0.09	0.10	0.20	0.08	0.10
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.16	0.10	0.14	0.14	0.18	0.08	0.03	0.08	0.13	0.14	0.26	0.10	0.26
		Min-2w	0.09	0.08	0.13	0.08	0.05	0.05	0.02	0.05	0.05	0.06	0.13	0.07	0.02
	Sado-seki	Mean	0.13	0.23	0.32	0.31	0.35	0.13	0.04	0.08	0.13	0.20	0.21	0.19	0.19
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.16	0.36	0.35	0.33	0.41	0.24	0.05	0.09	0.15	0.23	0.38	0.21	0.41
		Min-2w	0.11	0.11	0.29	0.28	0.30	0.07	0.03	0.07	0.12	0.17	0.08	0.18	0.03
	Happo* ¹	Mean	<0.01	0.19	0.17	0.16	0.16	0.36	0.02	0.05	0.01	0.06	0.09	0.02	0.10
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	<0.01	0.37	0.28	0.16	0.16	0.64	0.04	0.06	0.02	0.09	0.09	0.02	0.64
		Min-2w	<0.01	0.01	0.06	0.16	0.16	0.07	<0.01	0.04	0.01	0.04	0.09	0.02	<0.01
	Ijira	Mean	0.05	0.04	0.15	0.13	0.08	0.11	0.03	0.07	0.06	0.05	0.05	0.04	0.07
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.06	0.05	0.19	0.14	0.10	0.20	0.05	0.10	0.06	0.07	0.06	0.04	0.20
		Min-2w	0.05	0.04	0.10	0.12	0.06	0.05	<0.01	0.04	0.05	0.03	0.03	0.03	<0.01
	Oki	Mean	0.29	0.41	0.47	0.40	0.24	0.14	0.08	0.13	0.21	0.24	0.27	0.44	0.27
		%	100	48	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.40	0.41	0.54	0.45	0.25	0.24	0.08	0.17	0.26	0.29	0.46	0.61	0.61
		Min-2w	0.23	0.41	0.40	0.35	0.22	0.09	0.08	0.09	0.17	0.19	0.17	0.26	0.08
	Yusuhara	Mean	0.04	0.15	0.21	0.24	0.16	0.17	0.02	0.06	0.05	0.11	0.13	0.09	0.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.05	0.25	0.34	0.26	0.18	0.34	0.03	0.07	0.06	0.12	0.23	0.09	0.34
		Min-2w	0.04	0.06	0.08	0.22	0.14	0.04	0.02	0.06	0.05	0.09	0.09	0.09	0.02
	Hedo	Mean	0.41	0.55	0.60	0.74	0.47	0.19	0.12	0.16	0.31	0.44	0.32	0.35	0.38
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.44	0.73	0.62	0.80	0.61	0.22	0.12	0.17	0.43	0.47	0.42	0.42	0.80
		Min-2w	0.37	0.38	0.58	0.68	0.33	0.17	0.12	0.14	0.19	0.40	0.15	0.28	0.12
	Ogasawara	Mean	0.16	0.33	0.26	0.34	0.21	0.09	0.13	0.22	0.10	0.14	0.15	0.15	0.18
		%	55	100	100	100	100	100	100	100	100	100	100	100	96
		Max-2w	0.17	0.33	0.28	0.38	0.28	0.11	0.13	0.33	0.13	0.18	0.23	0.16	0.38
		Min-2w	0.16	0.33	0.23	0.31	0.14	0.07	0.12	0.10	0.07	0.10	0.10	0.14	0.07
	Tokyo	Mean	0.34	0.47	0.47	0.36	0.44	0.39	0.24	0.47	0.29	0.29	0.45	0.44	0.39
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.36	0.51	0.63	0.36	0.50	0.52	0.29	0.53	0.31	0.33	0.58	0.47	0.63
		Min-2w	0.32	0.44	0.31	0.36	0.37	0.32	0.20	0.42	0.27	0.25	0.31	0.40	0.20
	Niigata-maki	Mean				0.21	0.22	0.12	0.04	0.11	0.07	0.13	0.13	0.07	0.12
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.25	0.24	0.16	0.04	0.11	0.10	0.14	0.22	0.07	0.25
		Min-2w				0.18	0.21	0.07	0.03	0.11	0.04	0.12	<0.01	0.07	<0.01
	Tsushima	Mean				0.33	0.18	0.12	0.03	0.11	0.25	0.21	0.27	0.21	0.19
		%				100	100	100	100	100	100	100	100	100	76
		Max-2w				0.34	0.22	0.15	0.04	0.14	0.40	0.27	0.49	0.26	0.49
		Min-2w				0.32	0.14	0.06	0.02	0.09	0.10	0.16	0.15	0.16	0.02

* 1: April and May were combined because the sampling period was from 2020/04/03 to 2020/6/01 due to the influence of COVID-19.

Table 4.20.1 Particulate matter component: Ca²⁺ (continued)Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Lao PDR	Vientiane	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-m	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-m	***	***	***	***	***	***	***	***	***	***	***	***	***
Malaysia	Petaling Jaya	Mean	0.37	0.44	0.43	***	0.13	0.41	0.43	0.51	0.26	0.38	0.30	0.30	0.36
		%	100	100	75	***	80	100	100	100	100	100	100	100	88
		Max-w	0.56	0.54	0.53	***	0.18	0.55	0.56	0.63	0.33	0.50	0.43	0.34	0.63
		Min-w	0.18	0.34	0.33	***	0.10	0.33	0.35	0.39	0.19	0.34	0.19	0.27	0.10
	Tanah Rata	Mean	0.08	0.04	0.07	<0.01	0.06	0.08	0.13	0.12	0.03	0.06	0.03	0.03	0.06
		%	97	100	100	25	31	50	100	100	100	100	100	78	82
		Max-w	0.15	0.08	0.12	<0.01	0.08	0.13	0.38	0.20	0.03	0.11	0.05	0.04	0.38
		Min-w	0.02	0.01	0.03	<0.01	0.04	0.04	0.03	0.05	0.01	<0.01	<0.01	0.02	<0.01
	Danum Valley	Mean	<0.01	0.04	***	***	***	0.02	0.01	0.02	0.01	***	***	<0.01	0.02
		%	100	100	***	***	***	33	100	50	50	***	***	67	42
		Max-2w	<0.01	0.04	***	***	***	0.02	0.03	0.02	0.01	***	***	<0.01	0.04
		Min-2w	<0.01	0.03	***	***	***	0.02	<0.01	0.02	0.01	***	***	<0.01	<0.01
Mongolia	Ulaanbaatar	Mean	0.25	0.39	0.36	0.91	0.28	0.38	1.34	0.53	0.23	0.35	0.10	0.68	0.50
		%	100	100	100	100	100	100	100	100	75	100	100	60	94
		Max-w	0.89	0.87	0.88	1.25	0.58	1.11	4.68	1.40	0.44	0.65	0.17	1.81	4.68
		Min-w	<0.01	0.12	<0.01	0.30	0.08	<0.01	0.25	0.14	0.12	0.10	0.06	0.07	<0.01
	Terelj	Mean	0.01	0.01	0.02	0.04	0.02	0.08	0.10	0.03	0.08	0.08	0.07	0.02	0.05
		%	100	100	100	100	100	100	100	100	100	100	97	41	94
		Max-2w	0.02	0.03	0.04	0.07	0.02	0.09	0.14	0.04	0.11	0.13	0.09	0.02	0.14
		Min-2w	0.01	<0.01	0.01	0.01	0.01	0.06	0.05	0.02	0.04	0.04	0.04	0.02	<0.01
Myanmar	Yangon	Mean	1.02	2.81	0.08	0.89	0.21	0.10	0.02	0.43	<0.01	0.06	0.58	0.49	0.54
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	2.01	5.33	0.15	1.78	0.42	0.30	0.05	0.43	<0.01	0.12	0.71	1.46	5.33
		Min-2w	0.02	0.29	<0.01	<0.01	<0.01	<0.01	<0.01	0.43	<0.01	<0.01	0.45	<0.01	<0.01
Philippines	Metro Manila ^{*2}	Mean	1.67	1.39	0.19	0.87	0.77	1.23	0.64	1.12	1.14	0.98	1.03	1.08	1.08
		%	100	94	100	100	100	100	100	100	100	100	100	100	99
		Max-w	3.01	1.95	0.19	0.87	1.16	1.31	1.46	1.56	1.38	1.44	1.71	3.01	3.01
		Min-w	0.57	0.86	0.19	0.87	0.39	1.18	0.15	0.72	0.99	0.57	0.42	0.15	0.15
	Los Baños	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-w	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	Mondy ^{*1}	Mean	<0.01	0.01	<0.01	<0.01	0.04	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	0.02	<0.01	<0.01	0.07	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07
		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	0.06	0.09	0.04	0.03	0.03	0.09	0.04	0.04	0.02	0.02	0.03	0.04
		%	100	100	100	100	38	100	100	90	100	100	100	100	93
		Max-w	0.10	0.09	0.19	0.06	0.05	0.06	0.30	0.07	0.06	0.03	0.04	0.08	0.30
		Min-w	<0.01	0.03	0.02	0.01	0.02	0.01	0.01	0.02	0.02	0.01	<0.01	0.01	<0.01
	Irkutsk	Mean	0.09	0.06	0.11	0.05	0.12	0.09	0.07	0.06	0.10	0.30	0.25	0.28	0.13
		%	100	100	100	100	100	100	100	100	75	100	100	75	96
		Max-w	0.20	0.18	0.14	0.07	0.26	0.14	0.09	0.19	0.16	0.42	0.31	0.38	0.42
		Min-w	0.03	0.01	0.05	0.04	0.03	0.04	0.03	0.01	0.05	0.23	0.17	0.09	0.01
	Primorskaya	Mean	0.07	0.12	0.19	1.16	0.18	0.06	0.04	0.05	0.04	0.03	0.04	0.07	0.17
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-2w	0.07	0.19	0.33	2.24	0.32	0.07	0.05	0.05	0.05	0.04	0.04	0.07	2.24
		Min-2w	0.07	0.06	0.06	0.09	0.03	0.05	0.04	0.05	0.04	0.03	0.04	0.06	0.03
Thailand	Bangkok	Mean	0.93	0.97	0.37	***	***	***	0.33	0.26	0.29	0.86	0.86	1.71	0.73
		%	100	100	100	***	***	***	100	100	100	100	100	100	75
		Max-10d	1.16	1.27	0.83	***	***	***	0.53	0.42	0.44	0.98	1.75	1.95	1.95
		Min-10d	0.67	0.81	0.03	***	***	***	0.13	0.17	0.05	0.71	0.20	1.48	0.03
	Pathumthani	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
	Khanchanaburi (Vajiralongkorn Dam)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-2w	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-2w	***	***	***	***	***	***	***	***	***	***	***	***	***

* 2: March and April were combined because the sampling period was from 2020/03/03 to 2020/5/20 due to the influence of COVID-19.

* 3: April and May were combined because the sampling period was from 2020/03/26 to 2020/05/20 due to the influence of COVID-19.

Table 4.20.1 Particulate matter component: Ca²⁺ (continued)

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Vietnam	Hanoi	Mean	5.49	4.14	3.86	3.64	3.76	2.95	6.80	3.30	2.28	3.23	8.97	3.89	4.38
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	7.94	5.67	6.05	4.62	4.86	4.02	7.75	5.03	2.89	4.60	9.72	5.49	9.72
		Min-w	3.84	2.36	2.03	2.77	2.31	1.12	5.36	1.64	1.96	1.40	7.65	2.73	1.12
	Hoa Binh	Mean	2.47	1.84	2.38	2.34	2.80	2.20	1.67	2.48	2.67	1.72	2.02	1.51	2.15
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	2.88	2.65	2.98	3.13	3.08	2.54	1.91	3.23	3.44	2.01	2.23	1.74	3.44
		Min-w	2.03	0.81	1.50	1.58	2.53	1.53	1.43	1.86	2.05	1.38	1.87	1.29	0.81
	Can Tho	Mean	1.39	1.63	1.35	1.91	1.83	2.10	1.53	1.91	1.90	1.59	1.44	1.91	1.70
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	1.65	2.15	2.15	2.66	2.39	2.47	2.15	2.15	2.17	1.85	1.73	2.39	2.66
		Min-w	1.19	1.15	0.66	0.93	1.55	1.81	1.05	1.45	1.55	1.21	1.11	1.55	0.66
	Ho Chi Minh	Mean	2.38	2.51	3.02	2.78	2.78	3.42	2.41	3.34	2.74	3.20	3.15	2.67	2.85
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	3.56	3.64	5.15	3.64	3.18	5.15	3.84	5.15	3.84	4.16	4.37	3.26	5.15
		Min-w	1.21	1.45	1.97	1.85	1.85	2.64	1.59	1.85	1.91	1.21	1.45	1.85	1.21
	Yen Bai	Mean	3.75	3.43	5.10	3.36	3.21	3.62	4.68	3.54	1.99	1.77	1.90	1.31	3.12
		%	100	100	100	100	100	100	100	100	100	100	100	100	100
		Max-w	4.81	4.36	6.27	3.94	3.96	4.62	5.81	4.94	2.21	2.25	2.04	2.22	6.27
		Min-w	2.55	2.73	4.43	2.81	2.32	2.50	3.53	1.52	1.72	1.38	1.83	0.87	0.87

Table 4.20.2 Particulate matter component: Ca²⁺ - Measured by FP with PM2.5 cyclone

 Unit : µg/m³

Country	Site		2020												Annual
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Republic of Korea	Kanghwa	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Cheju (Kosan)	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***
	Imsil	Mean	***	***	***	***	***	***	***	***	***	***	***	***	***
		%	***	***	***	***	***	***	***	***	***	***	***	***	***
		Max-d	***	***	***	***	***	***	***	***	***	***	***	***	***
		Min-d	***	***	***	***	***	***	***	***	***	***	***	***	***

Terms and abbreviations are given in Table 4.2.

Table 4.21 Annual SO₂ concentration from 2006 to 2020

unit: ppb

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	FP					1.8	1.5	1.3	1.1	0.8	0.5	0.6	1.3	***	***	***
China	Jinyunshan	AT	17.2	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
	Hongwen	AT	9.4	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
		FP		5.7	7.3	7.9	8.4	6.7	***	***	***	***	2.9	2.9			
	Xiang Zhou	AT	8.2	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
	Wuzhishan	AT														0.2	0.3
	Lijiang	AT														0.1	0.1
Indonesia	Jakarta	FP									6.0	5.4	2.5	1.7	2.7	1.8	3.2
		PS		11.0	7.4	8.3	6.3	5.0	5.7	5.3	4.5	5.2	5.6	4.4	6.2	6.5	5.4
	Serpong	FP	0.5	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
	Kototabang	PS		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
	Bandung	FP									4.1	1.3	1.9	1.7	4.3	4.2	2.7
		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
Japan	Rishiri	AT	0.2	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
		FP	0.2	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
	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
		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
	Tappi	AT	0.5	0.5	0.6	***	***	0.4	0.4	0.5	0.5	0.3	0.3	0.3	0.3		
		FP	0.5	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	0.5	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
		FP	0.5	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	0.6	(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
		FP	0.5	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
	Ijira	AT	0.2	0.4	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	<0.1	0.2	0.1	0.2
		FP	0.4	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
	Oki	AT	0.7	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
		FP	0.6	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
	Banryu	AT	0.6	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	0.8	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	0.9	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
		FP	0.9	1.0	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.5	0.5	0.5	0.4	0.6	0.4
	Hedo	AT	0.3	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
		FP	0.5	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
	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	0.3	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
	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
	Niigata-maki	AT														0.2	0.1
		FP															0.3
	Tsushima	FP															0.5
Lao PDR	Vientiane	FP										0.4	0.4	***	***	***	***
Malaysia	Petaling Jaya	FP	6.3	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
	Tanah Rata	FP	0.1	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
	Danum Valley	FP	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
Mongolia	Ulaanbaatar	AT									8.9	9.8	10.0	11.5	7.3	6.9	12.2
		FP	4.8	4.3	1.8	4.3	9.1	6.1	***	***	***	***	7.5	4.8	3.4	5.0	5.0
	Terelj	FP	0.5	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
Philippines	Metro Manila	FP	2.1	2.7	1.2	***	2.2	***	***	***	***	***	***	***	***	0.4	2.4
	Los Banos	FP	0.3	0.4	0.3	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	<0.1	<0.1	0.4	<0.1	1.1	***	0.2	0.1	0.1	0.1	0.2	***	***	***	***
Republic of Korea	Kanghwa	AT	3.4	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
	Cheju	AT	3.4	2.3	2.2	2.7	2.5	2.5	0.9	0.6	0.5	0.5	0.5	0.8	1.0	0.7	0.7
	Imsil	AT	1.8	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
Russia	Mondy	FP	0.7	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
	Listvyanka	FP	3.5	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
	Irkutsk	FP	4.0	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
	Primorskaya	FP	1.2	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
Thailand	Bangkok	AT	4.1	0.8	2.1	1.9	1.6	1.6	1.5	1.9	1.4						
		FP							0.9	0.8	1.6	0.6	0.8	0.8	0.9	0.8	0.7
	Samutprakarn	AT	6.5	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	2.7	1.8	0.5	1.1	1.2	0.6	***	***	***	***	***	***	***	***	***
	Khanchanaburi	AT	1.3	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	***
	Mae Hia	FP	0.8	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	0.8	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
	Si Phum	AT								1.4	1.7	1.4	1.1	1.1	1.2	1.2	1.2
	Sakaerat	FP	0.3	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
Vietnam	Hanoi	FP	3.9	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
	Hoa Binh	FP	2.0	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
	Can Tho	FP									1.2	1.0	0.3	0.2	0.6	0.5	0.6
	Ho Chi Minh	FP									1.6	1.5	0.5	0.4	0.6	0.6	0.6
	Yen Bai	FP										4.2	1.5	0.8	0.8	0.5	0.4

Terms and abbreviations are given in Table 4.2.

Table 4.22 Annual HNO₃ concentration from 2006 to 2020

																	unit: ppb
Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.2	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
	Bandung	FP									0.7	0.5	0.5	0.4	0.8	0.9	0.4
Japan	Rishiri	FP	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ochiishi	FP			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Tappi	FP	0.1	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	0.3	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	0.3	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
	Ijira	FP	0.4	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
	Oki	FP	0.2	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
	Banryu	FP	0.3	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	0.5	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
	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
	Niigata-maki	FP															0.1
	Tsushima	FP															0.4
Lao PDR	Vientiane	FP										0.3	0.2	***	***	***	***
Malaysia	Petaling Jaya	FP	1.8	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
	Tanah Rata	FP	<0.1	0.2	0.1	0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	***	<0.1
	Danum Valley	FP	<0.1	<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
Mongolia	Ulaanbaatar	FP	0.1	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	<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
Philippines	Metro Manila	FP	0.3	0.4	0.4	***	0.2	***	***	***	***	***	***	***	***	0.1	0.3
	Los Banos	FP	<0.1	0.2	<0.1	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	<0.1	<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	0.4	0.7	0.5	0.5	0.4	***	***	0.4	0.5	0.3	0.4	0.1	0.1	<0.1	***
	Cheju	FP with PM _{2.5} cyclone	0.5	***	0.7	0.6	0.5	***	***	0.4	0.8	0.5	0.6	0.3	0.4	<0.1	***
	Imsil	FP with PM _{2.5} cyclone	0.6	0.4	0.4	0.5	0.3	***	***	0.6	0.6	0.4	0.7	0.6	0.4	<0.1	***
Russia	Mondy	FP	<0.1	<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
	Listvyanka	FP	0.2	<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
	Irkutsk	FP	<0.1	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
	Primorskaya	FP	0.5	<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
Thailand	Bangkok	FP	1.0	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	0.6	0.8	0.3	0.7	0.9	0.3	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.2	<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	0.2	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	0.3	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	0.9	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
	Hoa Binh	FP	0.3	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
	Can Tho	FP									0.5	0.4	0.2	<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
	Yen Bai	FP										0.7	0.6	1.3	0.5	0.4	0.6

Terms and abbreviations are given in Table 4.2.

Table 4.23 Annual HCl concentration from 2006 to 2020

unit: ppb																	
Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.5	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
	Bandung	FP									0.8	0.5	1.1	0.9	0.9	0.9	0.7
Japan	Rishiri	FP	0.4	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
	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
	Tappi	FP	0.5	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	0.9	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	0.2	<0.1	<0.1	<0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
	Ijira	FP	0.2	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
	Oki	FP	0.9	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
	Banryu	FP	0.8	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	0.4	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
	Hedo	FP	0.9	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
	Ogasawara	FP	0.4	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
	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
	Niigata-maki	FP															0.5
	Tsushima	FP															
Lao PDR	Vientiane	FP										0.3	0.2	***	***	***	***
Malaysia	Petaling Jaya	FP	1.6	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
	Tanah Rata	FP	<0.1	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
	Danum Valley	FP	0.2	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
Mongolia	Ulaanbaatar	FP	1.0	0.9	0.7	0.7	1.7	1.1	***	***	***	***	11.3	1.7	0.8	0.4	0.7
	Terelj	FP	0.4	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
Philippines	Metro Manila	FP	0.5	0.7	0.7	***	0.8	***	***	***	***	***	***	***	***	0.6	0.4
	Los Banos	FP	0.3	0.8	0.4	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.2	<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	0.2	<0.1	0.1	0.2	***	***	0.3	0.2	0.1	<0.1	<0.1	<0.1	0.7	***
	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	0.2	1.1	***
	Imsil	FP with PM _{2.5} cyclone	0.3	0.2	0.1	0.2	0.1	***	***	0.2	0.2	0.2	0.2	0.2	0.2	1.2	***
Russia	Mondy	FP	<0.1	<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
	Listvyanka	FP	0.2	<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
	Irkutsk	FP	0.1	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
	Primorskaya	FP	0.2	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
Thailand	Bangkok	FP	1.5	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	1.1	1.2	0.4	0.9	0.7	0.5	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.3	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	0.5	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	0.4	0.3	0.2	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	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
	Hoa Binh	FP	1.5	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
	Can Tho	FP									1.7	1.4	1.2	0.9	1.8	1.7	1.8
	Ho Chi Minh	FP									1.6	1.1	1.5	1.3	1.6	3.3	1.5
	Yen Bai	FP										2.4	2.4	2.3	1.8	1.4	1.9

Terms and abbreviations are given in Table 4.2.

Table 4.24 Annual NH₃ concentration from 2006 to 2020

unit: ppb ait: ppb

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	6.2	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
	Bandung	FP									8.4	9.4	6.6	8.6	8.7	10.5	10.1
		PS													9.8	11.9	20.7
Japan	Rishiri	FP	0.4	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
	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
	Tappi	FP	0.3	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	0.6	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	0.4	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
	Ijira	FP	1.3	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
	Oki	FP	0.7	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
	Banryu	FP	1.1	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	0.4	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
	Hedo	FP	0.9	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
	Ogasawara	FP	0.5	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
	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
	Niigata-maki	FP															1.1
	Tsushima	FP															0.9
Lao PDR	Vientiane	FP										2.6	2.7	***	***	***	***
Malaysia	Petaling Jaya	FP	16.9	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
	Tanah Rata	FP	1.2	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
	Danum Valley	FP	1.2	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
Mongolia	Ulaanbaatar	FP	10.3	10.4	10.7	7.4	14.8	8.7	***	***	***	***	***	9.7	7.3	7.0	5.8
	Terelj	FP	1.6	1.3	1.2	1.9	1.4	1.5	***	***	***	***	***	1.7	2.1	1.3	1.2
Myanmar	Yangon	FP						15.5	10.2	6.2	8.9	7.6	7.1	5.8	2.0	2.1	1.0
Philippines	Metro Manila	FP	3.8	6.6	9.2	***	7.5	***	***	***	***	***	***	***	***	13.1	9.6
	Los Banos	FP	2.0	2.7	3.1	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.2	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	4.8	9.7	3.4	3.2	4.6	***	***	7.4	3.7	4.3	0.8	0.4	0.5	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	***
	Imsil	FP with PM _{2.5} cyclone	5.9	5.0	5.0	6.0	6.5	***	***	3.0	6.3	5.6	4.3	8.4	9.4	10.8	***
Russia	Mondy	FP	1.9	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
	Listvyanka	FP	4.4	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
	Irkutsk	FP	3.7	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
	Primorskaya	FP	2.7	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
Thailand	Bangkok	FP	10.1	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	7.0	9.2	3.1	8.1	7.8	5.2	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	2.1	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	3.2	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	2.8	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	2.8	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
	Hoa Binh	FP	2.7	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
	Can Tho	FP									2.6	2.5	3.3	3.4	4.9	5.4	4.9
	Ho Chi Minh	FP									3.0	2.8	4.3	5.6	4.6	4.1	4.6
	Yen Bai	FP										2.9	2.8	3.5	3.2	3.4	2.5

Terms and abbreviations are given in Table 4.2.

1) NH₃ concentrations at Bandung site were measured by two methods: Filter pack and Passive sampler. (FP / PS)

Table 4.25 Annual NO concentration from 2006 to 2020

unit: ppb

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
China	Jinyunshan	AT(DOAS)	2.6	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
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
	Tappi	AT(CLD)	<0.1	<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	0.3	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
	Oki	AT(CLD)	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Banryu	AT(CLD)	0.3	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	<0.1	0.2	<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
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
Philippines	Metro Manila	AT(CLD)										17.6	13.9	***	***	***	***
Thailand	Bangkok	AT(CLD)	11.1	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
	Samutprakarn	AT(CLD)	16.4	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)	0.6	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)	2.5	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
	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

Terms and abbreviations are given in Table 4.2.

Table 4.26 Annual NO₂ concentration from 2006 to 2020

unit: ppb

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
China	Hongwen	AT(DOAS)	23.8	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
	Xiang Zhou		20.7	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
	Wuzhishan															0.9	0.9
	Lijiang															0.6	1.2
Indonesia	Jakarta	PS		4.2	32.8	48.5	31.2	***	16.3	26.5	25.9	25.7	26.5	28.4	22.8	21.4	16.0
	Kototabang	PS		0.7	1.9	3.5	0.5	***	***	2.5	0.7	1.2	1.0	1.2	1.0	0.9	0.9
	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
Japan	Banryu	AT(CLD)	2.5	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
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
	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
	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
Thailand	Bangkok	AT(CLD)	23.6	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
	Samutprakarn	AT(CLD)	19.3	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)	8.3	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
	Si Phum	AT(CLD)									16.1	14.9	18.1	18.9	14.5	19.0	15.3
	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

Terms and abbreviations are given in Table 4.2.

Table 4.27 Annual NOx concentration from 2006 to 2020

unit: ppb

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
China	Jinyunshan (NOx*)	AT(CLD)	8.7	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
Japan	Rishiri (NOx*)	AT(CLD)	1.0	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
	Ochiishi (NOx*)	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
	Tappi (NOx*)	AT(CLD)	1.2	1.3	1.6	***	***	1.1	1.2	1.4	1.5	1.4	1.4	1.3	1.2		
	Sado-seki (NOx*)	AT(CLD)	1.3	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
	Happo (NOx*)	AT(CLD)	1.9	(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
	Ijira (NOx*)	AT(CLD)	3.1	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
	Oki (NOx*)	AT(CLD)	1.5	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
	Banryu	AT(CLD)	2.8	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 (NOx*)	AT(CLD)	1.5	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
	Hedo (NOx*)	AT(CLD)	0.8	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
	Ogasawara (NOx*)	AT(CLD)	0.5	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
	Niigata-miki (NOx*)	AT(CLD)														2.1	1.8
Lao PDR	Vientiane	AT(CLD)									18.4	22.4	***	***	***	***	***
Malaysia	Tanah Rata (NOx*)			12.2	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(CLD)									48.7	58.2	58.6	62.3	47.0	48.7	37.3
Philippines	Metro Manila	AT(CLD)										33.2	26.9	***	***	***	***
Thailand	Bangkok	AT(CLD)	34.6	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
	Samutprakarn	AT(CLD)	35.6	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 (NOx*)	AT(CLD)	2.8	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)	10.4	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
	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

Terms and abbreviations are given in Table 4.2.

Table 4.28 Annual O₃ concentration from 2006 to 2020

unit: ppb

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	AT(UVP)														18	19
Indonesia	Bandung	AT(UVP) PS										26	10	11	15	8	***
															10	11	9
Japan	Rishiri	AT(UVP)	43	46	42	42	40	37	34	37	39	40	39	37	36	32	34
	Ochiishi	AT(UVP)			38	37	38	35	39	39	42	40	38	42	40	33	35
	Tappi	AT(UVP)	51	54	60	***	***	38	41	40	39	38	41	45	45		
	Sado-seki	AT(UVP)	48	48	47	49	53	49	46	46	47	45	45	45	44	44	40
	Happo	AT(UVP)	59	(63)	50	52	48	53	49	49	48	48	47	47	50	51	45
	Ijira	AT(UVP)	17	35	20	21	19	20	24	26	28	26	25	28	28	24	17
	Oki	AT(UVP)	44	45	45	46	45	46	46	48	47	47	46	47	46	45	43
	Banryu	AT(UVP)	34	34	35	36	35	33	33	33	33	33	33	35	32		
	Yusuhara	AT(UVP)	42	40	40	41	36	33	34	39	40	40	37	41	39	39	39
	Hedo	AT(UVP)	40	38	39	39	38	33	35	38	40	39	36	36	29	37	30
	Ogasawara	AT(UVP)	31	32	28	30	38	29	32	37	33	35	29	36	30	45	41
	Niigata-maki	AT(UVP)														38	35
	Tsushima	AT(UVP)														47	43
Malaysia	Tanah Rata			15	***	***	***	***	***	***	***	***	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(UVP)									12	13	12	9	11	12	12
Philippines	Metro Manila											7	10	***	***	***	***
Republic of Korea	Kanghwa	AT(UVP)	27	43	41	43	43	39	44	46	50	47	45	43	41	46	42
	Cheju	AT(UVP)	35	38	42	44	42	35	39	41	45	46	39	47	42	46	42
	Imsil	AT(UVP)	30	30	20	33	30	30	33	31	31	36	36	29	28	36	29
Russia	Mondy	AT(UVP)	45	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
	Samutprakarn	AT(UVP)	14	14	18	18	15	17	19	20	22	23	16	17	20	21	29
	Khanchanaburi	AT(UVP)	10	7	16	14	23	12	16	13	22	20	19	18	25	26	23
	ChangPhueak	AT(UVP)	19	23	22	26	24	25	21	21	20	22	25	22	29	31	26
	Si Phum	AT(UVP)								22	19	***	***	***	***	***	***
	Nai Mueang	AT(UVP)			22	***	17	***	19	22	22	21	22	26	22	25	26

Terms and abbreviations are given in Table 4.2.

1) O₃ concentrations at Bandung site were measured by two methods: Automonitor and Passive sampler. (AT / PS)

Table 4.29 Annual PM₁₀ concentration from 2006 to 2020

unit: µg/m³

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
China	Jinyunshan	AT(β -ray)	78	65	50	40	51	45	43	64	57	48	56	50	48	39	35
	Hongwen	AT(TEOM)	97	71	59	60	63	61	59	58	54	43	42	43	41	37	33
	Xiang Zhou		47	50	51	48	48	49									
	Haibin-Park	AT(TEOM)							44	54	46	50	41	42	40	37	31
	Wuzhishan	AT(Hybrid)														14	11
	Lijiang	AT(Hybrid)														8	7
Japan	Rishiri	TEOM/AT(β -ray)	15	14	16	16	18	15	13	12	26	19	16	17	17	22	18
	Ochiishi	AT(β -ray)			30	24	22	23	20	16	26	22	18	16	15	15	13
	Tappi	AT(β -ray)	18	17	22	16	28	18	17	18	20	20	18	16	16		
	Sado-seki	TEOM/AT(β -ray)	24	22	23	22	21	21	19	20	23	24	20	21	22	24	20
	Happo	AT(β -ray)	13	12	14	12	12	12	11	11	12	10	10	7	9	6	7
	Ijira	AT(β -ray)	22	22	20	18	18	19	16	18	17	17	16	18	17	15	13
	Oki	AT(β -ray)	30	29	26	26	29	25	23	27	31	32	29	28	29	30	29
	Banryu	AT(β -ray)	31	31	27	26	28	24	22	25	25	24	22	24	22		
	Yusuhara	AT(β -ray)	20	19	18	18	18	16	15	17	15	16	14	14	15	13	13
	Hedo	AT(β -ray)	37	29	27	28	31	28	27	26	27	31	28	29	31	29	29
	Ogasawara	AT(β -ray)	13	13	10	12	12	10	11	12	11	18	19	19	20	20	19
	Niigata-maki	AT(β -ray)															21
	Tsushima	AT(β -ray)														23	19
Lao PDR	Vientiane	AT(β -ray)									72	72	***	***	***	***	***
Mongolia	Ulaanbaatar	AT(β -ray)									211	106	97	102	121	126	92
Philippines	Metro Manila	AT(β -ray)										33	29	***	***	***	***
Republic of Korea	Kanghwa	AT(β -ray)	46	52	48	51	51	44	45	48	49	52	51	49	42	43	36
	Cheju	AT(β -ray)	51	54	50	43	47	42	37	45	47	45	42	37	39	39	30
	Imsil	AT(β -ray)	57	43	59	34	40	38	36	39	44	43	42	39	37	49	34
Thailand	Bangkok	AT(β -ray)	44	45	43	39	38	38	37	41	37	32	35	36	36	34	32
	Samutprakarn	AT(β -ray)			45	43	38	54	39	44	41	35	38	38	42	40	34
	Khanchanaburi	AT(β -ray)	37	31	37	28	46	23	10	28	90	23	34	17	35	33	121
	ChangPhueak	AT(β -ray)	41	52	38	42	45	33	42	41	45	43	48	43	50	56	52
	Si Phum	AT(β -ray)								47	47	49	52	45	41	50	46
	Nai Mueang	AT(β -ray)			47	***	44	***	54	59	51	45	55	54	53	49	50

Terms and abbreviations are given in Table 4.2.

Table 4.30 Annual PM_{2.5} concentration from 2006 to 2020

unit: µg/m³

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	AT(β-ray)												13	19	28	20
Indonesia	Jakarta	AT(β-ray)											***	39	46	38	34
Japan	Rishiri	AT(β-ray)	8	8	9	8	9	8	8	7	8	8	7	8	7	8	7
	Ochiishi	AT(β-ray)			16	12	12	10	9	7	7	9	8	7	6	7	5
	Tappi	AT(β-ray)										10	9	8	9		
	Sadoseki	AT(β-ray)									11	10	10	10	9	9	7
	Happo	AT(β-ray)										7	6	6	6	5	5
	Ijira	AT(β-ray)										11	9	11	8	8	6
	Oki	AT(β-ray)	15	15	14	12	12	14	13	15	13	13	12	11	12	10	9
	Banryu	AT(β-ray)										13	12	13	11		
	Yuahara	AT(β-ray)										11	10	10	10	10	9
	Hedo	AT(β-ray)										10	10	11	11	10	10
	Ogasawara	AT(β-ray)										7	6	6	6	6	6
	Niigata-maki	AT(β-ray)															7
	Tsushima	AT(β-ray)														12	10
Lao PDR	Vientiane	AT(β-ray)													31	32	31
Mongolia	Ulaanbaatar	AT(β-ray)									50	50	53	48	43	39	***
Myanmar	Yangon	AT(β-ray)													24	24	22
	Mandalay	AT(β-ray)										47	33	37	16	41	77
Philippines	Metro Manila	AT(β-ray)										22	20	18	17	16	12
Republic of Korea	Kanghwa	FP with PM _{2.5} cyclone											28	25	22	23	19
	Cheju	FP with PM _{2.5} cyclone											21	16	16	20	15
	Imsil	FP with PM _{2.5} cyclone														19	16
Thailand	Bangkok	AT(β-ray)										18	23	25	21	21	19
	Samutprakarn	AT(β-ray)											28	24	23	22	19
	Khanchanaburi	AT(β-ray)										24	***	7	27	7	104
	ChangPhueak	AT(β-ray)											24	30	29	36	33
	Si Phum	AT(β-ray)								35	33	33	32	23	30	31	28
	Nai Mueang	AT(β-ray)														24	27
Vietnam	Hoa Binh	AT(β-ray)										40	49	37	37	34	30

Terms and abbreviations are given in Table 4.2.

Table 4.31 Annual SO₄²⁻ in PM concentration from 2006 to 2020

unit: µg/m³

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.56	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
	Bandung	FP									6.93	2.69	2.73	2.28	7.52	8.08	5.03
Japan	Rishiri	FP	2.39	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
	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
	Tappi	FP	4.10	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	3.07	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	2.79	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
	Ijira	FP	4.89	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
	Okii	FP	5.73	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
	Banryu	FP	6.55	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	5.81	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
	Hedo	FP	6.51	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
	Ogasawara	FP	1.65	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
	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
	Niigata-maki	FP															1.93
	Tsushima	FP															3.19
Lao PDR	Vientiane	FP										4.75	3.77	***	***	***	***
Malaysia	Petaling Jaya	FP	2.60	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
	Tanah Rata	FP	1.38	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
	Danum Valley	FP	0.69	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
Mongolia	Ulaanbaatar	FP	5.68	4.20	1.33	2.24	4.70	4.11	***	***	***	***	2.10	2.23	1.25	1.15	0.95
	Terelj	FP	1.40	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
Philippines	Metro Manila	FP	2.63	3.15	2.37	***	1.43	***	***	***	***	***	***	***	***	2.33	3.18
	Los Banos	FP	1.52	2.29	1.86	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.14	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	3.43	2.35	3.11	6.04	6.19	***	***	7.43	7.17	6.12	6.11	4.20	3.37	3.37	***
	Cheju	FP with PM _{2.5} cyclone	8.05	6.75	5.51	4.68	3.82	***	***	4.37	7.81	5.62	4.75	2.01	3.45	4.35	***
	Imsil	FP with PM _{2.5} cyclone	10.31	5.90	4.18	4.66	5.03	***	***	5.61	5.86	4.66	5.07	3.55	3.30	3.77	***
Russia	Mondy	FP	0.49	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
	Listvyanka	FP	1.16	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
	Irkutsk	FP	2.13	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
	Primorskaya	FP	4.11	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
Thailand	Bangkok	FP	4.71	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	3.14	4.69	1.41	3.12	3.78	1.64	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	2.74	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	2.22	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	3.64	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	16.46	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
	Hoa Binh	FP	7.80	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
	Can Tho	FP									1.40	1.22	1.42	5.58	5.40	5.83	5.46
	Ho Chi Minh	FP									2.08	2.42	2.15	7.68	6.75	7.11	7.24
	Yen Bai	FP										8.68	6.49	6.61	7.14	5.30	5.67

Terms and abbreviations are given in Table 4.2.

Table 4.32 Annual NO₃⁻ in PM concentration from 2006 to 2020unit: µg/m³

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.37	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
	Bandung	FP									1.92	1.19	1.00	0.73	1.57	1.92	1.66
Japan	Rishiri	FP	0.58	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
	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
	Tappi	FP	1.17	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	0.80	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	0.25	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
	Ijira	FP	0.54	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
	Okii	FP	1.28	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
	Banryu	FP	1.54	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	0.59	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
	Hedo	FP	1.65	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
	Ogasawara	FP	0.36	0.74	0.57	0.60	0.53	0.53	0.60	0.48	0.71	0.52	0.55	0.48	0.56	0.56	0.53
	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
	Niigata-maki	FP															0.78
	Tsushima	FP															1.57
Lao PDR	Vientiane	FP										0.47	0.40	***	***	***	***
Malaysia	Petaling Jaya	FP	0.81	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
	Tanah Rata	FP	0.18	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
	Danum Valley	FP	0.05	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
Mongolia	Ulaanbaatar	FP	1.74	1.66	0.90	0.93	1.25	1.81	***	***	***	***	0.10	0.18	0.18	0.16	0.14
	Terelj	FP	0.19	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
Philippines	Metro Manila	FP	1.03	1.27	0.99	***	0.85	***	***	***	***	***	***	***	***	1.35	1.66
	Los Banos	FP	0.29	0.39	0.27	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.02	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	2.03	1.03	1.92	2.38	3.50	***	***	3.51	2.54	3.40	3.25	2.82	2.74	3.10	***
	Cheju	FP with PM _{2.5} cyclone	0.39	0.57	0.34	0.49	0.67	***	***	0.74	1.10	0.79	0.75	1.92	1.41	1.15	***
	Imsil	FP with PM _{2.5} cyclone	3.99	3.05	2.86	2.67	3.82	***	***	2.95	2.82	1.93	1.17	2.72	3.17	2.56	***
Russia	Mondy	FP	0.06	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
	Listvyanka	FP	0.19	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
	Irkutsk	FP	0.69	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
	Primorskaya	FP	1.18	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
Thailand	Bangkok	FP	1.60	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	0.81	2.02	0.77	1.73	1.93	0.92	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.09	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	0.67	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	0.52	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	5.34	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
	Hoa Binh	FP	1.09	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
	Can Tho	FP									0.67	0.55	0.66	2.19	2.16	2.15	2.15
	Ho Chi Minh	FP									1.09	1.07	2.06	5.67	5.80	5.84	5.75
	Yen Bai	FP										3.19	4.36	8.00	5.89	3.91	4.70

Terms and abbreviations are given in Table 4.2.

Table 4.33 Annual CI in PM concentration from 2006 to 2020

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

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.21	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
	Bandung	FP									0.31	0.27	0.20	0.57	0.17	0.21	0.36
Japan	Rishiri	FP	2.03	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
	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
	Tappi	FP	8.08	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	3.56	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	0.03	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
	Ijira	FP	0.05	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
	Oki	FP	2.42	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
	Banryu	FP	1.47	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	0.08	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
	Hedo	FP	6.35	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
	Ogasawara	FP	2.69	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
	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
	Niigata-maki	FP															1.12
	Tsushima	FP															0.82
Lao PDR	Vientiane	FP										0.06	0.06	***	***	***	***
Malaysia	Petaling Jaya	FP	0.10	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
	Tanah Rata	FP	0.04	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
	Danum Valley	FP	0.04	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
Mongolia	Ulaanbaatar	FP	1.25	0.87	0.47	1.84	1.06	1.18	***	***	***	***	0.08	0.20	0.14	0.20	0.12
	Terelj	FP	0.19	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
Philippines	Metro Manila	FP	0.62	0.62	0.59	***	0.66	***	***	***	***	***	***	***	***	0.69	1.05
	Los Banos	FP	0.67	1.15	0.82	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.03	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	0.15	0.19	0.19	0.64	0.44	***	***	0.47	0.13	0.13	0.10	0.28	0.11	0.09	***
	Cheju (Kosan)	FP with PM _{2.5} cyclone	0.13	0.30	0.32	0.29	0.46	***	***	1.12	0.72	0.37	0.60	0.54	0.62	0.23	***
	Imsil	FP with PM _{2.5} cyclone	0.29	0.38	0.50	0.45	0.61	***	***	0.48	0.25	0.38	0.31	0.39	0.41	0.20	***
Russia	Mondy	FP	0.03	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
	Listvyanka	FP	0.08	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
	Irkutsk	FP	0.19	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
	Primorskaya	FP	0.12	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
Thailand	Bangkok	FP	0.19	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	0.09	0.39	0.07	0.20	0.14	0.15	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.08	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	0.29	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	0.09	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	2.90	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
	Hoa Binh	FP	0.65	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
	Can Tho	FP									0.56	0.46	1.78	1.08	2.14	2.23	2.36
	Ho Chi Minh	FP									0.74	0.59	1.29	1.40	4.03	4.42	4.45
	Yen Bai	FP										1.01	1.25	3.58	3.52	2.78	2.92

Terms and abbreviations are given in Table 4.2.

Table 4.34 Annual NH₄⁺ in PM concentration from 2006 to 2020

unit: µg/m³

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.08	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
	Bandung	FP									1.20	1.17	1.42	1.13	1.60	1.38	1.29
Japan	Rishiri	FP	0.41	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
	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
	Tappi	FP	0.63	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	0.48	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	0.64	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
	Ijira	FP	1.39	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
	Oki	FP	1.19	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
	Banryu	FP	1.51	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	1.41	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
	Hedo	FP	0.80	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
	Ogasawara	FP	0.17	0.46	0.24	0.21	0.17	0.22	0.31	0.23	0.25	0.19	0.22	0.16	0.17	0.17	0.25
	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
	Niigata-maki	FP															0.34
	Tsushima	FP															0.75
Lao PDR	Vientiane	FP										1.22	1.12	***	***	***	***
Malaysia	Petaling Jaya	FP	0.76	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
	Tanah Rata	FP	0.40	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
	Danum Valley	FP	0.10	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
Mongolia	Ulaanbaatar	FP	1.95	1.96	0.23	0.95	1.69	1.80	***	***	***	***	0.67	0.58	0.34	0.32	0.12
	Terelj	FP	0.43	0.40	0.37	0.28	0.12	0.43	***	***	***	***	0.06	0.04	<0.01	0.05	0.01
Myanmar	Yangon	FP						0.34	0.38	0.30	0.50	0.45	0.37	0.80	0.33	0.40	0.59
Philippines	Metro Manila	FP	0.25	0.43	0.42	***	0.14	***	***	***	***	***	***	***	***	0.59	0.09
	Los Banos	FP	0.23	0.28	0.34	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.03	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	1.38	0.85	1.34	2.51	2.93	***	***	3.54	3.58	3.48	3.20	2.50	2.13	1.99	***
	Cheju	FP with PM _{2.5} cyclone	2.39	2.15	1.61	1.54	1.32	***	***	1.80	2.83	2.30	1.86	1.19	1.38	1.59	***
	Imsil	FP with PM _{2.5} cyclone	3.67	2.37	1.82	2.34	2.54	***	***	2.82	2.87	2.36	2.02	1.96	1.92	1.86	***
Russia	Mondy	FP	0.09	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
	Listvyanka	FP	0.27	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
	Irkutsk	FP	0.46	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
	Primorskaya	FP	1.32	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
Thailand	Bangkok	FP	1.30	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	0.86	1.37	0.71	1.50	0.84	0.26	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.65	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	0.67	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	1.13	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	3.18	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
	Hoa Binh	FP	2.29	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
	Can Tho	FP									0.63	1.08	0.77	1.39	1.21	1.12	1.09
	Ho Chi Minh	FP									1.00	1.35	1.44	1.23	1.37	1.33	1.33
	Yen Bai	FP										2.00	2.62	3.17	2.58	1.35	1.15

Terms and abbreviations are given in Table 4.2.

Table 4.35 Annual Na⁺ in PM concentration from 2006 to 2020unit: µg/m³

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.32	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
	Bandung	FP									0.57	0.64	0.41	0.49	0.67	0.49	0.48
Japan	Rishiri	FP	1.62	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
	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
	Tappi	FP	5.23	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	2.52	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	0.08	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
	Ijira	FP	0.26	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
	Oki	FP	2.26	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
	Banryu	FP	1.68	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	0.45	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
	Hedo	FP	4.85	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
	Ogasawara	FP	1.78	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
	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
	Niigata-maki	FP															1.07
	Tsushima	FP															1.02
Lao PDR	Vientiane	FP										0.28	0.25	***	***	***	***
Malaysia	Petaling Jaya	FP	0.21	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
	Tanah Rata	FP	0.13	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
	Danum Valley	FP	0.13	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
Mongolia	Ulaanbaatar	FP	0.38	0.32	0.09	0.08	0.21	0.20	***	***	***	***	0.20	0.31	0.18	0.22	0.17
	Terelj	FP	0.11	0.12	0.08	0.11	0.02	0.09	***	***	***	***	0.03	0.03	0.02	0.03	0.01
Myanmar	Yangon	FP						0.59	0.74	0.21	0.34	0.12	0.31	0.19	0.58	0.27	1.88
Philippines	Metro Manila	FP	0.61	0.79	0.97	***	0.54	***	***	***	***	***	***	***	***	0.66	0.77
	Los Banos	FP	0.70	0.98	0.67	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.05	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	0.25	0.26	0.34	0.52	0.40	***	***	0.51	0.30	0.26	0.25	0.23	0.20	0.26	***
	Cheju	FP with PM _{2.5} cyclone	0.40	0.39	0.41	0.51	0.45	***	***	0.64	0.57	0.28	0.39	0.38	0.39	0.30	***
	Imsil	FP with PM _{2.5} cyclone	0.39	0.42	0.46	0.54	0.40	***	***	0.24	0.20	0.21	0.24	0.26	0.26	0.21	***
Russia	Mondy	FP	0.04	<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
	Listvyanka	FP	0.06	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
	Irkutsk	FP	0.17	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
	Primorskaya	FP	0.22	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
Thailand	Bangkok	FP	0.68	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	0.34	0.40	0.27	0.38	0.30	0.22	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.17	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	0.21	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	0.17	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	1.99	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
	Hoa Binh	FP	0.52	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
	Can Tho	FP									0.24	0.31	0.24	0.48	0.24	0.13	0.22
	Ho Chi Minh	FP									0.26	0.37	0.38	1.08	1.05	1.36	1.18
	Yen Bai	FP										0.83	1.18	0.88	0.78	0.90	0.78

Terms and abbreviations are given in Table 4.2.

Table 4.36 Annual K⁺ in PM concentration from 2006 to 2020

																	unit: µg/m ³
Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.11	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
	Bandung	FP									0.55	0.74	0.48	0.47	0.64	0.73	0.39
Japan	Rishiri	FP	0.15	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
	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
	Tappi	FP	0.28	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	0.15	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	0.06	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
	Ijira	FP	0.17	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
	Oki	FP	0.23	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
	Banryu	FP	0.25	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	0.21	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
	Hedo	FP	0.32	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
	Ogasawara	FP	0.08	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
	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
	Niigata-maki	FP															0.08
	Tsushima	FP															0.10
Lao PDR	Vientiane	FP										0.36	0.36	***	***	***	***
Malaysia	Petaling Jaya	FP	0.19	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
	Tanah Rata	FP	0.10	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
	Danum Valley	FP	0.09	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
Mongolia	Ulaanbaatar	FP	0.60	0.25	0.12	0.16	0.22	0.29	***	***	***	***	0.08	0.15	0.06	0.05	0.06
	Terelj	FP	0.13	0.14	0.09	0.16	0.04	0.08	***	***	***	***	0.03	0.03	0.02	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
Philippines	Metro Manila	FP	0.46	0.41	0.43	***	0.22	***	***	***	***	***	***	***	***	0.63	1.25
	Los Banos	FP	0.22	0.28	0.17	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.03	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	0.33	0.30	0.25	0.49	0.20	***	***	0.29	0.29	0.21	0.20	0.17	0.09	0.17	***
	Cheju	FP with PM _{2.5} cyclone	0.46	0.40	0.33	0.21	0.12	***	***	0.15	0.25	0.11	0.15	0.10	0.07	0.09	***
	Imsil	FP with PM _{2.5} cyclone	0.50	0.32	0.37	0.35	0.25	***	***	0.16	0.16	0.13	0.15	0.15	0.13	0.14	***
Russia	Mondy	FP	0.04	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
	Listvyanka	FP	0.05	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
	Irkutsk	FP	0.10	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
	Primorskaya	FP	0.37	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
Thailand	Bangkok	FP	0.65	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	0.48	1.82	0.26	0.54	0.47	0.24	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.34	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	0.86	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	0.25	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	1.70	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
	Hoa Binh	FP	1.19	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
	Can Tho	FP									0.89	0.19	0.30	0.29	0.24	0.23	0.23
	Ho Chi Minh	FP									0.53	0.34	0.58	0.66	0.97	1.04	1.10
	Yen Bai	FP										1.11	0.94	0.91	0.85	0.27	0.31

Terms and abbreviations are given in Table 4.2.

Table 4.37 Annual Mg²⁺ in PM concentration from 2006 to 2020

unit: µg/m³

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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
	Serpong	FP	0.04	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
	Bandung	FP									0.14	0.21	0.17	0.15	0.17	0.19	0.12
Japan	Rishiri	FP	0.20	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
	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
	Tappi	FP	0.63	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	0.28	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	0.02	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
	Ijira	FP	0.04	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
	Oki	FP	0.30	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
	Banryu	FP	0.26	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	0.09	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
	Hedo	FP	0.60	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
	Ogasawara	FP	0.22	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
	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
	Niigata-maki	FP															0.13
	Tsushima	FP															0.13
Lao PDR	Vientiane	FP										0.05	0.05	***	***	***	***
Malaysia	Petaling Jaya	FP	0.03	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
	Tanah Rata	FP	0.02	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
	Danum Valley	FP	0.01	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
Mongolia	Ulaanbaatar	FP	0.26	0.19	0.11	0.04	0.18	0.38	***	***	***	***	0.04	0.05	0.04	0.02	<0.01
	Terelj	FP	0.06	0.02	0.02	0.04	0.04	0.05	***	***	***	***	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
Philippines	Metro Manila	FP	0.24	0.14	0.17	***	0.10	***	***	***	***	***	***	***	***	0.10	0.13
	Los Banos	FP	0.09	0.14	0.11	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.01	<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	0.01	0.03	0.04	***	***	0.08	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	***
	Cheju	FP with PM _{2.5} cyclone	0.02	0.09	0.02	<0.01	0.04	***	***	0.04	0.04	0.03	0.07	0.03	0.03	<0.01	***
	Imsil	FP with PM _{2.5} cyclone	0.04	0.03	0.01	0.02	0.05	***	***	0.03	0.03	0.03	0.08	0.03	0.02	<0.01	***
Russia	Mondy	FP	<0.01	<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
	Listvyanka	FP	0.02	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
	Irkutsk	FP	0.08	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
	Primorskaya	FP	0.07	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
Thailand	Bangkok	FP	0.13	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	0.05	0.08	0.06	0.07	0.05	0.04	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.04	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	0.22	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	0.05	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	0.52	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
	Hoa Binh	FP	0.13	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
	Can Tho	FP									0.15	0.20	0.22	0.40	0.37	0.42	0.42
	Ho Chi Minh	FP									0.23	0.46	0.72	0.44	0.68	0.58	0.68
	Yen Bai	FP										0.19	2.26	0.13	0.22	0.18	0.18

Terms and abbreviations are given in Table 4.2.

Table 4.38 Annual Ca²⁺ in PM concentration from 2006 to 2020

unit: µg/m³

Country	Site	Method	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cambodia	Phnom Penh	FP					0.9	0.8	0.8	0.9	0.7	1.3	1.1	1.2	***	***	***
China	Hongwen	FP		2.8	2.8	2.7	9.4	1.6	***	***	***	***	1.6	1.8			
Indonesia	Jakarta	FP									3.2	1.1	0.8	0.6	1.1	1.1	0.6
	Serpong	FP	0.36	0.3	0.1	0.1	0.1	0.2	0.6	0.5	0.5	0.7	0.4	0.4	0.9	0.9	0.4
	Bandung	FP									1.3	1.6	1.3	1.1	1.5	1.5	0.9
Japan	Rishiri	FP	0.13	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.1
	Ochiishi	FP			0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1
	Tappi	FP	0.35	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.5	0.4	0.2	0.2	0.2		
	Sado-seki	FP	0.23	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2
	Happo	FP	0.17	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
	Ijira	FP	0.18	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Oki	FP	0.29	0.3	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.3	0.3	0.3
	Banryu	FP	0.31	0.3	0.2	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.2		
	Yusuhara	FP	0.27	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
	Hedo	FP	0.48	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
	Ogasawara	FP	0.13	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
	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
	Niigata-maki	FP															0.12
	Tsushima	FP															0.19
Lao PDR	Vientiane	FP										0.22	0.22	***	***	***	***
Malaysia	Petaling Jaya	FP	0.39	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
	Tanah Rata	FP	0.07	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
	Danum Valley	FP	0.02	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
Mongolia	Ulaanbaatar	FP	4.64	3.69	3.38	1.43	1.45	3.35	***	***	***	***	0.55	0.74	0.83	0.54	0.50
	Terelj	FP	0.30	0.43	0.42	0.32	0.16	0.32	***	***	***	***	0.40	0.06	0.08	0.06	0.05
Myanmar	Yangon	FP						1.82	1.03	0.29	0.51	3.11	1.69	0.40	0.24	0.27	0.54
Philippines	Metro Manila	FP	1.09	1.18	0.87	***	0.66	***	***	***	***	***	***	***	***	0.71	1.08
	Los Banos	FP	0.13	0.23	0.27	***	***	***	***	***	***	***	***	***	***	***	***
	Mt. Sto. Tomas	FP	0.02	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	0.04	0.05	0.07	0.17	0.07	***	***	0.14	0.11	0.02	0.03	0.05	0.03	0.02	***
	Cheju	FP with PM _{2.5} cyclone	0.05	0.09	0.11	0.08	0.07	***	***	0.09	0.10	0.08	0.12	0.05	0.08	0.07	***
	Imsil	FP with PM _{2.5} cyclone	0.12	0.28	0.11	0.08	0.09	***	***	0.08	0.07	0.09	0.14	0.08	0.08	0.06	***
Russia	Mondy	FP	0.07	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
	Listvyanka	FP	0.13	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
	Irkutsk	FP	0.47	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
	Primorskaya	FP	0.38	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
Thailand	Bangkok	FP	1.39	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	0.65	0.93	0.36	0.90	0.98	0.50	***	***	***	***	***	***	***	***	***
	Khanchanaburi	FP	0.18	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	0.61	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	0.17	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	8.97	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
	Hoa Binh	FP	2.39	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
	Can Tho	FP									1.52	1.53	1.74	1.36	1.41	2.00	1.70
	Ho Chi Minh	FP									1.18	1.05	1.78	2.88	2.63	2.71	2.85
	Yen Bai	FP										4.08	0.17	2.42	2.63	2.26	3.12

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

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	0.14	0.11	0.12	--	0.13	0.06	2.04	0.17	2.33	0.12	0.27	0.08
Feb	0.10	0.09	0.14	--	0.17	0.09	2.48	0.26	2.78	0.18	0.31	0.10
Mar	0.05	0.07	0.13	0.06	0.15	0.09	3.64	0.22	3.74	0.21	0.48	0.19
Apr	0.05	0.06	0.19	0.07	0.09	0.07	2.26	0.12	2.21	0.07	0.25	0.08
May	0.02	0.05	0.29	0.06	0.10	0.10	1.05	0.15	1.33	0.06	0.15	0.06
June	0.04	0.06	0.40	0.09	0.07	0.06	0.55	0.07	0.79	0.04	0.09	0.03
July	0.05	0.07	0.47	0.11	0.09	0.05	0.26	0.10	0.49	0.03	0.05	0.01
Aug	0.01	0.05	0.53	0.06	0.08	0.03	0.60	0.05	0.98	0.05	0.10	0.03
Sept	0.01	0.03	0.44	0.04	0.07	0.07	2.38	0.07	2.17	0.07	0.24	0.07
Oct	0.09	0.04	0.20	0.03	0.05	0.07	4.58	0.08	4.66	0.15	0.51	0.17
Nov	0.07	0.05	0.17	0.04	0.06	0.09	4.43	0.11	4.32	0.16	0.48	0.16
Dec	0.17	0.08	0.05	0.04	0.07	0.09	1.31	0.13	1.44	0.09	0.16	0.06
Annual	0.79	0.75	3.13	0.62	1.11	0.87	25.60	1.52	27.24	1.21	3.10	1.05

Table 4.40 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Ochiishi

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	0.15	0.04	0.09	0.01	0.06	0.04	2.23	0.09	2.10	0.05	0.23	0.05
Feb	0.10	0.09	0.05	0.01	0.08	0.05	1.19	0.12	1.17	0.03	0.13	0.03
Mar	0.09	0.19	0.27	0.09	0.07	0.07	3.05	0.08	2.85	0.06	0.31	0.07
Apr	0.12	0.29	0.53	0.11	0.08	0.10	1.98	0.09	2.01	0.04	0.22	0.06
May	0.08	0.12	0.72	0.14	0.11	0.14	1.33	0.13	1.54	0.03	0.17	0.06
June	0.10	0.19	0.97	0.19	0.07	0.08	0.47	0.08	0.73	0.02	0.08	0.02
July	0.10	0.18	0.71	0.20	0.08	0.03	0.12	0.07	0.30	0.01	0.03	0.01
Aug	0.13	0.41	1.32	0.23	0.11	0.06	0.50	0.08	0.82	0.02	0.09	0.02
Sept	0.22	0.08	0.72	0.21	0.03	0.04	1.19	0.02	1.15	0.02	0.12	0.03
Oct	0.14	0.17	0.62	0.06	0.03	0.04	2.31	0.04	2.06	0.04	0.22	0.05
Nov	0.11	0.11	0.52	0.05	0.06	0.08	2.88	0.09	2.65	0.06	0.29	0.07
Dec	0.31	0.12	0.13	0.05	0.08	0.08	0.89	0.15	0.88	0.03	0.10	0.03
Annual	1.64	1.98	6.64	1.34	0.85	0.80	18.15	1.04	18.26	0.42	2.00	0.51

Table 4.41 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Sado-seki

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	--	--	--	--	--	--	--	--	--	--	--	--
Feb	--	--	--	--	--	--	--	--	--	--	--	--
Mar	0.07	0.22	0.16	0.03	0.12	0.18	21.63	0.13	20.06	0.50	2.11	0.77
Apr	0.12	0.36	0.41	0.12	0.41	0.60	35.19	0.45	34.90	1.03	3.85	1.61
May	0.11	0.79	1.00	0.09	0.38	0.49	5.17	0.27	8.44	0.28	1.03	0.96
June	0.12	0.67	0.74	0.11	0.20	0.21	2.33	0.17	3.82	0.13	0.47	0.23
July	0.08	0.28	0.80	0.06	0.16	0.18	3.09	0.09	5.44	0.15	0.60	0.16
Aug	0.33	0.68	0.80	0.09	0.40	0.34	3.46	0.38	7.20	0.15	0.77	0.25
Sept	0.07	0.20	0.62	0.08	0.26	0.36	12.01	0.20	13.80	0.32	1.50	0.47
Oct	0.09	0.32	0.20	0.04	0.24	0.38	15.72	0.18	16.60	0.44	1.86	0.73
Nov	0.15	0.30	0.26	0.04	0.22	0.39	29.48	0.20	28.51	0.77	3.11	1.15
Dec	0.14	0.21	0.19	0.03	0.41	0.52	44.56	0.54	44.10	1.11	4.65	1.20
Annual	1.28	4.03	5.19	0.72	2.79	3.63	172.64	2.61	182.85	4.88	19.95	7.52

1 NO₂ = NOx- NO

Table 4.42 Monthly and annual dry deposition amounts of gaseous and particulate substances**Site: Happo****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	0.08	0.29	0.09	0.01	0.14	0.02	0.07	0.17	0.46	0.04	0.04	0.05
Feb	0.11	0.34	0.14	0.01	0.30	0.19	0.44	0.24	1.37	0.14	0.29	1.32
Mar	0.07	0.43	0.27	0.04	0.30	0.24	0.27	0.25	1.89	0.19	0.31	1.10
Apr	0.10	1.94	0.67	0.07	0.33	0.15	0.10	0.30	0.80	0.18	0.24	1.10
May	0.16	1.23	0.82	0.03	0.15	0.06	0.02	0.15	0.22	0.06	0.07	0.34
June	0.15	0.70	1.08	0.07	0.18	0.10	0.05	0.26	0.19	0.05	0.06	0.26
July	0.06	0.44	0.76	0.04	0.12	0.01	0.02	0.17	0.15	0.06	0.02	0.09
Aug	0.65	0.82	0.52	0.02	0.44	0.01	0.01	0.55	0.16	0.04	0.05	0.06
Sept	0.38	0.34	0.69	0.03	0.10	0.02	0.05	0.12	0.29	0.03	0.04	0.03
Oct	0.30	0.23	0.36	0.02	0.13	0.06	0.09	0.16	0.60	0.05	0.08	0.12
Nov	0.14	0.16	0.16	0.03	0.09	0.06	0.04	0.09	0.68	0.05	0.08	0.12
Dec	0.06	0.26	0.05	0.03	0.06	0.01	0.03	0.04	0.40	0.03	0.05	0.08
Annual	2.25	7.20	5.62	0.38	2.35	0.93	1.19	2.49	7.22	0.92	1.34	4.67

Table 4.43 Monthly and annual dry deposition amounts of gaseous and particulate substances**Site: Ijira****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	0.13	0.05	0.11	0.03	0.04	0.01	0.04	0.06	0.17	0.03	0.02	0.02
Feb	0.14	0.05	0.08	0.02	0.04	0.02	0.08	0.06	0.27	0.03	0.03	0.02
Mar	0.16	0.11	0.26	0.05	0.05	0.04	0.13	0.08	0.41	0.05	0.06	0.09
Apr	0.10	0.19	0.26	0.13	0.07	0.06	0.08	0.12	0.42	0.06	0.06	0.09
May	0.12	0.20	0.42	0.16	0.05	0.02	0.02	0.09	0.15	0.04	0.03	0.06
June	0.11	0.20	0.49	0.07	0.05	0.01	0.01	0.07	0.11	0.03	0.02	0.05
July	0.05	0.05	0.58	0.03	0.02	0.00	0.00	0.03	0.05	0.02	0.00	0.01
Aug	0.10	0.27	0.68	0.06	0.10	0.00	0.00	0.15	0.23	0.04	0.02	0.03
Sept	0.03	0.08	0.48	0.02	0.03	0.01	0.06	0.03	0.24	0.04	0.03	0.02
Oct	0.06	0.05	0.20	0.02	0.02	0.01	0.02	0.03	0.11	0.02	0.01	0.02
Nov	0.07	0.06	0.17	0.01	0.02	0.01	0.02	0.03	0.13	0.02	0.02	0.02
Dec	0.05	0.03	0.12	0.01	0.02	0.01	0.03	0.03	0.07	0.01	0.01	0.02
Annual	1.12	1.35	3.85	0.61	0.50	0.21	0.49	0.76	2.36	0.38	0.31	0.44

Table 4.44 Monthly and annual dry deposition amounts of gaseous and particulate substances**Site: Oki****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	0.30	0.25	0.25	0.02	0.49	0.74	58.20	0.77	55.10	1.41	6.14	1.52
Feb	0.30	0.04	0.12	0.02	0.13	0.18	9.96	0.16	9.50	0.25	1.06	0.47
Mar	0.16	0.56	0.52	0.09	0.59	0.98	45.39	0.77	44.76	1.22	4.93	2.05
Apr	0.17	0.36	0.42	0.12	0.47	0.90	40.68	0.50	41.18	1.13	4.65	1.90
May	0.13	0.82	0.70	0.10	0.69	0.83	10.53	0.76	14.75	0.47	1.71	0.89
June	0.15	0.92	0.94	0.12	0.45	0.49	7.70	0.44	11.28	0.47	1.28	0.50
July	0.04	0.43	0.92	0.07	0.65	0.33	9.05	0.37	13.37	0.60	1.50	0.43
Aug	0.33	0.79	0.57	0.11	0.99	0.31	3.65	0.77	8.97	0.28	1.00	0.32
Sept	0.09	0.42	0.86	0.09	0.53	0.47	15.25	0.45	19.12	0.57	2.16	0.71
Oct	0.09	0.20	0.31	0.04	0.25	0.37	10.23	0.28	11.45	0.37	1.32	0.61
Nov	0.17	0.31	0.38	0.04	0.26	0.45	11.88	0.35	12.93	0.43	1.48	0.63
Dec	0.40	0.33	0.29	0.03	0.50	1.13	89.86	0.76	85.61	2.09	9.79	2.79
Annual	2.31	5.43	6.29	0.86	6.01	7.17	312.37	6.37	328.02	9.29	37.02	12.83

1 NO₂ = NOx - NO

Table 4.45 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Yusuhara

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	0.56	0.24	0.16	--	0.17	0.13	0.13	0.31	0.68	0.07	0.08	0.08
Feb	0.64	0.33	0.19	--	0.18	0.10	0.22	0.26	0.74	0.07	0.14	0.25
Mar	0.65	0.33	0.36	--	0.22	0.18	0.33	0.29	1.35	0.12	0.20	0.36
Apr	0.51	0.38	0.29	0.22	0.31	0.27	0.44	0.48	2.06	0.12	0.31	0.56
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	--	--	--	--	--	--	--	--	--	--	--	--
July	--	--	--	--	--	--	--	--	--	--	--	--
Aug	0.30	0.22	0.15	0.06	0.17	0.00	0.01	0.14	0.30	0.02	0.04	0.04
Sept	--	--	--	--	--	--	--	--	--	--	--	--
Oct	0.10	0.30	0.19	0.04	0.08	0.06	0.08	0.11	0.51	0.06	0.07	0.10
Nov	0.32	0.39	0.28	0.06	0.14	0.14	0.19	0.21	1.00	0.09	0.13	0.16
Dec	0.36	0.59	0.15	0.09	0.23	0.29	0.41	0.49	1.29	0.11	0.16	0.18
Annual	3.46	2.78	1.76	0.47	1.49	1.17	1.80	2.27	7.92	0.65	1.12	1.73

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 4.47 Monthly and annual dry deposition amounts of gaseous and particulate substances

Site: Ogasawara

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	0.42	0.02	0.12	0.01	0.07	0.04	3.98	0.05	4.06	0.10	0.46	0.12
Feb	0.17	0.03	0.20	--	0.12	0.13	6.05	0.08	6.29	0.16	0.74	0.32
Mar	0.16	0.08	0.46	--	0.18	0.16	6.39	0.16	7.10	0.20	0.83	0.30
Apr	0.30	0.08	0.65	--	0.23	0.19	5.38	0.18	6.53	0.23	0.84	0.42
May	0.08	0.08	1.06	--	0.17	0.09	4.04	0.04	5.27	0.20	0.67	0.34
June	0.01	0.02	0.39	--	0.07	0.02	0.73	0.03	1.14	0.03	0.13	0.03
July	--	--	--	--	--	--	--	--	--	--	--	--
Aug	--	--	--	--	--	--	--	--	--	--	--	--
Sept	--	--	--	--	--	--	--	--	--	--	--	--
Oct	--	--	--	--	--	--	--	--	--	--	--	--
Nov	--	--	--	--	--	--	--	--	--	--	--	--
Dec	--	--	--	--	--	--	--	--	--	--	--	--
Annual	1.14	0.31	2.89	0.01	0.84	0.63	26.57	0.55	30.39	0.92	3.67	1.54

1 NO₂ = NOx - NO

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

Site: Niigata-maki

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	0.16	--	--	0.02	--	--	--	--	--	--	--	--
Feb	0.11	--	--	0.03	--	--	--	--	--	--	--	--
Mar	0.11	0.01	0.02	0.24	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Apr	0.12	0.24	0.44	0.22	0.08	0.08	0.31	0.09	0.37	0.01	0.04	0.02
May	0.09	0.40	0.80	0.26	0.11	0.09	0.06	0.11	0.17	0.01	0.02	0.02
June	0.05	0.31	0.93	0.36	0.08	0.06	0.09	0.08	0.18	0.01	0.02	0.01
July	0.00	0.19	0.71	0.24	0.04	0.03	0.03	0.04	0.09	0.00	0.01	0.00
Aug	0.05	0.66	0.69	0.30	0.27	0.05	0.03	0.32	0.19	0.01	0.02	0.01
Sept	0.07	0.14	0.71	0.29	0.04	0.04	0.08	0.03	0.13	0.01	0.01	0.01
Oct	0.04	0.14	0.36	0.11	0.05	0.06	0.20	0.04	0.25	0.01	0.03	0.02
Nov	0.15	0.19	0.34	0.13	0.04	0.06	0.20	0.04	0.25	0.01	0.03	0.01
Dec	0.11	0.16	0.32	0.12	0.02	0.02	0.14	0.04	0.15	0.00	0.02	0.00
Annual	1.07	2.43	5.32	2.32	0.73	0.50	1.17	0.81	1.79	0.08	0.20	0.12

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

Site: Tsushima

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	--	--	--	--	--	--	--	--	--	--	--	--
Feb	--	--	--	--	--	--	--	--	--	--	--	--
Mar	--	0.01	0.02	--	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00
Apr	--	0.43	0.31	--	0.14	0.23	0.11	0.22	0.27	0.02	0.03	0.04
May	--	0.84	0.44	--	0.16	0.06	0.02	0.16	0.13	0.01	0.02	0.02
June	--	0.76	0.56	--	0.12	0.03	0.01	0.16	0.07	0.01	0.01	0.01
July	--	0.30	0.42	--	0.09	0.02	0.01	0.07	0.07	0.01	0.01	0.00
Aug	--	0.49	0.29	--	0.33	0.02	0.04	0.22	0.22	0.01	0.03	0.01
Sept	--	0.24	0.40	--	0.09	0.06	0.47	0.08	0.52	0.02	0.06	0.02
Oct	--	0.43	0.18	--	0.10	0.14	0.12	0.14	0.23	0.01	0.03	0.03
Nov	--	0.69	0.19	--	0.09	0.16	0.07	0.19	0.15	0.01	0.02	0.02
Dec	--	0.64	0.10	--	0.09	0.19	0.04	0.28	0.08	0.01	0.01	0.02
Annual	0.00	4.82	2.92	0.00	1.21	0.93	0.89	1.53	1.75	0.10	0.22	0.18

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, Ca, and Mg), 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.

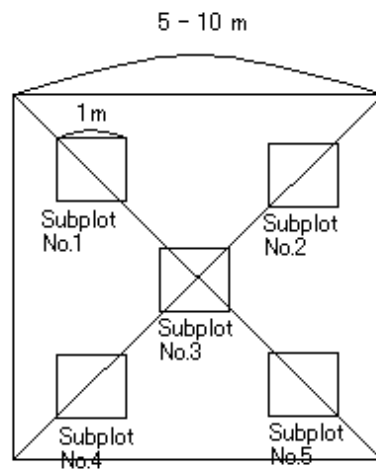


Figure 5.1 Plot for soil sampling

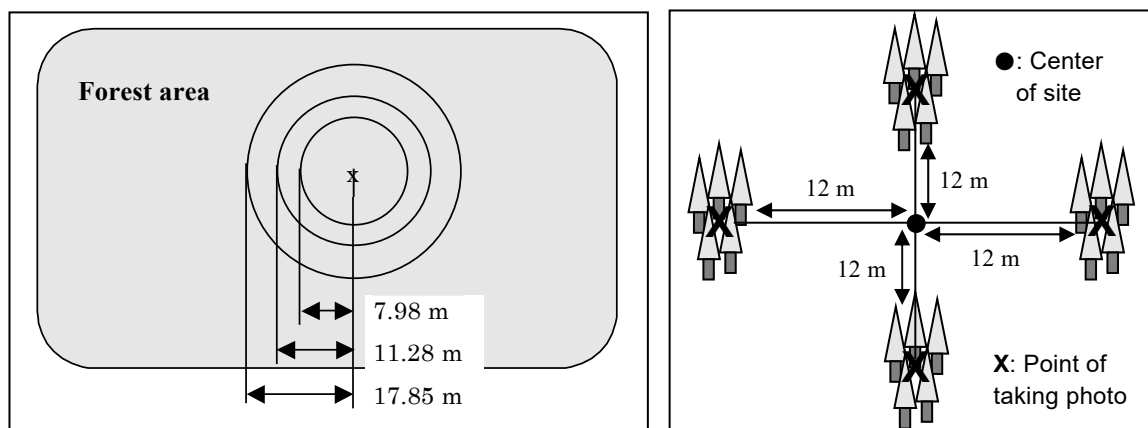


Figure 5.2 Plots for description of trees (Left) and selection of observation trees (Right)

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, Mg, 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 5 areas of 2 countries this year. The list of monitoring sites and reported items in 2020 is shown in Table 5.4.1. Observation of the tree decline was conducted at 7 sites. Soil monitoring were carried out in 4 sites in China and Japan. Number of soil and vegetation plots in each monitoring site is shown in Table 5.4.2 with number of surveys until 2020.

Table 5.4.1 Outline of the Monitoring Sites in 2020

Country	Nearest deposition monitoring site	Site: Name of forests EANET site code	Soil type	Items ^{*1}
China	Jinyunshan (Chongqing)	Jinyunshan CNS004	Acidic-Udic Argosol	S, F ₁ , F ₂
	Jiwozi (Xi'an)	Dabagou CNS007	Brown soil	S, F ₁ , F ₂
	Xiaoping (Xiamen)	Xiaoping CNS009	Red soil	F ₁
Japan	Happo	Sekido-san JPS005	Cambisols	S, F ₁ , F ₂
		Horyu-zan JPS105	Haplic/Ferric Alisol	S, F ₁ , F ₂
	Ijira	Ijira JPS006	Dystric Cambisol	F ₁
		Yamato JPS106	Andosols	F ₁

^{*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 2020

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 2020			
				Forest plot	Soil plot			Tree decline	Forest survey	Understory survey	Soil survey
China	Jiayunshan (Chongqing)	Jiayunshan	CNS004	2	2	2000	2020	15	6	6	6
	Jiwozi (Xi'an)	Dabagou	CNS007	1	2	2001	2020	15	6	6	7
	Xiaoping (Xiamen)	Xiaoping	CNS009	1	1	2000	2020	14	5	4	5
	Zhuxiandong (Zhuhai)	Zhuxiandong	CNS011	3	3	2001	2016	7	7	7	6
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	2020	18	5	5	5
		Horyu-zan	JPS105	1	2	2001	2020	18	5	5	5
	Ijira	Ijira	JPS006	1	2	2000	2020	18	4	4	4
		Yamato	JPS106	1	2	2003	2020	18	3	3	3
	Banryu*	Banryu-2	JPS008	1	2	2000	2018	17	4	4	4
		Iwami "rinku" Factory Park	JPS108	1	2	2001	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
		Pereemnya river catchment	RUS102	1	2	2005	2005	1	1	1	1
	Mondy	Ilchir Lake	RUS001	0	2	1999	1999				1
		Okinskoe Lake	RUS101	0	1	1999	1999				1
		Solar Observatory	RUS201	1	2	1999	2014	1	1	1	2
	Primorskaya	Primorskaya	RUS004	1	1	2006	2013	1	1	1	2
Thailand	Vajiralongkorn Dam (old name: Kao Lam Dam)	Vajiralongkorn Dam	THS004	1	2	2000	2012	2	4	3	6
		Vajiralongkorn Puye	THS104	1	1	2002	2012	2	5	4	4
Vietnam	Hoa Binh	Cave of Heaven	VNS002	0	2	1999	1999				1
		Thang Ranh	VNS102	0	2	1999	1999				1

Bold letters indicate that soil and/or vegetation monitoring was conducted in 2020.

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

Grayed cells indicate sites which have no vegetation monitoring sites.

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 Jinyunshan (Area: Jinyunshan, China) CNS004

Table 5.5.2 Dabagou (Area: Jiwozi, China) CNS007

Table 5.5.3 Sekido-san (Area: Happo, Japan) JPS005

Table 5.5.4 Horyu-zan (Area: Happo, Japan) JPS105

➤ **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 Sekido-san (Area: Happo, Japan) JPS005

Table 5.6.6 Horyu-zan (Area: Happo, Japan) JPS105

Table 5.6.7 Ijira (Area: Ijira, Japan) JPS006

Table 5.6.8 Yamato (Area: Ijira, Japan) JPS106

➤ **Table 5.7: Description of trees**

Table 5.7.1 Jinyunshan-1 (Area: Jinyunshan, China) CNS004

Table 5.7.2 Jinyunshan-2 (Area: Jinyunshan, China) CNS004

Table 5.7.3 Dabagou (Area: Jiwozi, China) CNS007

Table 5.7.4 Sekido-san (Area: Happo, Japan) JPS005

Table 5.7.5 Horyu-zan (Area: Happo, Japan) JPS105

➤ **Table 5.8: Understory vegetation survey**

Table 5.8.1 Jinyunshan-1 (Area: Jinyunshan, China) CNS004

Table 5.8.2 Jinyunshan-2 (Area: Jinyunshan, China) CNS004

Table 5.8.3 Dabagou (Area: Jiwozi, China) CNS007

Table 5.8.4 Sekido-san (Area: Happo, Japan) JPS005

Table 5.8.5 Horyu-zan (Area: Happo, Japan) JPS105

5.3 Correction of Names of Plants

Names of plants should be recorded by Latin scientific name for reporting vegetation monitoring. Because of the complexity of scientific name, considerable number of mistakes have been accumulated to date. In this report, corrigenda list is included as Appendix 3. This

list covers three kinds of reports of the EANET monitoring, i) observation of tree decline, ii) description of trees, and iii) description of understory vegetation. Also, it is applied to all past monitoring records up to the year of 2019. The list will be published on the EANET data download site, and the subsequent monitoring report will be published following this list.

Table 5.5.1 Soil chemical analysis: Jinyunshan (Area: Jinyunshan, China) CNS004

Soil sampling date: 11 November 2020

Name of analysis laboratory: Chongqing Ecological and Environmental Monitoring Center

Location	Soil type	Plot No.	Subplot No.	Layer analyzed	Repeat analysis	Water content (%)	pH		Exchangeable base cations (B)				Ex-acidity	Ex-acid cations		ECEC	Total C	Total N	Available	Sulfate
				(cm)			H ₂ O	KCl	Ca	Mg	K	Na	(A)	Al	H	(A) + (B)			P	-S
(cmol _c kg ⁻¹)										(%)		(mg kg ⁻¹)								
Jinyunshan CNS004	Acidic-Udic Argosol	1	1	0-10	1	4.9	4.1	3.4	0.30	0.060	0.080	0.070	10	8.0	1.6	10	-	-	-	-
			2			5.7	4.2	3.4	0.10	0.050	0.070	0.050	7.8	7.0	0.88	8.1	-	-	-	-
			3			7.5	4.2	3.4	0.29	0.070	0.090	0.060	8.0	6.9	1.1	8.5	-	-	-	-
			4			6.6	4.2	3.6	0.080	0.040	0.040	0.050	6.0	4.9	1.1	6.2	-	-	-	-
			5			5.6	4.2	3.4	0.23	0.080	0.060	0.030	7.8	6.5	1.3	8.2	-	-	-	-
			1	10-20		4.0	4.0	3.3	0.39	0.10	0.080	0.040	8.1	6.8	1.2	8.7	-	-	-	-
			2			5.5	4.2	3.5	0.21	0.060	0.060	0.040	8.3	7.4	1.0	8.7	-	-	-	-
			3			4.2	4.3	3.5	0.45	0.090	0.090	0.090	7.7	6.8	0.92	8.4	-	-	-	-
			4			6.3	4.5	4.3	0.060	0.040	0.13	0.080	2.9	2.5	0.40	3.2	-	-	-	-
			5			4.0	4.2	3.5	0.22	0.070	0.060	0.040	7.3	6.0	1.3	7.7	-	-	-	-
		2	1	0-10		5.0	4.3	3.5	0.070	0.030	0.040	0.050	6.7	5.8	0.90	6.9	-	-	-	-
			2			5.7	4.2	3.5	0.20	0.060	0.060	0.020	7.2	6.1	1.1	7.5	-	-	-	-
			3			5.3	4.3	3.6	0.13	0.030	0.060	0.050	6.7	5.1	1.6	6.9	-	-	-	-
			4			5.3	4.4	3.6	0.14	0.040	0.060	0.040	5.9	5.1	0.82	6.2	-	-	-	-
			5			3.2	4.4	3.7	0.28	0.050	0.070	0.030	5.6	4.2	1.4	6.0	-	-	-	-
			1	10-20		5.5	4.3	3.6	0.080	0.020	0.040	0.050	6.6	5.5	1.0	6.8	-	-	-	-
			2			5.6	4.2	3.5	0.15	0.050	0.050	0.030	8.5	7.3	1.2	8.8	-	-	-	-
			3			7.0	4.3	3.6	0.11	0.030	0.050	0.050	6.2	6.2	0.06	6.5	-	-	-	-
			4			4.4	4.4	3.7	0.12	0.030	0.060	0.030	5.2	4.6	0.60	5.5	-	-	-	-
			5			3.3	4.6	3.8	0.53	0.090	0.080	0.050	4.6	3.8	0.73	5.3	-	-	-	-

Table 5.5.2 Soil chemical analysis: Dabagou (Area: Jiwozi, China) CNS007

Soil sampling date: 19 October 2020

Name of analysis laboratory: Xi'an Environmental Monitoring Center Station

Location	Soil type	Plot No.	Subplot No.	Layer analyzed	Repeat analysis	Water content (%)	pH		Exchangeable base cations (B)				Ex-acidity	Ex-acid cations		ECEC	Total C	Total N	Available P	Sulfate -S		
				(cm)			H ₂ O	KCl	Ca	Mg	K	Na	(A)	Al	H	(A) + (B)	C	N	P	-S		
									(cmol _c kg ⁻¹)													

Table 5.5.3 Soil chemical analysis: Sekido-san (Area: Happo, Japan) JPS005

Soil sampling date: 8 September 2020

Name of analysis laboratory: Ishikawa Prefectural Institute of Public Health and Environmental Science

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		ECEC (A) + (B)	Total C	Total N	Available P	Sulfate -S	
							H ₂ O	KCl	Ca	Mg	K	Na		Al	H						
													(cmol _c kg ⁻¹)								
Sekido-san JPS005	Cambisols	1	1	0-10	1	8.3	4.2	3.5	0.35	0.64	0.42	0.13	15	13	2.2	17	11.0	0.8	3.7	19	
			2			7.0	4.4	3.8	0.16	0.41	0.40	0.13	14	12	1.9	15	7.2	0.6	1.8	29	
			3			6.9	4.4	3.7	0.60	0.61	0.46	0.14	12	11	1.4	14	8.7	0.7	2.7	23	
			4			7.9	4.2	3.4	0.17	0.59	0.27	0.21	19	16	3.0	20	10.2	0.7	2.4	16	
			5			6.5	4.7	3.9	0.10	0.26	0.25	0.15	9.9	8.9	1.0	11	6.0	0.4	0.95	57	
			1	10-20		7.1	4.7	3.9	0.077	0.23	0.25	0.13	14	11	2.8	14	6.5	0.5	1.4	43	
			2			7.3	4.7	3.9	0.067	0.28	0.28	0.16	13	10	2.2	13	5.9	0.5	1.3	49	
			3			6.8	4.7	3.9	0.21	0.23	0.32	0.13	11	9.7	1.0	12	5.9	0.4	0.76	55	
			4			7.3	4.8	3.9	0.032	0.31	0.17	0.17	14	12	2.4	15	5.6	0.4	0.96	44	
			5			6.8	4.4	3.6	0.14	0.52	0.35	0.18	14	12	2.3	16	9.7	0.7	2.5	25	
		2	1	0-10		5.9	4.3	3.6	0.66	0.84	0.32	0.15	17	14	2.1	19	4.7	0.4	2.7	25	
			2			7.8	4.3	3.5	1.1	1.2	0.32	0.20	19	18	1.9	22	6.7	0.5	2.7	25	
			3			5.8	4.1	3.6	0.40	0.44	0.34	0.069	16	10	6.2	17	5.0	0.4	2.4	24	
			4			4.9	4.5	3.7	0.12	0.48	0.15	0.13	12	11	1.2	13	3.1	0.2	2.3	31	
			5			5.2	4.6	3.7	0.43	0.44	0.21	0.092	11	9.4	1.2	12	3.2	0.3	2.8	19	
			1	10-20		5.7	4.5	3.8	0.35	0.49	0.25	0.12	15	14	1.2	16	2.9	0.4	1.7	47	
			2			7.4	4.5	3.7	0.60	0.66	0.22	0.17	17	16	0.90	19	5.1	0.4	1.5	46	
			3			6.1	4.4	3.7	0.26	0.29	0.22	0.07	16	14	1.6	16	3.4	0.3	2.2	33	
			4			4.5	4.8	3.9	0.15	0.41	0.11	0.14	11	9.5	1.0	11	1.9	0.2	2.1	56	
			5			4.6	4.5	3.9	0.28	0.34	0.16	0.10	11	9.6	1.2	12	2.4	0.2	2.4	29	
		1	1	0-10	1	8.3	4.2	3.6	0.36	0.64	0.44	0.13	16	13	2.2	17	10.7	0.8	3.1	15	
			2			7.0	4.4	3.8	0.16	0.41	0.42	0.14	14	12	1.7	15	7.6	0.6	1.6	29	
			3			6.9	4.4	3.7	0.61	0.62	0.50	0.14	12	11	1.5	14	8.7	0.7	2.2	22	
			4			7.9	4.2	3.4	0.18	0.59	0.28	0.22	18	16	2.5	19	10.2	0.7	2.2	16	
			5			6.5	4.7	3.9	0.11	0.27	0.27	0.16	9.9	9.1	0.85	11	6.5	0.5	0.98	64	
			1	10-20		7.1	4.6	3.9	0.077	0.23	0.25	0.13	12	11	1.3	13	6.4	0.5	1.0	38	
			2			7.3	4.7	3.9	0.071	0.28	0.29	0.16	12	10	1.6	13	6.1	0.5	0.80	53	
			3			6.8	4.7	3.9	0.21	0.23	0.33	0.13	11	9.5	1.1	11	6.2	0.5	0.87	59	
			4			7.3	4.8	3.9	0.031	0.31	0.17	0.17	14	12	2.7	15	5.5	0.4	1.0	45	
			5			6.8	4.4	3.6	0.14	0.52	0.37	0.19	14	12	2.2	16	9.9	0.7	2.7	27	
		2	1	0-10	2	5.9	4.3	3.6	0.67	0.84	0.33	0.15	17	14	2.2	19	4.7	0.4	2.3	24	
			2			7.8	4.2	3.5	1.1	1.2	0.34	0.21	19	17	2.0	22	6.6	0.5	2.4	23	
			3			5.8	4.1	3.6	0.40	0.44	0.36	0.068	16	10.0	6.2	17	5.0	0.4	2.5	26	
			4			4.9	4.5	3.7	0.12	0.48	0.15	0.13	12	11	1.2	13	3.3	0.3	2.0	30	
			5			5.2	4.6	3.7	0.43	0.44	0.23	0.097	11	9.5	1.3	12	3.0	0.2	2.3	20	
			1	10-20		5.7	4.5	3.8	0.35	0.48	0.26	0.12	15	14	1.4	16	3.0	0.2	1.5	45	
			2			7.4	4.5	3.7	0.60	0.66	0.23	0.18	18	16	1.7	20	5.2	0.4	1.1	47	
			3			6.1	4.3	3.7	0.26	0.29	0.23	0.075	16	14	1.5	17	3.6	0.3	2.1	33	
			4			4.5	4.8	3.9	0.15	0.40	0.11	0.14	11	9.7	1.1	12	1.7	0.1	1.7	53	
			5			4.6	4.8	3.9	0.28	0.34	0.17	0.10	11	9.8	1.0	12	2.3	0.2	1.9	28	

Table 5.5.4 Soil chemical analysis: Horyu-zan (Area: Happo, Japan) JPS105

Soil sampling date: 10 September 2020

Name of analysis laboratory: Ishikawa Prefectural Institute of Public Health and Environmental Science

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		ECEC (A) + (B)	Total C	Total N	Available P	Sulfate -S		
							H ₂ O	KCl	Ca	Mg	K		Na	Al						H	
												(cmol _c kg ⁻¹)					(%)				(mg kg ⁻¹)
Horyu-zan JPS105	Haplic / Ferric Alisol	1	1	0-10	1	10	4.4	3.4	0.48	1.2	0.22	0.25	16	14	2.2	18	8.4	0.5	1.4	32	
			2			11	4.7	3.7	0.36	0.99	0.42	0.12	25	22	3.1	27	4.0	0.2	1.1	46	
			3			7.0	4.8	3.9	0.18	0.52	0.13	0.16	12	11	1.3	13	4.4	0.3	1.3	56	
			4			6.7	4.3	3.3	0.48	0.69	0.20	0.20	18	15	3.3	19	8.7	0.5	1.4	20	
			5			9.3	4.5	3.6	0.31	0.71	0.16	0.22	20	17	3.2	22	7.8	0.4	1.1	20	
			1	10-20		11	4.7	3.7	0.44	1.1	0.19	0.27	23	20	3.5	25	5.1	0.3	0.65	87	
			2			11	4.9	3.8	0.30	1.1	0.23	0.14	24	20	3.4	26	2.5	0.2	0.29	83	
			3			6.8	4.9	4.0	0.20	0.52	0.10	0.18	11	9.2	1.5	12	2.7	0.2	0.35	150	
			4			5.5	4.7	3.7	0.22	0.42	0.15	0.16	14	11	2.7	15	3.7	0.2	0.29	67	
			5			9.0	4.9	3.9	0.39	0.98	0.13	0.25	16	13	3.3	18	4.5	0.3	0.57	150	
		2	1	0-10	1	9.4	4.6	3.6	0.80	0.84	0.30	0.20	23	16	6.4	25	8.3	0.5	1.9	39	
			2			9.8	4.1	3.2	1.6	1.3	0.31	0.22	16	14	2.0	20	10.9	0.6	3.6	22	
			3			9.3	4.6	3.6	0.88	1.2	0.22	0.25	19	18	1.8	22	8.1	0.5	1.3	31	
			4			7.2	4.7	3.7	0.26	0.82	0.13	0.24	14	13	1.4	16	4.8	0.3	2.2	53	
			5			8.8	4.5	3.6	1.2	1.0	0.24	0.21	18	16	2.1	21	8.5	0.5	1.7	26	
			1	10-20		8.8	4.7	3.8	0.52	0.67	0.22	0.21	17	15	1.3	18	5.7	0.3	1.0	47	
			2			10	4.6	3.6	0.51	0.81	0.25	0.16	22	20	2.2	24	6.0	0.3	0.91	24	
			3			10	4.9	3.8	0.76	1.9	0.17	0.30	18	16	1.3	21	5.3	0.3	0.75	55	
			4			6.9	4.9	3.9	0.28	1.2	0.10	0.27	12	11	1.0	14	3.2	0.2	0.42	100	
			5			8.6	4.9	3.9	0.90	1.1	0.20	0.23	14	13	1.2	16	5.7	0.3	0.91	63	
		1	1	0-10	1	10	4.4	3.4	0.49	1.2	0.23	0.26	18	15	2.5	20	8.5	0.5	1.8	33	
			2			11	4.6	3.7	0.37	1.0	0.45	0.13	25	22	3.2	27	4.2	0.3	1.4	48	
			3			7.0	4.8	3.8	0.18	0.52	0.14	0.16	12	11	1.6	13	4.4	0.3	1.6	58	
			4			6.7	4.3	3.3	0.48	0.69	0.21	0.20	18	15	2.8	19	8.7	0.5	1.5	20	
			5			9.3	4.5	3.6	0.32	0.72	0.17	0.23	20	17	3.1	22	7.6	0.4	1.4	49	
			1	10-20		11	4.7	3.7	0.45	1.1	0.20	0.28	23	19	3.7	25	5.0	0.3	0.67	86	
			2			11	4.8	3.8	0.30	1.1	0.24	0.15	24	20	3.6	26	2.5	0.2	0.66	85	
			3			6.8	4.9	4.0	0.21	0.52	0.11	0.18	11	9.1	1.6	12	2.8	0.2	0.72	150	
			4			5.5	4.7	3.7	0.22	0.41	0.16	0.17	14	11	2.7	15	3.7	0.2	0.59	64	
			5			9.0	4.9	3.9	0.39	0.98	0.14	0.26	16	14	2.5	18	4.5	0.3	0.74	140	
		2	1	0-10	2	9.4	4.5	3.6	0.82	0.85	0.32	0.21	23	16	6.9	25	8.2	0.5	2.4	41	
			2			9.8	4.1	3.2	1.6	1.3	0.32	0.22	16	14	2.1	20	10.7	0.6	3.9	22	
			3			9.3	4.6	3.6	0.89	1.2	0.23	0.26	19	18	1.8	22	8.1	0.5	1.8	30	
			4			7.2	4.7	3.7	0.26	0.82	0.14	0.25	14	13	1.4	16	4.8	0.3	1.5	54	
			5			8.8	4.5	3.6	1.2	1.0	0.25	0.21	18	16	1.9	21	8.5	0.5	1.9	27	
			1	10-20		8.8	4.7	3.8	0.53	0.67	0.24	0.21	17	15	1.6	18	5.7	0.3	1.4	55	
			2			10	4.6	3.6	0.52	0.82	0.26	0.17	22	20	2.2	24	6.1	0.3	1.8	25	
			3			10	4.9	3.8	0.84	2.0	0.19	0.35	18	16	1.4	21	5.2	0.3	1.0	55	
			4			6.9	5.0	3.9	0.28	1.2	0.11	0.28	12	11	0.99	14	3.2	0.2	0.73	110	
			5			8.6	4.9	3.9	0.90	1.1	0.20	0.24	14	13	1.1	16	5.6	0.3	1.4	65	

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

Plot name: Jinyunshan-1

Date: 11 November 2020

Surveyor: Lixianyuan

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)	19.8	11.3	8.3	15.0	14.3	9.8	11.7	13.8	13.6	
DBH (cm)	19.2	16.2	13.1	14.8	15.3	10.4	12.8	13.6	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: 1, not specified.

Blank cells indicate "0" (no damage).

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

Plot name: Jinyunshan-2

Date: 11 November 2020

Surveyor: Meng xiaoxing

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 lancifolia</i>	<i>Elaeocarpus japonicus</i>	<i>Machilus pingii</i>
Relative height								Null
Tree height (m)	12.3	11.3	17.3	18.3	21.3	15.9	19.4	
DBH (cm)	13.1	17.3	19.2	25.8	21.7	17.3	40.5	
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: 4, 8, not specified.

Blank cells indicate "0" (no damage).

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

Plot name: Dabagou

Date: 19 October 2020

Surveyor: Zhu Jian, Yang Naiwang, Fu GeJuan, 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	14.8	12.0	12.0	9.8	9.0	10.9	14.8	14.6	12.6	10.9	15.4	11.2	13.3	11.9	13.7	11.5	8.8
DBH (cm)	25.9	25.8	17.0	21.6	24.8	17.8	12.7	19.0	15.9	19.2	28.7	24.1	15.1	24.1	16.6	24.6	16.4	24.3	16.2	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: High stand density.																				

Blank cells indicate "0" (no damage).

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

Plot name: XPZ-01

Date: 27 October 2020

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)	16.8	17.4	18.6	17.6	16.7	17.6	18.5	18.1	17.9	18.6	18.0	17.8	18.8	17.1	17.3	17.3	17.3	19.5
DBH (cm)	17.4	21.0	19.9	20.1	21.7	24.9	21.6	20.5	18.3	22.8	20.7	20.5	18.9	21.8	20.7	20.5	21.6	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).

Table 5.6.5 Observation of tree decline: Sekido-san (Area: Happo, Japan) JPS005

Plot name: Sekido-san

Date: 31 August 2020

Surveyor: Yo Sengi, Jiro Kodani, Hana Iwamoto

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 tschonoskii</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 than other trees. - : Significantly lower than other trees.

Blank cells indicate "0" (no damage).

Table 5.6.6 Observation of tree decline: Horyu-zan (Area: Happo, Japan) JPS105

Plot name: Horyu-zan

Date: 10 September 2020

Surveyor: Yo Sengi, Jiro Kodani, Hana Iwamoto

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

Blank cells indicate "0" (no damage).

Table 5.6.7 Observation of tree decline: Ijira (Area: Ijira, Japan) JPS006

Plot name: Ijira-lake

Date: 30 September 2020

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	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				—		+	+							+		—		Dead	—	—
Tree height (m)	17.4	15.7	18.1	13.9	18.4	19.5	21.1	18.9	18.3	16.8	19.1	17.4	17.0	20.3	19.4	14.6	15.6		14.4	14.7
DBH (cm)	23.2	16.8	18.8	15.8	19.3	25.9	28.4	23.5	18.6	19.6	16.5	16.4	16.7	22.4	20.9	22.5	17.7		12.3	18.6
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							1													
Defoliation of crown																				
Deformation of leaves																				
Size of leaves																				
Discoloration of leaves																				
Injury of leaves																				
Damage class																				

Estimated cause of decline: No. 2, 4, 5-2, 8, 11, 12, 14, 15 and 17, bent stem; 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. No. 18, dead by suppression of surrounding trees.

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

Blank cells indicate "0" (no damage).

Table 5.6.8 Observation of tree decline: Yamato (Area: Ijira, Japan) JPS106

Plot name: Yamato

Date: 29 September 2020

Surveyor: Yoshizumi Hisada

Individual No.	1	2	3	4	5-2	6	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			+		—	Dead		+				—						+		—
Tree height (m)	30.5	30.5	32.4	29.9	27.8		30.0	32.3	31.3	30.5	29.7	26.1	29.3	29.3	30.2	29.5	28.5	32.0	31.5	27.0
DBH (cm)	40.8	40.3	45.3	44.9	31.6		42.4	38.5	42.1	43.7	34.9	33.3	49.4	36.5	44.7	36.2	35.2	48.1	47.8	34.9
Vitality of tree																				
Form of tree								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																				

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. 6, dead by snow damage.

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

Blank cells indicate "0" (no damage).

Table 5.7.1 Description of trees: Jinyunshan-1 (Area: Jinyunshan, China) CNS004

Plot name: Jinyunshan-1

Date: 11 November 2020

Surveyor: Li xianyuan

Survey area 1: radius 7.98 m

(Height > 1.3 m)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Machilus pingii</i>	17.8	18.7	
2	<i>Symplocos setchuenensis</i>	16.2	11.3	
3	<i>Cunninghamia lanceolata</i>	19.2	19.8	
5	<i>Machilus pingii</i>	21.7	17.4	
6	<i>Symplocos setchuenensis</i>	15.2	10.5	
7	<i>Pinus massoniana</i>	45.0	25.0	
8	<i>Randia cochinchinensis</i>	4.4	5.7	
11	<i>Symplocos setchuenensis</i>	Dead		
12	<i>Randia cochinchinensis</i>	5.3	6.6	
13	<i>Randia cochinchinensis</i>	3.2	5.8	
15	<i>Symplocos setchuenensis</i>	14.1	12.2	
17	<i>Symplocos setchuenensis</i>	13.0	12.4	
18	<i>Symplocos setchuenensis</i>	6.8	12.2	
20	<i>Elaeocarpus japonicus</i>	7.2	12.2	
22	<i>Symplocos setchuenensis</i>	10.3	11.6	
24	<i>Symplocos setchuenensis</i>	8.1	13.0	
25	<i>Symplocos setchuenensis</i>	8.7	13.3	
26	<i>Pinus massoniana</i>	29.4	22.0	
27	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	4.4	8.7	
28	<i>Diospyros morrisiana</i>	2.9	5.2	
31	<i>Elaeocarpus japonicus</i>	25.9	18.0	
32	<i>Symplocos setchuenensis</i>	4.0	7.5	
33	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	41.5	24.3	
34	<i>Symplocos setchuenensis</i>	11.9	15.0	
35	<i>Symplocos setchuenensis</i>	10.6	13.0	
36	<i>Symplocos lancifolia</i>	Dead		
39	<i>Randia cochinchinensis</i>	2.7	5.0	
40	<i>Symplocos setchuenensis</i>	8.9	11.3	
43	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	Dead		
44	<i>Eurya nitida</i>	4.2	7.7	
46	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	26.3	24.0	
48	<i>Symplocos setchuenensis</i>	17.9	16.3	
49	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	Dead		
51	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	Dead		
52	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	Dead		
53	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	Dead		
57	<i>Machilus pingii</i>	24.4	21.0	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
58	<i>Symplocos setchuenensis</i>	13.1	8.3	
59	<i>Pinus massoniana</i>	51.0	27.4	
60	<i>Randia cochinchinensis</i>	7.8	8.0	
61	<i>Pinus massoniana</i>	32.1	23.0	
62	<i>Symplocos setchuenensis</i>	9.4	7.0	
63	<i>Adinandra bockiana</i>	Dead		
64	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	40.0	19.8	
65	<i>Symplocos setchuenensis</i>	13.6	10.8	
66	<i>Cunninghamia lanceolata</i>	21.2	19.3	
67	<i>Machilus pingii</i>	33.7	25.0	
68	<i>Machilus pingii</i>	27.7	21.0	
70	<i>Symplocos setchuenensis</i>	10.4	9.8	
72	<i>Symplocos setchuenensis</i>	12.8	11.7	
73	<i>Symplocos setchuenensis</i>	Dead		
74	<i>Symplocos setchuenensis</i>	15.8	14.1	
75	<i>Machilus pingii</i>	14.1	16.5	
76	<i>Symplocos setchuenensis</i>	16.5	15.2	
77	<i>Symplocos setchuenensis</i>	8.4	11.6	
78	<i>Symplocos setchuenensis</i>	22.2	16.0	
79	<i>Symplocos lancifolia</i>	Dead		
80	<i>Machilus pingii</i>	32.0	22.5	
81	<i>Machilus pingii</i>	22.7	22.6	
82	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	21.1	19.6	
83	<i>Cunninghamia lanceolata</i>	21.0	17.0	
84	<i>Symplocos setchuenensis</i>	7.3	8.4	
85	<i>Symplocos setchuenensis</i>	14.4	10.3	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
87	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	43.0	26.0	
88	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	32.6	23.1	
90	<i>Castanopsis fargesii</i>	45.0	27.1	
91	<i>Machilus pingii</i>	24.5	25.6	
92	<i>Machilus pingii</i>	29.0	23.2	
93	<i>Pinus massoniana</i>	64.8	30.1	
94	<i>Cunninghamia lanceolata</i>	27.8	25.0	
95	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	34.6	21.2	
99	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	41.0	25.0	
100	<i>Cunninghamia lanceolata</i>	28.8	18.2	
101	<i>Symplocos setchuenensis</i>	14.8	15.0	
102	<i>Symplocos setchuenensis</i>	Dead		
103	<i>Symplocos setchuenensis</i>	13.6	13.8	
104	<i>Symplocos setchuenensis</i>	10.9	13.6	
105	<i>Symplocos setchuenensis</i>	15.3	14.3	

Table 5.7.2 Description of trees: Jinyunshan-2 (Area: Jinyunshan, China) CNS004

Plot name: Jinyunshan-2

Date: 11 November 2020

Surveyor: Li xianyu

Survey area 1: radius 7.98 m

(Height > 1.3 m)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
2	<i>Eurya loquana</i>	3.9	5.7	
3	<i>Eurya loquana</i>	5.0	5.0	
6	<i>Machilus pingii</i>	35.8	27.5	
7	<i>Machilus pingii</i>	30.5	29.4	
12	<i>Machilus pingii</i>	36.5	25.8	
13	<i>Machilus pingii</i>	44.0	29.5	
18	<i>Symplocos setchuenensis</i>	8.1	7.1	
20	<i>Symplocos lancifolia</i>	Dead		
21	<i>Symplocos setchuenensis</i>	8.0	8.0	
23	<i>Symplocos lancifolia</i>	5.1	7.8	
25	<i>Elaeocarpus japonicus</i>	Dead		
26	<i>Symplocos setchuenensis</i>	4.0	5.7	
27	<i>Stranvaesia tomentosa</i>	Dead		
28	<i>Symplocos setchuenensis</i>	10.0	8.8	
32	<i>Eurya loquana</i>	3.8	6.8	
33	<i>Symplocos setchuenensis</i>	Dead		
35	<i>Symplocos setchuenensis</i>	9.2	8.8	
37	<i>Eurya loquana</i>	5.0	7.2	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
39	<i>Machilus pingii</i>	15.4	18.9	
40	<i>Machilus pingii</i>	32.7	27.8	
41	<i>Adinandra bockiana</i>	21.7	21.3	
42	<i>Symplocos lancifolia</i>	17.5	17.2	
43	<i>Symplocos setchuenensis</i>	11.4	17.0	
44	<i>Symplocos setchuenensis</i>	Dead		
45	<i>Elaeocarpus japonicus</i>	Dead		
46	<i>Symplocos setchuenensis</i>	Dead		
48	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	Dead		
49	<i>Viburnum sambucinum</i> var. <i>tomentosum</i>	Dead		

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
50	<i>Elaeocarpus japonicus</i>	47.3	21.9	
51	<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	37.0	26.8	
52	<i>Machilus pingii</i>	34.0	26.2	
53	<i>Machilus pingii</i>	34.0	29.8	
54	<i>Machilus pingii</i>	30.0	29.9	
55	<i>Machilus pingii</i>	36.3	31.3	
56	<i>Machilus pingii</i>	29.7	27.3	
57	<i>Machilus pingii</i>	32.3	27.8	
59	<i>Castanopsis fargesii</i>	56.8	28.2	
61	<i>Symplocos setchuenensis</i>	24.1	17.3	
62	<i>Machilus pingii</i>	38.2	31.5	
63	<i>Machilus pingii</i>	44.0	31.3	
67	<i>Symplocos setchuenensis</i>	13.1	12.3	
68	<i>Symplocos setchuenensis</i>	17.3	11.3	
69	<i>Machilus pingii</i>	24.6	16.9	
70	<i>Elaeocarpus japonicus</i>	40.5	19.4	
71	<i>Symplocos lancifolia</i>	17.3	15.9	
74	<i>Adinandra bockiana</i>	19.2	17.3	
76	<i>Symplocos setchuenensis</i>	25.8	18.3	
77	<i>Symplocos lancifolia</i>	16.0	15.3	

Table 5.7.3 Description of trees: Dabagou (Area: Jiwozi, China) CNS007

Plot name: Dabagou

Date: 19 October 2020

Surveyor: Zhu Jian, Yang Naiwang, Fu GeJuan, Wu Yu

Survey area 1: radius 7.98 m

(Height > 1.3 m)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
0	<i>Pinus armandii</i>	23.4	12.2	
1	<i>Pinus armandii</i>	21.7	15.3	
2	<i>Larix gmelinii</i>	11.8	13.6	
3	<i>Larix gmelinii</i>	20.2	15.0	
4	<i>Crataegus hupehensis</i>	3.0	3.8	
5	<i>Viburnum kansuense</i>	2.5	2.9	
6	<i>Viburnum betulifolium</i>	2.3	4.9	
7	<i>Rosa omeiensis</i>	2.2	3.0	
8	<i>Quercus aliena</i> var. <i>acuteserrata</i>	5.6	5.9	
9	<i>Pinus armandii</i>	26.5	16.0	
10	<i>Carpinus cordata</i>	2.6	3.9	
11	<i>Quercus aliena</i> var. <i>acuteserrata</i>	5.2	7.0	
12	<i>Lespedeza formosa</i>	2.7	3.9	
13	<i>Pinus armandii</i>	28.0	11.0	
14	<i>Pinus armandii</i>	24.0	14.1	
15	<i>Pinus armandii</i>	23.9	11.0	
16	<i>Pinus armandii</i>	14.6	18.3	
17	<i>Quercus aliena</i> var. <i>acuteserrata</i>	4.7	6.4	
18	<i>Elaeagnus henryi</i>	5.7	7.9	
19	<i>Pinus armandii</i>	12.7	12.6	
20	<i>Larix gmelinii</i>	11.3	8.9	
21	<i>Acer grosseri</i>	8.5	7.7	
22	<i>Carpinus cordata</i>	4.5	5.4	
23	<i>Larix gmelinii</i>	22.9	13.3	
24	<i>Larix gmelinii</i>	24.8	15.0	
25	<i>Larix gmelinii</i>	18.5	14.5	
26	<i>Quercus aliena</i> var. <i>acuteserrata</i>	5.6	8.4	
27	<i>Quercus aliena</i> var. <i>acuteserrata</i>	6.8	7.2	
28	<i>Larix gmelinii</i>	21.0	15.0	
29	<i>Berberis</i> sp.	2.3	3.9	
30	<i>Larix gmelinii</i>	13.0	11.5	
31	<i>Acer grosseri</i>	4.1	7.4	
32	<i>Prunus venosa</i>	3.5	7.2	
33	<i>Celastrus orbiculatus</i>	Dead		
34	<i>Quercus aliena</i> var. <i>acuteserrata</i>	7.0	7.0	
35	<i>Pinus armandii</i>	28.0	15.0	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
36	<i>Pinus armandii</i>	10.4	7.1	
37	<i>Pinus armandii</i>	10.0	9.6	
38	<i>Larix gmelinii</i>	10.1	8.0	
39	<i>Larix gmelinii</i>	9.5	10.0	
40	<i>Larix gmelinii</i>	13.0	10.0	
41	<i>Quercus aliena</i> var. <i>acuteserrata</i>	9.6	11.5	
42	<i>Larix gmelinii</i>	14.5	8.8	
43	<i>Larix gmelinii</i>	16.2	11.8	
44	<i>Larix gmelinii</i>	11.6	12.5	
45	<i>Larix gmelinii</i>	6.8	9.6	
46	<i>Larix gmelinii</i>	11.6	9.9	
47	<i>Larix gmelinii</i>	15.9	13.5	
48	<i>Larix gmelinii</i>	13.0	11.2	
49	<i>Larix gmelinii</i>	18.5	14.5	
50	<i>Larix gmelinii</i>	7.4	9.8	
51	<i>Pinus armandii</i>	15.9	16.0	
52	<i>Larix gmelinii</i>	6.5	7.9	
53	<i>Larix gmelinii</i>	7.8	9.6	
54	<i>Larix gmelinii</i>	6.1	8.1	
55	<i>Larix gmelinii</i>	6.5	7.8	
56	<i>Pinus armandii</i>	27.7	19.0	
57	<i>Larix gmelinii</i>	8.9	8.7	
58	<i>Larix gmelinii</i>	25.0	17.3	
59	<i>Pinus armandii</i>	26.5	16.2	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
60	<i>Pinus armandii</i>	26.1	16.0	
61	<i>Pinus armandii</i>	25.8	16.0	
62	<i>Larix gmelinii</i>	28.3	16.3	
63	<i>Pinus armandii</i>	30.6	17.3	
64	<i>Pinus armandii</i>	27.5	14.5	
65	<i>Pinus armandii</i>	26.4	19.6	
66	<i>Pinus armandii</i>	23.9	14.9	

Table 5.7.4 Description of trees: Sekido-san (Area: Happo, Japan) JPS005

Plot name: Sekido-san

Date: 31 August 2020

Surveyor: Yo Sengi, Jiro Kodani, Hana Iwamoto

Survey area 1: radius 7.98 m

(Height > 1.3 m)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
5	<i>Fagus crenata</i>	53.1	25.0	
10	<i>Acer pictum</i>	33.5	20.4	
15	<i>Fagus crenata</i>	48.0	26.5	
20	<i>Fagus crenata</i>	43.5	22.8	
24	<i>Fagus crenata</i>	43.6	22.8	
27	<i>Fagus crenata</i>	43.7	22.9	
28	<i>Fagus crenata</i>	56.8	25.6	
29	<i>Acer pictum</i>	33.6	19.6	
30	<i>Fagus crenata</i>	36.0	20.4	
31	<i>Euonymus oxyphyllus</i>	5.9	3.7	Bushy standing 31, 157
21	<i>Fagus crenata</i>	43.5	22.8	
160(138)	<i>Chengiopanax sciadophylloides</i>	3.6	3.2	
34	<i>Camellia japonica</i>	2.7	3.6	Bushy standing 34, 141-143
164(146)	<i>Acer japonicum</i>	2.6	3.2	
36	<i>Camellia japonica</i>	3.0	2.8	Bushy standing 36, 67, 68
152(37)	<i>Viburnum furcatum</i>	2.4	3.1	
162(38)	<i>Cryptomeria japonica</i>	4.2	2.6	
39	<i>Cryptomeria japonica</i>	5.9	3.4	
159(40)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.8	2.8	
41	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.4	2.6	
149(42)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.5	2.9	Bushy standing 149, 89
43	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.9	2.8	Bushy standing 43, 90
44	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	3.0	2.8	
148(45)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.3	2.4	
46	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.1	2.6	
47	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.8	2.4	
154(48)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	3.3	3.2	
49	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.5	2.8	Bushy standing 49, 153
50	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.1	2.3	
165(51)	<i>Camellia japonica</i>	1.5	2.4	Bushy standing 165, 145
52	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.6	2.3	
54	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.9	2.6	Bushy standing 54, 74, 75
55	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.4	2.7	
64	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.3	1.9	
156(65)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.6	2.9	
66	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.6	2.3	
67	<i>Camellia japonica</i>	2.3	2.6	Bushy standing 36, 67, 68
68	<i>Camellia japonica</i>	3.6	3.0	Bushy standing 36, 67, 68
155(69)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	4.0	3.0	
70	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.1	2.7	
71	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.4	2.5	
163	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	3.4	3.1	
72	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.3	2.0	
74	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	Dead		Bushy standing 54, 74, 75
75	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.4	2.0	Bushy standing 54, 74, 75
145(76)	<i>Camellia japonica</i>	2.5	2.9	Bushy standing 165, 145
141(77)	<i>Camellia japonica</i>	1.8	2.3	Bushy standing 34, 141-143
142(78)	<i>Camellia japonica</i>	0.7	1.7	Bushy standing 34, 141-143
143(79)	<i>Camellia japonica</i>	2.8	2.6	Bushy standing 34, 141-143
80	<i>Camellia japonica</i>	1.1	2.0	
81	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.4	2.8	Bushy standing 81, 82
82	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.5	2.4	Bushy standing 81, 82
147(83)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.7	2.5	
153(84)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	Dead		Bushy standing 49, 153
85	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.2	2.5	
151(86)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	Dead		
88	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.6	2.4	
89	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	3.1	2.9	Bushy standing 149, 89
90	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.7	2.9	Bushy standing 43, 90
134(91)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.8	2.2	
135(92)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.9	3.0	
136(93)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.1	2.4	Bushy standing 136, 94
94	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.0	2.4	Bushy standing 136, 94
95	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	2.3	2.5	
96	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.5	1.3	
157(97)	<i>Euonymus oxyphyllus</i>	1.8	2.2	Bushy standing 31, 157
158(98)	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	0.3	1.3	
137	<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	1.4	1.7	
144	<i>Acer pictum</i>	38.7	21.4	
150	<i>Viburnum furcatum</i>	2.6	2.7	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
4	<i>Fagus crenata</i>	66.5	31.6	
13	<i>Fagus crenata</i>	67.8	27.2	
14	<i>Fagus crenata</i>	37.6	24.0	
18	<i>Fagus crenata</i>	36.4	20.6	
19	<i>Fagus crenata</i>	60.6	26.8	
56	<i>Camellia japonica</i>	6.4	5.7	
139(57)	<i>Acer distylum</i>	6.1	4.6	
166(140)	<i>Acer distylum</i>	7.2	5.9	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
167(58)	<i>Acer pictum</i>	23.7	15.4	
11	<i>Fagus crenata</i>	60.0	26.0	
59	<i>Fagus crenata</i>	67.4	26.6	
60	<i>Fagus crenata</i>	50.8	24.6	
9	<i>Betula grossa</i>	40.9	21.6	
8	<i>Carpinus laxiflora</i>	Dead		
7	<i>Carpinus tschonoskii</i>	55.7	25.4	
6	<i>Fagus crenata</i>	55.7	24.8	
168(61)	<i>Acer pictum</i>	43.5	22.8	
3	<i>Carpinus tschonoskii</i>	Dead		
2	<i>Betula grossa</i>	57.4	35.0	
169(62)	<i>Carpinus tschonoskii</i>	72.0	26.6	
17	<i>Cerasus jamasakura</i>	68.4	21.2	
16	<i>Quercus crispula</i> var. <i>crispula</i>	50.3	26.1	
1	<i>Fagus crenata</i>	42.6	30.3	
170(99)	<i>Magnolia obovata</i>	26.6	16.7	

Table 5.7.5 Description of trees: Horyu-zan (Area: Happo, Japan) JPS105

Plot name: Horyu-zan

Date: 10 September 2020

Surveyor: Yo Sengi, Jiro Kodani, Hana Iwamoto

Survey area 1: radius 7.98 m, 1/3

(Height > 1.3 m)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
21	<i>Fagus crenata</i>	25.2	17.5	
22	<i>Fagus crenata</i>	29.3	18.7	
23	<i>Fagus crenata</i>	29.0	18.6	
245	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	Lost		
97(221)	<i>Sorbus commixta</i>	2.8	4.0	
24	<i>Fagus crenata</i>	25.3	17.6	
25	<i>Fagus crenata</i>	26.7	18.0	
26	<i>Fagus crenata</i>	10.0	9.6	
17(202)	<i>Magnolia salicifolia</i>	Lost		
27	<i>Quercus crispula</i> var. <i>crispula</i>	35.6	19.6	
23(197)	<i>Viburnum furcatum</i>	2.6	3.2	
22(196)	<i>Magnolia salicifolia</i>	2.6	3.0	
19(195)	<i>Magnolia salicifolia</i>	1.4	2.6	
18(193)	<i>Elliottia paniculata</i>	1.1	1.9	
205	<i>Viburnum furcatum</i>	Lost		
67(206)	<i>Magnolia salicifolia</i>	3.9	3.8	
20(184)	<i>Magnolia salicifolia</i>	1.8	3.3	
21(183)	<i>Magnolia salicifolia</i>	1.5	2.9	
89(198)	<i>Viburnum furcatum</i>	Lost		
24(201)	<i>Magnolia salicifolia</i>	1.5	2.3	
47	<i>Fagus crenata</i>	26.4	17.9	
46	<i>Fagus crenata</i>	23.5	16.9	
26(286)	<i>Acer japonicum</i>	3.4	3.6	
25(285)	<i>Acer japonicum</i>	3.5	3.8	
28(181)	<i>Padus grayana</i>	Lost		
27(180)	<i>Viburnum furcatum</i>	2.3	3.3	
33(174)	<i>Viburnum furcatum</i>	2.4	2.9	
35(176)	<i>Viburnum furcatum</i>	2.0	2.5	
36(171)	<i>Cornus kousa</i>	3.6	2.8	
40(166)	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	2.1	2.7	
38(169)	<i>Acer rufrinerve</i>	2.6	4.1	
39(170)	<i>Elliottia paniculata</i>	1.1	2.2	
80(157)	<i>Acer amoenum</i> var. <i>matsumurae</i>	2.0	2.3	
42	<i>Carpinus laxiflora</i>	14.5	12.6	
288	<i>Symplocos sawafutagi</i>	1.1	2.2	
291	<i>Acer amoenum</i> var. <i>matsumurae</i>	1.5	2.1	
84	<i>Elliottia paniculata</i>	0.9	1.7	
85	<i>Elliottia paniculata</i>	0.8	1.6	
86	<i>Elliottia paniculata</i>	1.4	1.8	
296	<i>Cornus kousa</i>	1.0	2.6	
41	<i>Aria alnifolia</i>	Lost		
37	<i>Fagus crenata</i>	28.6	18.5	
36	<i>Fagus crenata</i>	Dead		
35	<i>Fagus crenata</i>	19.9	15.4	
34	<i>Fagus crenata</i>	23.7	17.0	
33	<i>Fagus crenata</i>	18.4	14.7	
32	<i>Fagus crenata</i>	Dead		
39	<i>Fagus crenata</i>	12.3	11.2	
45(254)	<i>Acer japonicum</i>	2.5	3.1	
47(249)	<i>Acer amoenum</i> var. <i>matsumurae</i>	3.4	3.1	
48(250)	<i>Cornus kousa</i>	1.8	2.8	
49(251)	<i>Cornus kousa</i>	1.5	2.5	
50(252)	<i>Cornus kousa</i>	1.3	2.2	
51(253)	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.5	2.2	
52(248)	<i>Acer japonicum</i>	Lost		
55(244)	<i>Cornus kousa</i>	2.1	1.4	
53(242)	<i>Cornus kousa</i>	3.4	3.5	
54(243)	<i>Cornus kousa</i>	1.8	2.7	
1(247)	<i>Cornus kousa</i>	Lost		
5(232)	<i>Hamamelis japonica</i> var. <i>discolor</i>	1.9	2.7	
6(234)	<i>Hamamelis japonica</i> var. <i>discolor</i>	Dead		
4(231)	<i>Hamamelis japonica</i> var. <i>discolor</i>	2.8	3.9	
31	<i>Fagus crenata</i>	34.2	19.5	
57(239)	<i>Viburnum furcatum</i>	1.4	2.1	
56(238)	<i>Viburnum furcatum</i>	2.0	2.7	
58(241)	<i>Acer japonicum</i>	1.9	2.4	
30	<i>Pinus densiflora</i>	31.0	19.0	
7(235)	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.6	1.4	
230	<i>Toxicodendron trichocarpum</i>	Lost		
69(229)	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	Lost		
9(227)	<i>Magnolia salicifolia</i>	2.8	3.5	
65(226)	<i>Viburnum furcatum</i>	0.9	1.5	
8(224)	<i>Magnolia salicifolia</i>	2.0	3.0	
10(225)	<i>Magnolia salicifolia</i>	1.5	2.5	
10	<i>Fagus crenata</i>	25.4	18.3	
29	<i>Fagus crenata</i>	14.5	12.6	Bushy standing 29, 96
294	<i>Symplocos sawafutagi</i>	1.4	2.0	

Survey area 1: radius 7.98 m, 2/3

(Height > 1.3 m)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
83	<i>Acer japonicum</i>	1.4	2.2	
11(219)	<i>Viburnum furcatum</i>	1.8	2.4	
12(215)	<i>Magnolia salicifolia</i>	1.3	2.2	
13(281)	<i>Acer japonicum</i>	4.3	3.8	
14(212)	<i>Magnolia salicifolia</i>	3.0	3.5	
15(211)	<i>Symplocos sawafutagi</i>	1.3	2.4	
41(162)	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	2.0	2.8	
42(163)	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.3	2.1	
43(289)	<i>Acer japonicum</i>	2.7	2.8	
168	<i>Lindera umbellata</i> var. <i>membranacea</i>	Lost		
167	<i>Lindera umbellata</i> var. <i>membranacea</i>	Lost		
160	<i>Clethra barbinervis</i>	Lost		
161	<i>Clethra barbinervis</i>	Lost		
46(156)	<i>Acer japonicum</i>	1.2	2.3	
44(158)	<i>Viburnum furcatum</i>	1.7	2.3	
34(175)	<i>Viburnum furcatum</i>	0.9	1.9	
172	<i>Symplocos sawafutagi</i>	Lost		
177	<i>Callicarpa japonica</i>	Lost		
185	<i>Padus grayana</i>	Lost		
30(186)	<i>Viburnum furcatum</i>	1.5	2.2	
29(187)	<i>Viburnum furcatum</i>	1.7	2.6	
189	<i>Viburnum furcatum</i>	Lost		
188	<i>Viburnum furcatum</i>	Lost		
190	<i>Magnolia salicifolia</i>	Lost		
70(200)	<i>Symplocos sawafutagi</i>	1.4	2.3	
69(199)	<i>Padus grayana</i>	Lost		
203	<i>Fagus crenata</i>	Lost		
204	<i>Padus grayana</i>	Lost		
101(208)	<i>Clethra barbinervis</i>	Lost		
66(207)	<i>Magnolia salicifolia</i>	3.5	3.8	
71(209)	<i>Magnolia salicifolia</i>	Dead		
16(218)	<i>Sorbus commixta</i>	Lost		
61(237)	<i>Clethra barbinervis</i>	Lost		
3(255)	<i>Acer japonicum</i>	3.5	3.6	
283	<i>Magnolia salicifolia</i>	2.3	3.4	
295	<i>Acer japonicum</i>	2.4	3.1	
2(256)	<i>Acer japonicum</i>	1.1	2.1	
257	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	Lost		
258	<i>Magnolia salicifolia</i>	Lost		
259	<i>Magnolia salicifolia</i>	Lost		
73(260)	<i>Lindera umbellata</i> var. <i>membranacea</i>	Lost		
74(261)	<i>Magnolia salicifolia</i>	Lost		
72(262)	<i>Viburnum furcatum</i>	1.1	2.0	
32(263)	<i>Viburnum furcatum</i>	1.7	2.7	
31(264)	<i>Viburnum furcatum</i>	2.2	2.6	
79(265)	<i>Viburnum furcatum</i>	1.5	2.3	
78(266)	<i>Eurya japonica</i>	1.5	1.8	
77(267)	<i>Eurya japonica</i>	Lost		
81(268)	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.4	2.1	
82(269)	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	Lost		
270	<i>Magnolia salicifolia</i>	Lost		
271	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	Lost		
75(271)	<i>Lindera umbellata</i> var. <i>membranacea</i>	1.9	2.9	
76(273)	<i>Lindera umbellata</i> var. <i>membranacea</i>	Lost		
59(274)	<i>Viburnum furcatum</i>	2.2	2.5	
60(275)	<i>Viburnum furcatum</i>	0.8	1.8	
64(276)	<i>Hamamelis japonica</i> var. <i>discolor</i>	Lost		
63(277)	<i>Hamamelis japonica</i> var. <i>discolor</i>	Lost		
96(278)	<i>Fagus crenata</i>	2.1	2.8	Bushy standing 29, 96
37(279)	<i>Viburnum furcatum</i>	2.3	2.8	
87	<i>Symplocos sawafutagi</i>	1.4	2.0	
88	<i>Symplocos sawafutagi</i>	0.9	1.5	
89	<i>Ilex leucoclada</i>	0.9	2.2	
90	<i>Viburnum furcatum</i>	1.4	2.2	
91	<i>Eurya japonica</i>	1.1	1.6	
92	<i>Viburnum furcatum</i>	1.2	1.6	
93	<i>Viburnum furcatum</i>	1.0	1.9	
94	<i>Viburnum wrightii</i>	Lost		
95	<i>Chengiapanax sciadophylloides</i>	Lost		
98	<i>Lindera umbellata</i> var. <i>membranacea</i>	Dead		
99	<i>Magnolia salicifolia</i>	1.1	2.4	
100	<i>Clethra barbinervis</i>	1.3	2.5	
102	<i>Fagus crenata</i>	1.3	2.2	
103	<i>Fagus crenata</i>	1.4	2.1	
104	<i>Padus grayana</i>	Lost		
105	<i>Magnolia salicifolia</i>	1.2	2.6	
106	<i>Magnolia salicifolia</i>	Lost		
107	<i>Acer japonicum</i>	1.5	2.7	
282	<i>Padus grayana</i>	0.7	1.6	
284	<i>Clethra barbinervis</i>	1.1	2.0	
68	<i>Viburnum furcatum</i>	2.7	3.1	
292	<i>Eurya japonica</i>	1.5	2.2	

Survey area 1: radius 7.98 m, 3/3

(Height > 1.3 m)

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
108	<i>Acer japonicum</i>	Lost		
109	<i>Viburnum furcatum</i>	1.0	2.1	
110	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.3	2.1	
111	<i>Elliottia paniculata</i>	Lost		
112	<i>Lindera umbellata</i> var. <i>membranacea</i>	Lost		
113	<i>Lindera umbellata</i> var. <i>membranacea</i>	Lost		
114	<i>Acer rufigerve</i>	1.9	3.2	
115	<i>Elliottia paniculata</i>	Lost		
116	<i>Lindera umbellata</i> var. <i>membranacea</i>	1.3	2.0	
117	<i>Elliottia paniculata</i>	0.9	1.7	
118	<i>Acer pictum</i>	Lost		
119	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.9	2.3	
120	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.7	2.2	
121	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.5	2.0	
122	<i>Clethra barbinervis</i>	1.8	2.0	
123	<i>Clethra barbinervis</i>	1.2	1.6	
124	<i>Clethra barbinervis</i>	1.2	1.7	
125	<i>Ilex crenata</i> var. <i>radicans</i>	Lost		
126	<i>Ilex crenata</i> var. <i>radicans</i>	Lost		
127	<i>Eurya japonica</i>	Lost		
128	<i>Elliottia paniculata</i>	Lost		
129	<i>Viburnum furcatum</i>	1.4	2.1	
130	<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	1.0	2.1	
131	<i>Elliottia paniculata</i>	Lost		
132	<i>Acer japonicum</i>	1.4	3.0	
133	<i>Ilex leucoclada</i>	Lost		
290	<i>Lindera umbellata</i> var. <i>membranacea</i>	1.1	2.2	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
73	<i>Fagus crenata</i>	25.6	17.7	Bushy standing 73-75
74	<i>Fagus crenata</i>	34.7	19.6	Bushy standing 73-75
75	<i>Fagus crenata</i>	26.6	18.0	Bushy standing 73-75
68	<i>Fagus crenata</i>	20.2	15.6	Bushy standing 19, 20, 68, 70, 71
70	<i>Fagus crenata</i>	Dead	0.0	Bushy standing 19, 20, 68, 70, 71
71	<i>Fagus crenata</i>	25.7	17.7	Bushy standing 19, 20, 68, 70, 71
19	<i>Fagus crenata</i>	24.6	17.3	Bushy standing 19, 20, 68, 70, 71
20	<i>Fagus crenata</i>	32.2	19.3	Bushy standing 19, 20, 68, 70, 71
62	<i>Fagus crenata</i>	Lost	0.0	Bushy standing 62, 63
63	<i>Fagus crenata</i>	30.7	19.0	Bushy standing 62, 63
4	<i>Fagus crenata</i>	19.3	15.3	
60	<i>Aria alnifolia</i>	21.2	16.0	
5	<i>Fagus crenata</i>	25.1	18.4	Bushy standing 5, 59
59	<i>Fagus crenata</i>	19.2	15.1	Bushy standing 5, 59
55	<i>Fagus crenata</i>	Dead	0.0	
56	<i>Fagus crenata</i>	9.2	9.1	Bushy standing 54, 56, 57
54	<i>Fagus crenata</i>	29.3	18.7	Bushy standing 54, 56, 57
57	<i>Fagus crenata</i>	25.5	17.6	Bushy standing 54, 56, 57
8	<i>Fagus crenata</i>	20.2	16.5	Bushy standing 8, 9, 50, 51, 53
9	<i>Fagus crenata</i>	22.6	17.4	Bushy standing 8, 9, 50, 51, 53
50	<i>Fagus crenata</i>	22.1	16.4	Bushy standing 8, 9, 50, 51, 53
51	<i>Fagus crenata</i>	13.4	11.9	Bushy standing 8, 9, 50, 51, 53
53	<i>Fagus crenata</i>	13.0	11.6	Bushy standing 8, 9, 50, 51, 53
77	<i>Fagus crenata</i>	20.5	15.7	
15	<i>Fagus crenata</i>	22.2	15.6	Bushy standing 15, 280
280	<i>Fagus crenata</i>	28.7	18.5	Bushy standing 15, 280
297	<i>Magnolia salicifolia</i>	5.1	4.7	
298	<i>Chengiopanax sciadophylloides</i>	4.7	4.8	
299	<i>Acer amoenum</i> var. <i>matsumurae</i>	5.4	5.5	

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

Tree No.	Scientific name	DBH (cm)	Tree Height (m)	Remarks
1	<i>Fagus crenata</i>	24.8	19.1	
2	<i>Fagus crenata</i>	22.9	18.1	
3	<i>Fagus crenata</i>	42.4	22.2	
134	<i>Fagus crenata</i>	20.2	15.6	
133	<i>Fagus crenata</i>	34.7	19.6	Bushy standing 129-133
132	<i>Fagus crenata</i>	35.0	19.6	Bushy standing 129-133
129	<i>Fagus crenata</i>	40.0	19.7	Bushy standing 129-133
130	<i>Fagus crenata</i>	34.2	19.5	Bushy standing 129-133
131	<i>Fagus crenata</i>	32.7	19.3	Bushy standing 129-133
123	<i>Carpinus laxiflora</i>	22.8	16.7	
121	<i>Carpinus laxiflora</i>	21.0	15.9	
124	<i>Fagus crenata</i>	18.7	14.9	Bushy standing 124, 125, 126, 128
125	<i>Fagus crenata</i>	23.8	17.0	Bushy standing 124, 125, 126, 128
128	<i>Fagus crenata</i>	20.1	15.5	Bushy standing 124, 125, 126, 128
126	<i>Fagus crenata</i>	22.1	16.4	Bushy standing 124, 125, 126, 128
120	<i>Carpinus laxiflora</i>	11.8	10.9	
18	<i>Carpinus laxiflora</i>	16.5	13.6	
16	<i>Fagus crenata</i>	12.7	11.2	Bushy standing 16, 17, 116, 117, 119
17	<i>Fagus crenata</i>	19.9	17.3	Bushy standing 16, 17, 116, 117, 119
119	<i>Fagus crenata</i>	13.5	12.0	Bushy standing 16, 17, 116, 117, 119
117	<i>Fagus crenata</i>	29.8	18.8	Bushy standing 16, 17, 116, 117, 119
112	<i>Fagus crenata</i>	27.8	18.3	Bushy standing 112, 114
114	<i>Fagus crenata</i>	28.5	18.5	Bushy standing 112, 114
107	<i>Fagus crenata</i>	24.8	17.4	Bushy standing 107, 108
108	<i>Fagus crenata</i>	28.7	18.5	Bushy standing 107, 108
110	<i>Fagus crenata</i>	12.9	11.6	
106	<i>Fagus crenata</i>	13.7	12.1	
101	<i>Fagus crenata</i>	24.4	17.3	Bushy standing 101, 102
102	<i>Fagus crenata</i>	29.4	18.7	Bushy standing 101, 102
100	<i>Fagus crenata</i>	16.9	13.9	
98	<i>Fagus crenata</i>	22.0	16.3	
14	<i>Fagus crenata</i>	15.3	15.3	
12	<i>Fagus crenata</i>	19.0	16.8	Bushy standing 12, 90
13	<i>Fagus crenata</i>	25.7	18.6	Bushy standing 13, 93
93	<i>Fagus crenata</i>	Dead		Bushy standing 13, 93
90	<i>Fagus crenata</i>	Dead		Bushy standing 12, 90
95	<i>Fagus crenata</i>	25.8	17.1	
96	<i>Fagus crenata</i>	18.9	15.0	
97	<i>Fagus crenata</i>	Dead		
85	<i>Fagus crenata</i>	12.0	11.0	Bushy standing 85, 87, 88
87	<i>Fagus crenata</i>	9.0	8.9	Bushy standing 85, 87, 88
88	<i>Fagus crenata</i>	18.0	14.5	Bushy standing 85, 87, 88
83	<i>Pinus densiflora</i>	39.7	19.7	
79	<i>Fagus crenata</i>	19.3	15.1	
80	<i>Fagus crenata</i>	8.8	8.8	Bushy standing 80-82
81	<i>Fagus crenata</i>	18.5	14.8	Bushy standing 80-82
82	<i>Fagus crenata</i>	10.3	9.8	Bushy standing 80-82
6	<i>Pinus densiflora</i>	41.3	19.7	
—	<i>Symplocos sawafutagi</i>	Dead		
7	<i>Fagus crenata</i>	14.7	12.7	
78	<i>Acer japonicum</i>	Lost		
65	<i>Fagus crenata</i>	24.7	17.4	
66	<i>Fagus crenata</i>	21.6	16.2	
154	<i>Aria alnifolia</i>	Dead		
153	<i>Fagus crenata</i>	14.5	12.6	
152	<i>Fagus crenata</i>	Dead		
150	<i>Fagus crenata</i>	30.7	19.0	Bushy standing 146-150
149	<i>Fagus crenata</i>	12.7	11.5	Bushy standing 146-150
148	<i>Fagus crenata</i>	26.2	17.9	Bushy standing 146-150
147	<i>Fagus crenata</i>	20.2	15.6	Bushy standing 146-150
146	<i>Fagus crenata</i>	33.4	19.4	Bushy standing 146-150
140	<i>Fagus crenata</i>	Dead		Bushy standing 140-142
141	<i>Fagus crenata</i>	25.0	17.5	Bushy standing 140-142
142	<i>Fagus crenata</i>	30.2	18.9	Bushy standing 140-142
144	<i>Fagus crenata</i>	Dead		Bushy standing 144, 145
145	<i>Fagus crenata</i>	Dead		Bushy standing 144, 145
138	<i>Fagus crenata</i>	29.2	18.7	Bushy standing 135-138
137	<i>Fagus crenata</i>	17.5	14.2	Bushy standing 135-138
136	<i>Fagus crenata</i>	25.8	17.7	Bushy standing 135-138
135	<i>Fagus crenata</i>	Dead		Bushy standing 135-138

"Lost" indicates the individual which disappeared at the latest survey in 2020, while it was recorded in 2015.

Table 5.8.1 Understory vegetation survey

Plot name: Jinyunshan-1 (Area: Jinyunshan, China) CNS004

Date: 11 November 2020

Surveyor: Li xianyuan

Number of Species: 37

Scientific name	Abundance
<i>Symplocos setchuenensis</i>	1
<i>Lophatherum gracile</i>	+
<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	1
<i>Elaeocarpus duclouxii</i>	2
<i>Vaccinium sprengelii</i>	+
<i>Sarcandra glabra</i>	3
<i>Castanopsis fargesii</i>	+
<i>Maesa japonica</i>	1
<i>Diplopterygium chinensis</i>	1
<i>Elaeocarpus japonicus</i>	+
<i>Eurya loquania</i>	1
<i>Ardisia crispa</i> var. <i>dielsii</i>	+
<i>Camellia tsofuii</i>	+
<i>Lindera kwangtungensis</i>	+
<i>Symplocos lancifolia</i>	+
<i>Cunninghamia lanceolata</i>	+
<i>Randia cochinchinensis</i>	1
<i>Stranvaesia tomentosa</i>	+
<i>Dryopteris erythrosora</i>	+
<i>Embelia rudis</i>	+
<i>Antidesma decicatalum</i>	+
<i>Arachniodes chinensis</i>	+
<i>Ardisia crenata</i>	1
<i>Lysimachia paridiformis</i>	+
<i>Machilus pingii</i>	1
<i>Alpinia japonica</i>	+
<i>Smilax china</i>	1
<i>Neolitsea aurata</i> var. <i>glauca</i>	1
<i>Laurocerasus spinulosa</i>	+
<i>Gordonia acuminata</i>	+
<i>Balanophora henryi</i>	+
<i>Diospyros morrisiana</i>	+
<i>Ilex tetramera</i>	+
<i>Woodwardia japonica</i>	+
<i>Caesalpinia crista</i>	+
<i>Symplocos laurina</i>	+
<i>Rhododendron simsii</i>	+

Table 5.8.2 Understory vegetation survey

Plot name: Jinyunshan-2 (Area: Jinyunshan, China) CNS004

Date: 11 November 2020

Surveyor: Li xianyuan

Number of Species: 36

Scientific name	Abundance
<i>Diplopterygium chinensis</i>	4
<i>Machilus pingii</i>	3
<i>Castanopsis carlesii</i> var. <i>spinulosa</i>	2
<i>Symplocos lancifolia</i>	+
<i>Symplocos setchuenensis</i>	3
<i>Camellia sinensis</i>	+
<i>Rubus assamensis</i>	+
<i>Maesa japonica</i>	+
<i>Sarcandra glabra</i>	3
<i>Lophatherum gracile</i>	+
<i>Woodwardia japonica</i>	+
<i>Stranvaesia tomentosa</i>	+
<i>Caesalpinia crista</i>	2
<i>Arachniodes omaena</i>	+
<i>Castanopsis fargesii</i>	+
<i>Elaeocarpus japonicus</i>	+
<i>Lysimachia paridiformis</i>	+
<i>Adinandra bockiana</i>	+
<i>Ilex viridis</i> var. <i>brevipedicellata</i>	+
<i>Symplocos botryantha</i>	+
<i>Trachycarpus fortunei</i>	+
<i>Dichroa febrifuga</i>	+
<i>Daphniphyllum oldhamii</i>	+
<i>Mahonia eurybracteata</i>	+
<i>Cinnamomum appelianum</i>	+
<i>Eurya loquaniiana</i>	+
<i>Smilax china</i>	1
<i>Symplocos laurina</i>	+
<i>Sapium discolor</i>	+
<i>Balanophora henryi</i>	+
<i>Ardisia</i> sp.	+
<i>Photinia glabra</i>	+
<i>Aidia cochinchinensis</i>	+
<i>Aleurites fordii</i>	+
<i>Diospyros morrisiana</i>	+
<i>Microlepidia marginata</i>	+

Table 5.8.3 Understory vegetation survey

Plot name: Dabagou (Area: Jiwozi, China) CNS007

Date: 19 October 2020

Surveyor: Zhu Jian, Yang Naiwang, Fu GeJuan, Wu Yu

Number of Species: 13

Scientific name	Abundance
<i>Equisetum hyemale</i>	1
<i>Fargesia spathacea</i>	+
<i>Chimaphila japonica</i>	+
<i>Aquilegia ecalcarata</i>	+
<i>Sanguisorba officinalis</i>	+
<i>Euonymus alatus</i>	+
<i>Reineckea carnea</i>	+
<i>Cardamine leucantha</i>	+
<i>Glechoma longituba</i>	+
<i>Celastrus orbiculatus</i>	+
<i>Rubia ovatifolia</i>	+
<i>Agrimonia pilosa</i>	+
<i>Rubus mesogaeus</i>	+

Table 5.8.4 Understory vegetation survey

Plot name: Sekido-san (Area: Happo, Japan) JPS005

Date: 31 August 2020

Surveyor: Yo Sengi, Jiro Kodani, Hana Iwamoto

Number of Species: 25

Scientific name	Abundance
<i>Sasa kurilensis</i>	4
<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	3
<i>Viburnum furcatum</i>	1
<i>Aucuba japonica</i> var. <i>borealis</i>	1
<i>Cephalotaxus harringtonia</i> var. <i>nana</i>	+
<i>Carex conica</i> var. <i>conica</i>	+
<i>Acer japonicum</i>	+
<i>Torreya nucifera</i> var. <i>radicans</i>	+
<i>Euonymus alatus</i> var. <i>alatus</i>	+
<i>Cryptomeria japonica</i>	+
<i>Ilex crenata</i> var. <i>radicans</i>	+
<i>Struthiopteris niponica</i>	+
<i>Schizophragma hydrangeoides</i>	+
<i>Camellia japonica</i>	+
<i>Coptis japonica</i> var. <i>anemonifolia</i>	+
<i>Ardisia japonica</i>	+
<i>Goodyera foliosa</i> var. <i>laevis</i>	+
<i>Acer distylum</i>	+
<i>Carex morrowi</i>	+
<i>Dioscorea tokoro</i>	+
<i>Mitchella undulata</i>	+
<i>Kadsura japonica</i>	+
<i>Dumasia truncata</i>	+
<i>Lindera umbellata</i> var. <i>membranacea</i>	+
<i>Castanea crenata</i>	+

Table 5.8.5 Understory vegetation survey

Plot name: Horyu-zan (Area: Happo, Japan) JPS105

Date: 10 September 2020

Surveyor: Yo Sengi, Jiro Kodani, Hana Iwamoto

Number of Species: 37

Scientific name	Abundance
<i>Ilex leucoclada</i>	2
<i>Ilex crenata</i> var. <i>radicans</i>	2
<i>Rhododendron lagopus</i> var. <i>niphophilum</i>	2
<i>Elliottia paniculata</i>	2
<i>Shortia uniflora</i> var. <i>kantoensis</i>	2
<i>Viburnum furcatum</i>	1
<i>Symplocos sawafutagi</i>	1
<i>Acer japonicum</i>	+
<i>Magnolia salicifolia</i>	+
<i>Rhododendron kaempferi</i> var. <i>kaempferi</i>	+
<i>Eurya japonica</i> var. <i>japonica</i>	+
<i>Aucuba japonica</i> var. <i>borealis</i>	+
<i>Struthiopteris niponica</i>	+
<i>Padus grayana</i>	+
<i>Cornus kousa</i> ssp. <i>kousa</i>	+
<i>Lindera umbellata</i> var. <i>membranacea</i>	+
<i>Acer amoenum</i> var. <i>matsumurae</i>	+
<i>Acer rufinerve</i>	+
<i>Sasa palmata</i>	+
<i>Daphniphyllum macropodum</i> ssp. <i>humile</i>	+
<i>Skimmia japonica</i> var. <i>intermedia</i>	+
<i>Cerasus incisa</i> var. <i>kinkiensis</i>	+
<i>Chengiopanax sciadophylloides</i>	+
<i>Carex morrowi</i>	+
<i>Mitchella undulata</i>	+
<i>Acer pictum</i>	+
<i>Hamamelis japonica</i> var. <i>discolor</i>	+
<i>Toxicodendron trichocarpum</i>	+
<i>Fagus crenata</i>	+
<i>Callicarpa japonica</i>	+
<i>Clethra barbinervis</i>	+
<i>Disporum smilacinum</i>	+
<i>Ardisia japonica</i>	+
<i>Cephalotaxus harringtonia</i> var. <i>nana</i>	+
<i>Heloniopsis orientalis</i>	+
<i>Euonymus alatus</i> var. <i>alatus</i>	+
<i>Smilax China</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

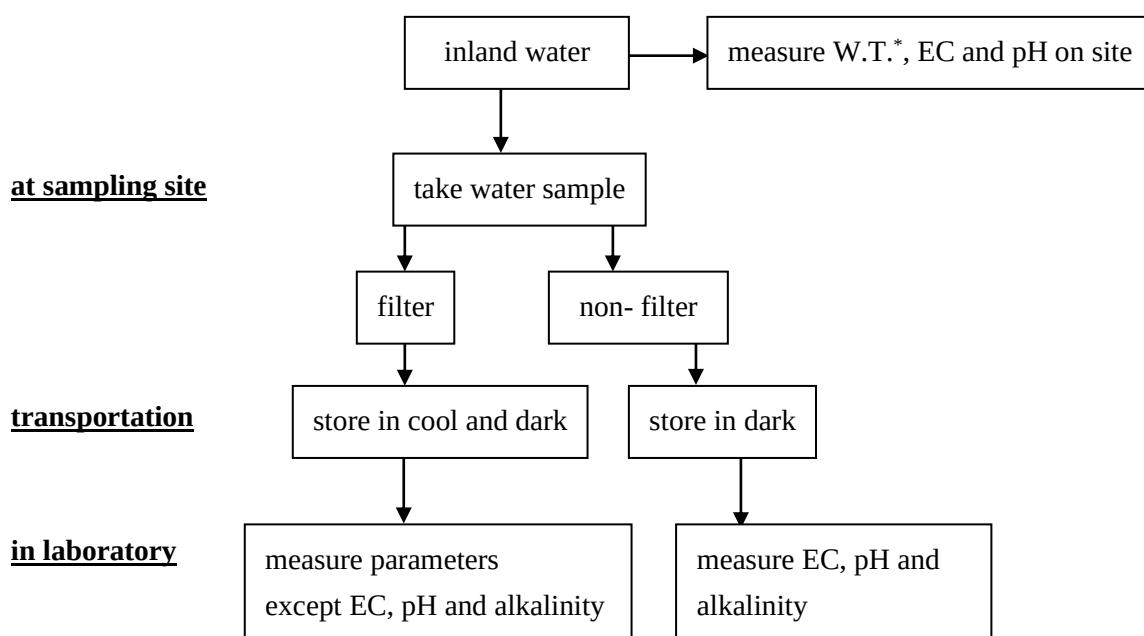
According to the technical manual (2010), the lakes chosen for monitoring should be harmonic type lakes, preferably with depths of approximately 10 m or less, a water residence time of 1 year or less, an area of 1 ha or more, with low alkalinity and electric conductivity, minimal anthropogenic water 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 12 lakes/reservoirs and 5 rivers/streams. For 2020, 7 countries (China, Japan, Mongolia, 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 4 sites (Xiaoping Dam in China, Futago-ike Lake in Japan, Terelj River in Mongolia and Komarovka River in Russia) which have results exceeding allowable range of R_1 and/or R_2 . However, those main reasons could not be identified.

The annual mean values of each parameter from 2001 to 2020 are shown in Table 6.5.1 to Table 6.5.21.

Table 6.2 Outline of Inland Aquatic Environment Monitoring of 2020

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	-
Mongolia	Terelj River	-	Remote (Terelj)	2002	6 times/yr.
Philippines	Pandin Lake	30 km	Rural (Mt. Makiling)	2004	3 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.

Note: The monitoring sites at Semenyih Dam and Tembaling River in Malaysia have been discontinued. New two sites are under preparation (see Table 2.3 in Chapter 2).

Table 6.3.1 Properties of lakes or streams

Lake Name: Sras Srang Lake

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

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

- : no information

Table 6.3.2 Properties of lakes or streams

Lake Name: Jinyunshan Lake

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

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

- : no information

Table 6.3.3 Properties of lakes or streams

Lake Name: Xiaoping Dam

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

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

- : no information

*1 Xiamen, 2014

Table 6.3.4 Properties of lakes or streams

Stream Name: Jiwozi River

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

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

- : no information

*1 Xi'an, 2019

Table 6.3.5 Properties of lakes or streams

Stream Name: Zhuxiandong Stream

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

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

- : no information

*1 Zhuhai, 2019

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

Table 6.3.6 Properties of lakes or streams

Lake Name: Patengang Lake

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

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

- : no information

*1 Bandung, 2017

Table 6.3.7 Properties of lakes or streams

Lake Name: Gunung Lake

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

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

- : no information

Table 6.3.8 Properties of lakes or streams

Lake Name: Ijira Lake

Country	Japan
Location	Gifu prefecture
Latitude and longitude	35° 33' 51" N, 136° 42' 12" E
Altitude	110 m
Origin	Artificial (dam-made lake)
Area and shape	0.1 km ²
Shore line length	1.8 km
Lake hydrologic type	Reservoir
Lake trophic type	Oligotrophic or mesotrophic
Water depth	Ave. 5.4 m (Max 10.9 m)
Water volume	0.00054 km ³
Annual water level fluctuation	0-0.74 m (Ave. 0.22 m)
Annual air temperature	17.0 °C (mean) *1
Precipitation	2088.5 mm/year *1
Sunshine duration	181.1 hrs/month (mean) *1
Solar radiation	-
Wind speed	Mean 2.6 m/s *1
Wind direction	NW (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, 2020

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	10.4 °C (mean) *1	
Precipitation	1432.0 mm/year *1	
Sunshine duration	179.6 hrs/month (mean) *1	
Solar radiation	-	
Wind speed	Mean 2.0 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, 2020

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

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 6.3.12 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 6.3.13 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 6.3.14 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

Table 6.3.15 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 6.3.16 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	141.8-153.9m (mean: 148.3 m) (2018)
Water volume	4.5649-8.4538 km ³ (mean: 6.5415 km ³) (2018)
Annual water level fluctuation	Depth: 4.2 m (2010)
Annual air temperature	-
Precipitation	-
Sunshine duration	-
Solar radiation	-
Wind speed	0.02-0.26 (Ave. 0.07) m/s (2011)
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 : 7,949.8 x 10 ⁶ m ³ /year, daily : 21.8 x 10 ⁶ m ³ /day
Amount of outlet water	Annual : 6,687.4 x 10 ⁶ m ³ /year, daily : 18.3 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

Table 6.3.17 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	24.7 °C (mean) *2
Precipitation	1289.9 mm *2
Sunshine duration	115.1 hrs/month (mean) *2
Solar radiation	-
Wind speed	Mean 1.5 m/s *2
Wind direction	NE (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, 2019

Table 6.4.1 Result of Inland Aquatic Environment Monitoring

Duration: 2020.2-2020.12

Country: China

Lake/Stream: (See below)

Mandatory Parameters : 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ²⁺ (mg/L)
Chongqing -Jinyunshan Lake	31-Mar-20	15.0	6.90	11.08	0.203	27.36	9.39	2.22	0.01	2.70	2.10	10.82	4.33
	29-Jun-20	25.0	6.71	9.58	0.116	21.29	10.99	1.61	0.01	1.71	2.71	8.37	2.71
	23-Aug-20	29.5	6.70	9.36	0.122	23.28	9.35	1.47	0.01	1.93	1.76	8.74	3.03
	13-Dec-20	12.0	6.34	9.88	0.145	24.19	10.25	1.71	0.01	2.13	1.46	9.27	2.98
	mean*2	20.4	6.61	9.98	0.147	24.03	10.00	1.75	0.01	2.12	2.01	9.30	3.26
Xiamen -Xiaoping Dam	06-Feb-20	16.1	7.59	5.72	0.261	2.31	3.08	2.68	0.03	3.57	2.51	3.34	0.65
	08-Apr-20	21.3	7.46	6.11	0.321	1.68	1.81	1.85	0.02	4.63	2.66	3.72	0.67
	10-Aug-20	25.8	7.33	5.91	0.278	2.52	2.24	2.82	0.02	5.05	2.95	3.60	0.67
	09-Nov-20	18.3	7.16	5.88	0.266	2.31	2.69	2.58	0.05	3.61	2.52	3.81	0.64
	mean*2	20.4	7.36	5.91	0.282	2.21	2.46	2.48	0.03	4.22	2.66	3.62	0.66
Xi'an -Jiwozi River	31-Mar-20	4.0	7.47	5.72	0.360	6.19	0.80	0.78	0.00	1.65	0.70	7.89	1.17
	24-Jun-20	15.0	7.14	5.23	0.340	5.21	0.76	0.67	0.00	1.57	0.68	7.44	1.07
	01-Aug-20	17.0	7.13	5.19	0.350	5.09	0.68	0.73	0.00	1.65	0.70	7.14	1.10
	09-Dec-20	5.0	6.94	5.47	0.360	5.59	0.75	0.79	0.00	1.89	0.83	7.40	1.18
	mean*2	10.3	7.13	5.40	0.353	5.52	0.75	0.74	0.00	1.69	0.73	7.47	1.13
Zhuhai -Zhuxiandong Stream	02-Mar-20	17.2	6.99	7.30	0.420	1.90	2.05	5.02	0.00	8.42	1.46	4.24	1.29
	06-May-20	25.6	7.18	7.74	0.522	1.65	0.98	5.10	0.00	8.40	1.22	4.80	1.66
	01-Jul-20	26.2	7.55	7.07	0.430	1.84	1.53	5.68	0.00	7.22	1.18	4.30	1.71
	09-Oct-20	25.3	7.41	7.25	0.420	2.02	2.76	5.76	0.00	7.12	1.18	4.52	1.92
	mean*2	23.6	7.23	7.34	0.448	1.85	1.83	5.39	0.00	7.79	1.26	4.47	1.65

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	31-Mar-20	2.6	-	-	-	-
	29-Jun-20	1.8	-	-	-	-
	23-Aug-20	3.1	-	-	-	-
	13-Dec-20	2.2	-	<0.05*1	0.000	4.0
	mean*2	2.4	-	0.000	0.000	4.0
Xiamen -Xiaoping Dam	06-Feb-20	1.0	-	-	0.089	2.3
	08-Apr-20	1.1	-	-	0.014	1.7
	10-Aug-20	1.2	-	-	0.034	1.8
	09-Nov-20	0.9	-	0.021	0.070	2.3
	mean*2	1.1	-	0.021	0.052	2.0
Xi'an -Jiwozi River	31-Mar-20	-	-	-	-	-
	24-Jun-20	-	-	-	-	-
	01-Aug-20	-	-	-	-	-
	09-Dec-20	-	-	<0.01*1	<0.003*1	<5*1
	mean*2	-	-	<0.01*1	<0.003*1	<5*1
Zhuhai -Zhuxiandong Stream	02-Mar-20	-	-	-	-	-
	06-May-20	-	-	0.020	0.004	1.7
	01-Jul-20	-	-	-	-	-
	09-Oct-20	-	-	-	-	-
	mean*2	-	-	0.020	0.004	1.7

note

- : Items were not analyzed.

*1: Less than determination limit.

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

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

		Anion	Cation	R1	Judge	Acalc	R2	Judge
Chongqing -Jinyunshan Lake	31-Mar-20	987	1068	3.9	O	13.1	8.5	O
	29-Jun-20	782	785	0.2	O	10.3	3.4	O
	23-Aug-20	799	815	1.0	O	10.5	5.8	O
	13-Dec-20	862	839	-1.4	O	11.1	5.6	O
	mean							
Xiamen -Xiaoping	6-Feb-20	436	441	0.6	O	5.0	-6.4	O
	8-Apr-20	438	511	7.8	O	5.2	-7.7	O
	10-Aug-20	447	531	8.6	×	5.6	-3.1	O
	9-Nov-20	432	467	3.8	O	5.2	-6.6	O
	mean							
Xi'an -Jiwozi	31-Mar-20	524	580	5.1	O	6.3	4.5	O
	24-Jun-20	480	545	6.4	O	5.8	5.0	O
	1-Aug-20	487	537	4.8	O	5.7	5.1	O
	9-Dec-20	511	569	5.4	O	6.1	5.3	O
	mean							
Zhuhai -Zhuxiandong Stream	2-Mar-20	634	721	6.4	O	7.4	1.0	O
	6-May-20	717	773	3.8	O	8.0	1.9	O
	1-Jul-20	653	699	3.4	O	7.4	2.6	O
	9-Oct-20	669	723	3.9	O	7.7	3.2	O
	mean							

Table 6.4.2 Result of Inland Aquatic Environment Monitoring

Duration: 2020.4-2021.1
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-20	14.1	7.76	3.94	0.175	0.158	5.48	0.56	1.86	<0.01*1	2.06	0.20	3.06	1.26
	16-Jul-20	20.2	6.80	2.75	0.111	0.098	3.36	0.97	1.52	<0.01*1	1.61	0.23	1.78	0.89
	07-Oct-20	21.7	6.87	3.81	0.177	0.167	4.34	1.13	1.66	<0.01*1	1.92	0.29	2.67	1.24
	13-Jan-21	6.2	7.01	4.09	0.189	0.181	5.07	0.72	1.89	<0.01*1	2.00	0.24	3.37	1.16
	mean*2	15.6	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
Center (near bottom)	15-Apr-20	12.4	7.16	4.09	0.172	0.146	5.79	0.82	1.83	<0.01*1	2.06	0.21	3.09	1.33
	16-Jul-20	18.3	6.69	3.03	0.135	0.120	3.41	1.01	1.57	0.05	1.60	0.25	2.02	1.02
	07-Oct-20	20.1	6.63	4.08	0.204	0.193	4.33	0.91	1.68	0.16	1.93	0.32	2.77	1.41
	13-Jan-21	6.1	7.05	4.13	0.192	0.181	5.07	0.72	1.90	<0.01*1	2.03	0.25	3.43	1.16
	mean*2	14.2	6.83	3.83	0.176	0.160	4.65	0.86	1.74	0.05	1.90	0.26	2.83	1.23
Kamagatani River (Input)	15-Apr-20	12.9	7.39	4.17	0.148	0.133	6.91	1.12	1.81	<0.01*1	2.14	0.24	2.90	1.45
	16-Jul-20	18.6	7.00	2.97	0.113	0.097	3.77	1.05	1.72	<0.01*1	1.71	0.23	1.90	0.99
	07-Oct-20	18.3	7.14	3.98	0.153	0.140	5.75	1.36	1.77	<0.01*1	2.02	0.28	2.60	1.36
	13-Jan-21	6.6	7.17	4.39	0.136	0.127	7.39	1.68	1.92	<0.01*1	2.08	0.21	2.90	1.55
	mean*2	14.1	7.15	3.88	0.137	0.124	5.95	1.30	1.80	<0.01*1	1.99	0.24	2.58	1.33
Kobora River (Input)	15-Apr-20	11.9	7.12	3.60	0.135	0.113	5.08	1.14	1.88	<0.01*1	2.35	0.22	1.95	1.35
	16-Jul-20	19.0	6.91	2.57	0.099	0.083	3.22	0.49	1.68	<0.01*1	1.88	0.23	1.29	0.88
	07-Oct-20	17.2	7.01	3.48	0.140	0.121	4.46	1.10	1.86	<0.01*1	2.27	0.25	1.71	1.23
	*3													
	mean*2	16.0	7.01	3.22	0.125	0.106	4.25	0.91	1.81	<0.01*1	2.17	0.23	1.65	1.15

Mandatory Parameters : Once/year								Optional Parameters
Site	Sampling Date	Transparency (m)	Water Color (Forel-Ule Scale)	Water Color (sample)	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	DOC (mg/L)	Chl-a (µg/L)
Center (Surface)	15-Apr-20	1.9	16	clear, colorless	0.03	<0.01*1	0.9	15.7
	16-Jul-20	2.6	16	clear, colorless	-	<0.01*1	-	0.4
	07-Oct-20	2.4	16	clear, colorless	-	<0.01*1	-	2.6
	13-Jan-21	1.9	17	clear, colorless	-	<0.01*1	-	5.1
	mean	2.2	-	-	0.03	<0.01*1	0.9	5.9
Center (near bottom)	15-Apr-20	-	-	clear, colorless	<0.02*1	<0.01*1	0.7	10.7
	16-Jul-20	-	-	clear, colorless	-	<0.01*1	-	0.8
	07-Oct-20	-	-	clear, colorless	-	0.05	-	4.2
	13-Jan-21	-	-	clear, colorless	-	<0.01*1	-	8.7
	mean	-	-	-	<0.02*1	0.01	0.7	6.1
Kamagatani River (Input)	15-Apr-20	-	-	clear, colorless	<0.02*1	<0.01*1	0.3	-
	16-Jul-20	-	-	clear, colorless	-	<0.01*1	-	-
	07-Oct-20	-	-	clear, colorless	-	<0.01*1	-	-
	13-Jan-21	-	-	clear, colorless	-	<0.01*1	-	-
	mean	-	-	-	<0.02*1	<0.01*1	0.3	-
Kobora River (Input)	15-Apr-20	-	-	clear, colorless	<0.02*1	<0.01*1	0.3	-
	16-Jul-20	-	-	clear, colorless	-	<0.01*1	-	-
	07-Oct-20	-	-	clear, colorless	-	<0.01*1	-	-
	*3	-	-	-	-	-	-	-
	mean	-	-	-	<0.02*1	<0.01*1	0.3	-

note

- : Items were not analyzed.

*1: Less than detection limit.

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

*3: No sample because of no river flow.

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

Annual precipitation is 2088.5 mm/year in 2020 (Gifu pref. Meteorological observatory).

		Anion	Cation	R1	Judge	Acale	R2	Judge
Center (Surface)	15-Apr-20	351	350	-0.1	O	4.11	2.2	O
	16-Jul-20	239	238	-0.3	O	2.81	1.1	O
	07-Oct-20	332	326	-1.0	O	3.81	0.1	O
	13-Jan-21	359	356	-0.5	O	4.17	1.0	O
Center (near bottom)	15-Apr-20	357	358	0.2	O	4.21	1.5	O
	16-Jul-20	266	263	-0.6	O	3.09	1.1	O
	07-Oct-20	357	355	-0.2	O	4.10	0.3	O
	13-Jan-21	362	361	-0.2	O	4.21	1.0	O
Kamagatani River (Input)	15-Apr-20	361	363	0.3	O	4.34	2.0	O
	16-Jul-20	256	256	0.0	O	3.04	1.1	O
	07-Oct-20	344	336	-1.2	O	4.04	0.8	O
	13-Jan-21	371	368	-0.4	O	4.48	1.1	O
Kobora River (Input)	15-Apr-20	312	316	0.6	O	3.71	1.6	O
	16-Jul-20	221	224	0.7	O	2.62	1.0	O
	07-Oct-20	303	292	-1.8	O	3.49	0.1	O
	*3	-	-	-	-	-	-	-

Table 6.4.3 Result of Inland Aquatic Environment Monitoring

Duration: 2020.6-2020.10
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	15-Jun-20	13.7	7.01	1.77	0.112	0.099	1.05	0.70	0.30	<0.02*1	0.97	0.23	1.79	0.18
	20-Aug-20	17.4	6.88	1.66	0.118	0.100	1.10	0.78	0.35	<0.02*1	1.02	0.29	1.87	0.18
	01-Oct-20	10.8	7.08	1.89	0.135	0.118	1.12	0.74	0.33	<0.02*1	1.22	0.29	2.14	0.20
	mean*2	14.0	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
Oike (center) near bottom	15-Jun-20	7.7	6.96	1.98	0.140	0.129	1.20	0.94	0.36	<0.02*1	1.21	0.28	2.34	0.24
	20-Aug-20	5.6	6.98	2.00	0.141	0.128	1.15	1.04	0.44	<0.02*1	1.31	0.32	2.32	0.22
	01-Oct-20	6.6	6.92	2.06	0.148	0.132	1.17	0.82	0.34	<0.02*1	1.33	0.31	2.33	0.23
	mean*2	6.6	6.95	2.01	0.143	0.130	1.17	0.93	0.38	<0.02*1	1.28	0.30	2.33	0.23
Meike (center) surface	15-Jun-20	17.2	5.89	0.55	0.024	0.007	0.79	0.23	0.30	<0.02*1	0.24	0.17	0.34	0.10
	20-Aug-20	22.3	6.24	0.65	0.041	0.023	0.81	0.00	0.32	<0.02*1	0.41	0.28	0.47	0.09
	01-Oct-20	13.9	6.34	0.66	0.035	0.023	0.87	0.00	0.31	<0.02*1	0.55	0.24	0.48	0.08
	mean*2	17.8	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
Meike (center) near bottom	15-Jun-20	12.9	5.63	0.63	0.024	0.007	0.82	0.33	0.30	<0.02*1	0.26	0.18	0.36	0.10
	20-Aug-20	14.7	6.26	0.84	0.050	0.034	0.96	0.23	0.31	<0.02*1	0.54	0.22	0.71	0.10
	01-Oct-20	13.5	6.27	0.68	0.042	0.021	0.87	0.00	0.30	<0.02*1	0.54	0.24	0.46	0.08
	mean*2	13.7	5.94	0.71	0.039	0.021	0.88	0.19	0.30	<0.02*1	0.44	0.21	0.51	0.09

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	15-Jun-20	8.5	bluish green	clear, colorless	<0.01*1	<0.01*1	0.8	1.4	0.02	0.4	
	20-Aug-20	10.0	green	clear, colorless	<0.01*1	<0.01*1	1.1	1.6	0.02	0.0	
	01-Oct-20	8.6	bluish green	clear, colorless	<0.01*1	<0.01*1	1.0	1.7	0.02	0.1	
	mean	9.0	-	-	<0.01*1	<0.01*1	1.0	1.5	0.02	0.2	
Oike (center) near bottom	15-Jun-20	-	-	clear, colorless	<0.01*1	<0.01*1	0.9	1.6	0.02	0.6	
	20-Aug-20	-	-	clear, colorless	<0.01*1	<0.01*1	1.3	2.0	0.02	0.2	
	01-Oct-20	-	-	clear, colorless	<0.01*1	<0.01*1	1.1	2.0	0.02	0.2	
	mean	-	-	-	<0.01*1	<0.01*1	1.1	1.9	0.02	0.3	
Meike (center) surface	15-Jun-20	4.1	bluish green	clear, colorless	<0.01*1	<0.01*1	1.5	2.3	0.07	0.2	
	20-Aug-20	4.6	green	clear, colorless	<0.01*1	<0.01*1	1.8	3.0	0.03	1.8	
	01-Oct-20	2.1	bluish green	clear, colorless	<0.01*1	<0.01*1	1.4	2.8	0.02	0.7	
	mean	3.6	-	-	<0.01*1	<0.01*1	1.6	2.7	0.04	0.9	
Meike (center) near bottom	15-Jun-20	-	-	clear, colorless	<0.01*1	<0.01*1	2.1	3.5	0.11	0.8	
	20-Aug-20	-	-	clear, colorless	<0.01*1	<0.01*1	1.8	2.6	0.04	1.1	
	01-Oct-20	-	-	clear, colorless	<0.01*1	<0.01*1	1.5	3.1	0.02	0.7	
	mean	-	-	-	<0.01*1	<0.01*1	1.8	3.0	0.06	0.8	

- : Items were not analyzed.

*1: Less than determination limit.

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

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

Annual precipitation is 1432.0 mm/year in 2020 (Hara village Meteorological observatory).

		Anion	Cation	R1	Judge			Acalc	R2	Judge
Oike (center) surface	15-Jun-20	153	152	-0.3	O			1.7	-2.3	O
	20-Aug-20	163	160	-1.0	O			1.8	3.8	O
	01-Oct-20	179	184	1.3	O			2.0	2.6	O
Oike (center) near bottom	15-Jun-20	190	196	1.5	O			2.1	3.6	O
	20-Aug-20	194	199	1.2	O			2.2	4.1	O
	01-Oct-20	195	201	1.5	O			2.2	2.6	O
Meike (center) surface	15-Jun-20	52	41	-11.6	O			0.6	5.0	O
	20-Aug-20	67	56	-8.8	×			0.7	5.3	O
	01-Oct-20	61	61	-0.4	O			0.7	4.4	O
Meike (center) near bottom	15-Jun-20	55	45	-10.2	O			0.7	3.6	O
	20-Aug-20	82	73	-6.2	O			0.9	3.8	O
	01-Oct-20	69	59	-7.1	O			0.7	5.2	O

Table 6.4.4 Result of Inland Aquatic Environment Monitoring

Duration: 2020.5-2020.10

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	13-May-20	25.0	6.69	5.40	0.342	4.84	1.08	0.61	0.010	1.93	0.49	8.00	0.93
	10-Jun-20	25.0	6.83	5.13	0.362	4.59	0.80	0.41	0.003	2.39	0.47	7.51	0.84
	1-Jul-20	25.0	6.90	4.74	0.322	2.89	0.63	0.23	0.004	1.79	0.45	7.04	0.78
	5-Aug-20	25.0	5.73	3.87	0.281	2.22	0.05	0.20	0.004	1.58	0.61	6.20	0.69
	2-Sep-20	25.0	6.30	5.33	0.342	5.76	0.69	0.22	0.004	2.79	0.47	7.00	0.78
	8-Oct-20	25.0	6.46	5.62	0.362	4.95	0.69	0.29	0.002	2.59	0.43	7.96	0.90
	mean*1	25.0	6.27	5.02	0.335	4.21	0.66	0.33	0.005	2.18	0.49	7.29	0.82

Mandatory Parameters : Once/year			
Site	Sampling Date	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)
Terelj River	13-May-20	-	-
	10-Jun-20	-	-
	1-Jul-20	-	-
	5-Aug-20	-	-
	2-Sep-20	-	-
	8-Oct-20	-	-
	mean*1	-	-

note

-: Items were not analyzed.

*1: Less than determination limit.

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

		Anion	Cation	R1	Judge
Terelj River	13-May-20	477	573	9.1	×
	10-Jun-20	482	560	7.5	O
	1-Jul-20	399	505	11.8	×
	5-Aug-20	334	453	15.1	×
	2-Sep-20	479	548	6.7	O
	8-Oct-20	484	595	10.3	×

	Acalc	R2	Judge
Terelj River	5.90	4.4	O
	5.78	6.0	O
	4.96	2.3	O
	4.35	5.8	O
	5.75	3.8	O
	6.01	3.3	O

Table 6.4.5 Result of Inland Aquatic Environment Monitoring

Duration: 2020.2-2020.12

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)
Ambulalakaw Lake	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	mean*1	-	-	-	-	-	-	-	-	-	-	-	-
Pandin Lake	13-Feb-20	25.4	8.30	18.05	1.910	0.880	0.000	3.90	0.000	8.51	4.00	13.6	7.45
	03-Sep-20	30.4	8.68	20.76	2.040	0.903	0.000	3.48	0.000	8.06	2.92	18.2	8.13
	07-Dec-20	26.6	8.10	16.88	1.740	1.040	0.000	3.49	0.212	8.13	4.50	13.0	7.49
	mean*1	-	8.30	18.56	1.897	0.941	0.000	3.62	0.071	8.23	3.81	14.9	7.69

Mandatory Parameters: Once/year					Optional Parameters
Site	Sampling Date	Transparency (m)	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	DO (mg/L)
Ambulalakaw Lake	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	mean*1	-	-	-	-
Pandin Lake	13-Feb-20		0.000	0.000	-
	3-Sep-20		2.920	0.113	-
	7-Dec-20		0.000	0.000	-
	mean*1	-	0.973	0.038	-

note

- : Items were not analyzed.

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

		Anion	Cation	R1	Judge				Δcalc	R2	Judge
Ambulalakaw Lake	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
Pandin Lake	13-Feb-20	2038	1764	-7.2	O	19.4	3.6	O			
	03-Sep-20	2252	2002	-5.9	O	21.9	2.7	O			
	07-Dec-20	1860	1745	-3.2	O	18.5	4.7	O			

note

Concerning "×" judging, it was not able to specify the main reasons.

Table 6.4.6 Result of Inland Aquatic Environment Monitoring

Duration: 2020.2-2020.11

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	3-Mar-20	0.2	6.74	5.13	0.155	12.00	0.81	0.17	0.02	1.26	0.67	5.31	0.91
	21-May-20	5.3	6.60	3.64	0.105	8.10	0.68	0.11	0.00	0.71	0.50	3.67	0.69
	14-Jul-20	15.2	7.06	5.86	0.108	15.25	0.39	0.10	0.00	1.09	0.82	5.43	1.18
	23-Sep-20	8.4	6.96	4.70	0.104	12.65	0.40	0.13	0.00	1.00	0.80	4.39	0.98
	mean*1	7.3	6.80	4.83	0.118	12.00	0.57	0.13	0.00	1.01	0.70	4.70	0.94
Komarovka River	15-Feb-20	0.1	6.71	8.55	0.312	12.53	4.16	3.38	0.15	4.38	0.77	9.47	2.13
	13-Apr-20	6.0	6.70	8.46	0.401	11.22	1.77	2.85	0.28	4.08	1.53	8.30	2.80
	15-Jun-20	14.0	6.88	8.68	0.402	12.95	1.59	2.62	0.41	4.68	2.00	9.50	2.02
	14-Sep-20	16.0	6.73	8.66	0.588	6.32	1.08	2.52	0.23	4.68	2.18	10.55	1.70
	10-Nov-20	2.3	6.87	8.61	0.425	12.12	1.50	2.98	0.11	4.03	1.12	10.27	2.62
	mean*1	7.7	6.77	8.59	0.426	11.03	2.02	2.87	0.24	4.37	1.52	9.62	2.25

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	3-Mar-20	-	colorless	0.3	0.002	0.004	2.07	13.08	0.005	-
	21-May-20	-	colorless	1.0	0.001	0.005	2.10	11.43	0.005	-
	14-Jul-20	-	colorless	0.6	0.002	0.005	2.78	9.66	0.004	-
	23-Sep-20	-	colorless	2.1	0.003	0.006	2.50	10.42	0.005	-
	mean*1	-	-	1.0	0.002	0.005	2.36	11.15	0.004	-
Komarovka River	15-Feb-20	-	colorless	2.4	0.026	0.001	5.38	13.05	-	0.14
	13-Apr-20	-	colorless	4.8	0.010	0.006	5.38	12.37	-	0.52
	15-Jun-20	-	colorless	4.8	0.010	0.014	5.22	10.20	-	0.19
	14-Sep-20	-	colorless	4.4	0.010	0.006	5.10	9.90	-	0.67
	10-Nov-20	-	colorless	4.8	0.080	0.004	5.27	12.25	-	0.21
	mean*1	-	-	4.2	0.027	0.006	5.27	11.55	-	0.35

note
 -: Items were not analyzed.
 *1: Mean of pH takes an average of hydrogen ion.

		Anion	Cation	R1	Judge
Pereemnaya River	3-Mar-20	422	413	-1.1	O
	21-May-20	288	284	-0.6	O
	14-Jul-20	435	437	0.2	O
	23-Sep-20	378	363	-1.9	O
Komarovka River	15-Feb-20	736	867	8.1	×
	13-Apr-20	744	877	8.2	×
	15-Jun-20	771	918	8.6	×
	14-Sep-20	808	939	7.5	O
	10-Nov-20	787	938	8.7	×

		Δcalc	R2	Judge
Pereemnaya River	3-Mar-20	5.21	0.9	O
	21-May-20	3.57	-1.0	O
	14-Jul-20	5.62	-2.0	O
	23-Sep-20	4.76	0.6	O
Komarovka River	15-Feb-20	9.6	5.9	O
	13-Apr-20	9.5	5.7	O
	15-Jun-20	10.0	7.0	O
	14-Sep-20	9.8	6.0	O
	10-Nov-20	10.1	7.9	O

Table 6.4.7 Result of Inland Aquatic Environment Monitoring

Duration: 2020.2-2020.8
 Country: Thailand
 Lake/Stream: Vajiralongkorn Dam&Resovior

Mandatory Parameters : 4 times/year													
Site	Sampling Date	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/L)	SO ₄ ²⁻ (mg/L)	NO ₃ ⁻ (mg/L)	Cl ⁻ (mg/L)	NH ₄ ⁺ (mg/L)	Na ⁺ (mg/L)	K ⁺ (mg/L)	Ca ²⁺ (mg/L)	Mg ² (mg/L)
Station1 (Ban Pong Chang)	13-Feb-20	29.7	8.30	11.76	1.050	0.95	0.10	0.92	0.01	1.15	0.98	16.35	3.42
	13-Aug-20	30.9	8.60	12.32	1.090	1.54	0.10	1.35	0.01	1.34	0.99	16.40	3.18
	mean*1	30.3	8.42	12.04	1.070	1.24	0.10	1.13	0.01	1.25	0.99	16.38	3.30
Station2 (Ban Pang Pueng)	13-Feb-20	29.6	8.60	11.54	1.015	1.19	0.10	0.93	0.01	1.16	1.01	16.65	2.88
	13-Aug-20	30.4	8.80	12.17	1.075	1.31	0.10	1.01	0.01	1.23	0.96	17.05	2.84
	mean*1	30.0	8.69	11.86	1.045	1.25	0.10	0.97	0.01	1.20	0.99	16.85	2.86

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)	13-Feb-20	4.0	light green	0.01	-	-
	13-Aug-20	4.0	light green	0.01	-	-
	mean*1	4.0	-	0.01	-	-
Station2 (Ban Pang Pueng)	13-Feb-20	4.5	light green	0.01	-	-
	13-Aug-20	4.0	light green	0.01	-	-
	mean*1	4.3	-	0.01	-	-

note

- : Items were not analyzed.

*1: Less than determination limit.

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

	Date	Anion	Cation	R1	Judge	Acalc	R2	Judge
Station1 (Ban Pong Chang)	13-Feb-20	1097	1172	3.3	O	11.9	0.4	O
	13-Aug-20	1162	1164	0.1	O	12.2	-0.6	O
	mean*1	1129.5	1168	1.7	O	12.05	-0.1	O
Station2 (Ban Pang Pueng)	13-Feb-20	1068	1144	3.5	O	11.6	0.3	O
	13-Aug-20	1133	1163	1.3	O	12.0	-0.6	O
	mean*1	1100.5	1153.5	2.4	O	11.8	-0.15	O

Table 6.4.8 Result of Inland Aquatic Environment Monitoring

Duration: 2020.3-2020.12
 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-20	23.1	7.60	16.50	1.340	4.96	0.99	2.28	0.03	2.69	1.21	22.85	2.55
	15-Jun-20	31.3	7.70	15.10	1.260	3.95	0.82	2.16	0.03	2.33	1.09	21.68	2.16
	15-Sep-20	29.2	7.80	16.90	1.370	4.62	1.89	3.29	0.04	3.69	2.36	23.12	2.85
	15-Dec-20	24.6	7.76	18.30	1.450	5.05	2.36	4.26	0.05	4.12	2.69	24.32	3.29
	mean*1	27.1	7.71	16.70	1.355	4.65	1.52	3.00	0.04	3.21	1.84	22.99	2.71

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-20	1.2	-	0.03	0.093	0.017	4.6
	15-Jun-20	1.2	-	0.02	0.075	0.015	4.1
	15-Sep-20	1.2	-	0.03	0.103	0.020	4.3
	15-Dec-20	1.2	16	0.03	0.089	0.019	3.9
	mean*1	1.2	-	0.03	0.090	0.018	4.2

note

- : Items were not analyzed.

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

		Anion	Cation	R1	Judge			
Hoa Binh Reservoir	15-Mar-20	1527	1500	-0.9	O	Acalc	R2	Judge
	15-Jun-20	1419	1390	-1.0	O	16.2	-1.0	O
	15-Sep-20	1593	1611	0.6	O	15.0	-0.4	O
	15-Dec-20	1717	1735	0.5	O	17.2	1.0	O
						18.6	0.9	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	6.61	9.98	0.147	-	24.03	10.00	1.75	0.01	2.12	2.01	9.30	3.26
	Xiamen	Xiaoping Dam	7.36	5.91	0.282	-	2.21	2.46	2.48	0.03	4.22	2.66	3.62	0.66
	Xi'an	Jiwozi River	7.13	5.40	0.353	-	5.52	0.75	0.74	0.00	1.69	0.73	7.47	1.13
	Zhuhai	Zhuxiandong Stream	7.23	7.34	0.448	-	1.85	1.83	5.39	0.00	7.79	1.26	4.47	1.65
Indonesia	Bandung	Patengang Lake	-	-	-	-	-	-	-	-	-	-	-	-
	Sukabumi, West Java	Gunung Lake	-	-	-	-	-	-	-	-	-	-	-	-
Japan	Gifu pref.	Ijira Lake (Center, surface)	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
	Nagano pref.	Futago-ike Lake(Oike)*3 (Center, surface)	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
		Futago-ike Lake(Meike)*3 (Center, surface)	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
Lao PDR	Vientiane province	Nam Houm Lake	-	-	-	-	-	-	-	-	-	-	-	-
Mongolia	Terelj	Terelj River*6	6.27	5.02	0.335	-	4.21	0.66	0.33	0.00	2.18	0.49	7.29	0.82
Philippines	San Pablo City	Pandin Lake	8.30	18.56	1.897	-	0.94	0.00	3.62	0.07	8.23	3.81	14.93	7.69
	Benguet	Ambulalakaw Lake	-	-	-	-	-	-	-	-	-	-	-	-
Russia	Southern Baikal	Pereemnya River	6.80	4.83	0.118	-	12.00	0.57	0.13	0.00	1.01	0.70	4.70	0.94
	Primorskaya	Komarovka River*5	6.77	8.59	0.426	-	11.03	2.02	2.87	0.24	4.37	1.52	9.62	2.25
Thailand	Kanchanaburi Province	Vajiralongkorn Dam*2 (Ban Pong Chang)	8.42	12.04	1.070	-	1.24	0.10	1.13	0.01	1.25	0.99	16.38	3.30
		Vajiralongkorn Dam*2 (Ban Pang Pueng)	8.69	11.86	1.045	-	1.25	0.10	0.97	0.01	1.20	0.99	16.85	2.86
Vietnam	Hoa Binh Province	Hoa Binh Reservoir	7.71	16.70	1.355	-	4.65	1.52	3.00	0.04	3.21	1.84	22.99	2.71

Mandatory Parameters : Once/year						
Country	Location	Site	Transparency (m)	PO ₄ ³⁻ (mg/L)	NO ₂ ⁻ (mg/L)	COD (mg/L)
Cambodia	Kampong Speu province	Sras Srang Lake	-	-	-	-
China	Chongqing	Jinyunshan Lake	2.4*4	0.000	0.000	-
	Xiamen	Xiaoping Dam*7	1.1*4	0.021	0.052	-
	Xi'an	Jiwozi River	-	<0.01*1	<0.003*1	-
	Zhuhai	Zhuxiandong Stream	-	0.020	0.004	-
Indonesia	Bandung	Patengang Lake	-	-	-	-
	Sukabumi, West Java	Gunung Lake	-	-	-	-
Japan	Gifu pref.	Ijira Lake*7 (Center, surface)	2.2*4	0.030	<0.01*1	0.9
	Nagano pref.	Futago Lake(Oike)*3 (Center, surface)	9.0	<0.01*1	<0.01*1	1.0
		Futago Lake(Meike)*3 (Center, surface)	3.6	<0.01*1	<0.01*1	1.6
Lao PDR	Vientiane province	Nam Houm Lake	-	-	-	-
Mongolia	Terelj	Terelj River	-	-	-	-
Philippines	San Pablo City	Pandin Lake*3	-	0.97	0.038	-
	Benguet	Ambulalakaw Lake	-	-	-	-
Russia	Southern Baikal	Pereemnya River *4	-	0.005	0.002	-
	Primorskaya	Komarovka River*5	-	0.006	0.027	-
Thailand	Kanchanaburi Province	Vajiralongkorn Dam*2 (Ban Pong Chang)	4.0	0.010	-	-
		Vajiralongkorn Dam*2 (Ban Pang Pueng)	4.3	0.010	-	-
Vietnam	Hoa Binh Province	Hoa Binh Reservoir*4	1.2	0.090	0.018	-

note

- : Items were not analyzed.

*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.

Table 6.5.1 Annual mean values of each parameters of 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 2020 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

Table 6.5.3 Annual mean values of each parameters from 2001 to 2020 at Xiaoping Dam (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	7.21	-	-	-	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

- : Items were not analyzed.

*1: Less than determination/detection limit.

Table 6.5.4 Annual mean values of each parameters from 2001 to 2020 at Jiwozi River (China)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ mg/L	DOC mg/L	COD mg/L
2001	7.11	4.50	0.225	-	10.03	1.47	1.06	0.04	1.90	0.70	8.83	1.38	-	-	-	-	-
2002	7.60	8.47	0.110	-	12.16	1.70	1.80	*1	2.80	1.20	12.73	1.72	-	-	-	-	-
2003	7.54	7.83	0.140	-	11.44	2.01	1.63	*1	2.08	0.95	12.03	1.59	-	-	-	-	-
2004	7.20	6.63	0.243	-	11.68	2.30	1.06	*1	1.79	0.68	9.04	1.35	-	*1	*1	-	3.2
2005	6.99	7.99	0.208	-	15.31	0.81	1.74	0.06	1.77	0.72	7.44	1.35	-	*1	0.090	-	1.6
2006	6.80	7.59	0.238	-	11.80	1.87	1.21	0.07	1.93	0.65	7.64	1.11	-	0.030	0.003	-	2.8
2007	7.32	8.86	0.250	-	16.68	3.46	1.31	0.13	2.09	0.96	11.00	0.96	-	*1	*1	-	2.2
2008	7.05	8.42	0.248	-	13.92	1.89	1.51	0.30	1.43	1.05	9.38	1.20	-	<0.01*1	<0.003*1	-	2.5
2009	6.98	8.28	0.278	-	15.51	2.07	1.34	0.14	1.88	1.04	9.85	1.38	-	<0.01*1	<0.003*1	-	2.5
2010	7.33	8.11	0.280	-	13.92	2.83	1.27	*1	1.22	0.81	10.49	1.35	-	<0.01*1	<0.003*1	-	3.0
2011	6.85	6.83	0.275	-	12.89	0.87	0.51	*1	0.74	0.84	8.09	2.01	-	<0.01*1	<0.003*1	-	3.0
2012	6.83	6.95	0.275	-	12.97	0.96	0.57	*1	0.70	0.83	7.80	2.01	-	<0.01*1	<0.003*1	-	4.0
2013	6.86	8.92	0.333	-	15.01	2.39	3.16	*1	3.50	1.37	11.07	1.69	-	<0.01*1	<0.003*1	-	5.0
2014	7.05	8.24	0.273	-	15.85	1.28	1.32	0.27	1.93	1.06	9.15	1.61	-	<0.01*1	<0.003*1	-	4.0
2015	7.09	7.27	0.263	-	11.32	6.45	1.55	*1	4.12	0.95	9.19	1.28	-	<0.01*1	<0.003*1	-	3.0
2016	7.10	7.60	0.295	-	11.70	2.86	0.82	*1	2.29	0.65	10.07	1.11	-	<0.01*1	<0.003*1	-	*1
2017	6.99	6.87	0.335	-	9.02	2.09	1.02	0.03	2.02	0.82	8.60	1.41	-	<0.01*1	<0.003*1	-	*1
2018	6.95	6.33	0.330	-	8.59	0.77	1.20	0.02	1.81	0.85	7.62	1.48	-	<0.01*1	<0.003*1	-	*1
2019	7.65	6.22	0.295	-	6.80	5.10	1.22	0.28	1.89	0.99	7.48	1.06	-	<0.01*1	<0.003*1	-	<0.5*1
2020	7.13	5.40	0.353	-	5.52	0.75	0.74	0.00	1.69	0.73	7.47	1.13	-	<0.01*1	<0.003*1	-	<5*1

Table 6.5.5 Annual mean values of each parameters from 2004 to 2020 at Zhuxiandong stream and from 2001 to 2003 at Zhuxiandong resorvoir(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

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	-	-	-	-	-

- : Items were not analyzed.

*1: Less than determination/detection limit.

Table 6.5.7 Annual mean values of each parameters from 2008 to 2019 at Gunung Lake (Indonesia)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2008	6.73	5.90	0.438	-	5.59	0.03	2.01	0.57	2.24	0.71	5.09	1.87	1.1	0.040	0.007	6.7	-
2009	6.69	5.54	0.460	-	3.48	0.06	1.30	0.16	3.14	1.02	4.62	2.20	1.0	0.014	0.005	10.8	-
2010	6.24	5.14	0.442	-	1.70	0.00	1.15	0.11	2.01	0.87	5.35	1.66	1.1	0.125	0.002	5.0	-
2011	7.38	5.15	0.414	-	4.04	0.07	1.00	0.12	2.36	0.84	5.04	2.02	0.7	0.037	0.004	10.2	-
2012	6.56	5.86	0.450	-	4.04	*1	1.10	*1	1.74	0.88	5.30	2.54	0.5	0.710	*1	9.5	-
2013	7.38	4.15	0.321	-	3.05	0.04	0.75	0.08	2.75	0.76	2.92	1.18	1.0	*1	0.002	5.3	-
2014	6.97	3.96	0.248	-	4.05	0.04	1.68	0.13	2.74	0.87	2.65	0.92	1.0	0.020	0.004	8.8	4.8
2015	7.33	4.91	0.274	-	6.74	0.05	1.96	0.03	1.74	0.49	4.46	2.00	-	-	-	-	-
2016	7.41	3.92	0.412	-	1.27	0.15	0.81	0.09	4.10	0.51	5.53	1.36	-	-	-	-	-
2017	7.88	4.47	0.318	-	1.59	0.13	0.82	0.09	1.87	0.92	5.07	1.17	0.8	-	-	-	-
2018	6.99	4.87	0.487	-	0.84	0.15	1.12	0.03	2.35	0.65	6.31	1.61	-	-	-	-	-
2019	7.76	5.58	0.436	-	2.50	0.14	1.09	0.56	1.68	0.98	6.39	1.64	-	-	-	-	-

Table 6.5.8 Annual mean values of each parameters from 2001 to 2020 at Ijira Lake (Japan)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC mS/m	Alkalinity meq/L	Gran's ANC (meq/L)	SO ₄ ²⁻ mg/L	NO ₃ ⁻ mg/L	Cl ⁻ mg/L	NH ₄ ⁺ mg/L	Na ⁺ mg/L	K ⁺ mg/L	Ca ²⁺ mg/L	Mg ²⁺ mg/L	Transparency m	PO ₄ ³⁻ mg/L	NO ₂ ⁻ mg/L	DOC mg/L	COD mg/L
2001	6.85	4.33	0.138	-	4.66	2.31	2.19	0.07	2.37	0.40	3.51	1.61	-	<0.01*1	-	-	-
2002	6.72	4.52	0.173	-	5.63	2.01	2.27	0.09	2.23	0.38	3.39	1.37	2.2	<0.066*1	<0.01*1	3.2	-
2003	6.75	4.10	0.146	-	5.14	2.07	2.40	0.08	1.86	0.30	2.94	1.36	3.0	<0.01*1	<0.03*1	1.4	-
2004	7.17	4.05	0.145	-	4.79	1.88	2.34	0.12	2.15	0.23	2.71	1.23	2.8	<0.03*1	<0.02*1	1.1	-
2005	6.94	4.47	0.153	-	5.73	2.37	2.32	0.08	2.29	0.39	3.27	1.42	3.0	<0.03*1	0.068	0.7	-
2006	6.81	3.94	0.164	-	4.53	2.11	2.09	0.03	2.00	0.33	2.80	1.23	2.4	<0.1*1	<0.02*1	0.6	-
2007	7.09	4.58	0.206	-	5.77	1.22	2.27	0.03	2.24	0.30	3.57	1.46	2.7	<0.1*1	<0.02*1	1.0	-
2008	7.19	4.36	0.183	-	5.37	1.78	2.16	0.04	2.10	0.28	3.24	1.45	2.7	<0.1*1	<0.01*1	0.8	-
2009	7.04	4.26	0.176	-	5.18	1.47	2.13	0.01	2.08	0.26	3.03	1.35	2.7	<0.1*1	<0.01*1	0.7	-
2010	7.01	3.74	0.158	-	4.58	1.10	1.96	<0.01*1	1.88	0.25	2.61	1.18	2.3	<0.1*1	<0.01*1	0.5	-
2011	7.11	3.85	0.159	-	4.77	1.34	1.86	<0.01*1	1.89	0.23	3.05	1.22	1.8	<0.1*1	<0.01*1	0.8	-
2012	7.11	3.76	0.154	-	4.66	1.31	1.89	<0.01*1	1.85	0.23	2.78	1.23	2.3	<0.1*1	<0.01*1	0.5	-
2013	7.17	3.94	0.165	-	5.02	1.06	1.97	<0.01*1	1.97	0.24	2.73	1.25	2.4	<0.1*1	<0.01*1	0.5	-
2014	7.06	3.73	0.140	-	4.67	1.21	1.86	<0.01*1	1.82	0.27	2.34	1.12	1.9	<0.1*1	<0.01*1	0.5	-
2015	7.16	3.57	0.149	-	4.38	1.06	1.87	<0.01*1	1.79	0.27	2.12	1.05	2.2	<0.1*1	<0.01*1	0.6	-
2016	7.11	3.73	0.141	-	5.37	1.39	1.78	<0.01*1	1.89	0.27	2.39	1.20	4.8	<0.1*1	<0.01*1	0.6	-
2017	7.02	3.89	0.165	-	5.33	0.97	1.84	<0.01*1	1.96	0.26	2.82	1.31	3.3	<0.1*1	<0.01*1	0.6	-
2018	6.95	3.59	0.162	0.143	4.54	0.74	1.87	<0.01*1	1.82	0.26	2.75	1.16	2.6	<0.1*1	<0.01*1	2.4	-
2019	7.16	3.84	0.176	0.160	4.81	0.74	1.88	<0.01*1	1.95	0.24	3.08	1.20	3.3	<0.02*1	<0.01*1	3.0	-
2020	6.99	3.64	0.163	0.151	4.56	0.85	1.73	<0.01*1	1.90	0.24	2.72	1.13	2.2	0.030	<0.01*1	0.9	-

Table 6.5.10 Annual mean values of each parameters from 2019 to 2020 at Futago-ike Lake (Meike) (Japan)

Table 6.5.10 Annual mean values of each parameters from 2015 to 2020 at Futaba Inland Lake (Inake) (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

Table 6.5.11 Annual mean values of each parameters of 2009 and 2019 at Nam Houm Lake (Lao PDR)

	Mandatory Parameters : 4 times/year												Mandatory Parameters : Once/year				
	pH	EC m/s/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

- : Items were not analyzed.

*1: Less than determination/detection limit.

Table 6.5.14 Annual mean values of each parameters from 2002 to 2020 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	-	-	-	-	-

Table 6.5.15 Annual mean values of each parameters from 2004 to 2020 at Pandin Lake (Philippines)

	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
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	8.30	18.56	1.897	-	0.94	0.00	3.62	0.07	8.23	3.81	14.93	7.69	-	0.973	0.038	-	-

Table 6.5.16 Annual mean values of each parameters from 2005 to 2016 at Ambulalakao Lake (Philippines)

Table 6.5.10 Annual mean values of each parameters from 2005 to 2016 at Aninlakak 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	-	-	-	-	-

- : Items were not analyzed.

*1: Less than determination/detection limit.

Table 6.5.17 Annual mean values of each parameters from 2004 to 2020 at Pereemnaya River (Russia)

	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
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

Table 6.5.18 Annual mean values of each parameters from 2005 to 2020 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

Table 6.5.19 Annual mean values of each parameters from 2002 to 2020 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 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
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	-	-	-

- : Items were not analyzed.

*1: Less than determination/detection limit.

Table 6.5.20 Annual mean values of each parameters from 2002 to 2020 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	-	-	-

- : Items were not analyzed.

*1: Less than determination/detection limit.

Table 6.5.21 Annual mean values of each parameters from 2001 to 2020 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

- : Items were not analyzed.

*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) recommended to measure 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 the 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, Mg, 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: $\text{mol}_c \text{ L}^{-1}$ (ex. $\mu\text{mol}_c \text{ L}^{-1}$ or $\text{mmol}_c \text{ L}^{-1}$)
- Ion flux (deposition, discharge or soil/vegetation flux): $\text{mol}_c \text{ ha}^{-1}$ or $\text{mol}_c \text{ m}^{-2}$
- Elemental flux for N and S: $\text{kg ha}^{-1} \text{ y}^{-1}$ or $\text{g m}^{-2} \text{ y}^{-1}$

Based on the compiled data with the standard units on a water-year basis, initial evaluations should be 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 map of the Lake Ijira catchment site is shown in Figure 7.1.

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 (1 st , PAGASA-Science Garden Station; 2 nd , Manila Observatory (MO), Ateneo de Manila University (AdMU)) 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 are used; *2, The data from the EANET soil and vegetation monitoring plots are referred.

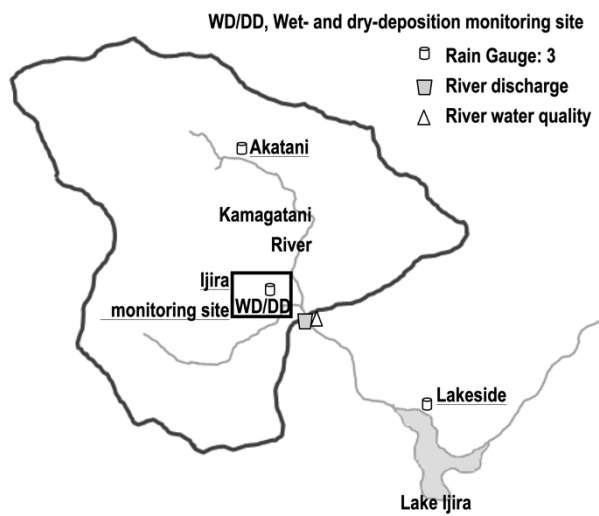


Figure 7.1 Catchment area and sampling design at the Lake Ijira catchment site

The area surrounded by a bold line indicates the catchment area for calculation of the material budget.

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 2020

Site	Items	Detailed items	Water year
Lake Ijira Catchment	Input ^{*1}	1. Precipitation amount (at 3 different slope positions)	2019-2020 ^{*2}
	Output	1. Water discharge 2. Stream water chemistry: biweekly 3. Chemical discharge	2019-2020 ^{*2}
La Mesa Watershed	Input ^{*1}	1. Precipitation amount (observed at PAGASA-Science Garden Station)	2020
	Output	1. Stream water chemistry: monthly	2020

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 2019 and/or 2020; ^{*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

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

Fluxes ^{*1}	Points	Water year ^{*2}
		2019-2020
Input by precipitation, mm y ⁻¹	Akatani (260 m)	3811
	Ijira monitoring site (140 m)	3423
	Lakeside (110 m)	3570
	Mean	3061
Output by the stream, mm y ⁻¹	Outlet of Kamagatani River	3326
Runoff rate, %		92

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
		2020
Input by precipitation, mm y ⁻¹	Science Garden	2472
	Manila Observatory	-
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 2019-2020)

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 ⁺	Al		TOC	SiO ₂
	mS m ⁻¹			μmol _e L ⁻¹												mg L ⁻¹	mg-C L ⁻¹
2019/11/15	7.00	4.18	150	148	131	21.4	50.9	87	113	113	6.6	<3.0	0.10	<0.02	0.6	8.7	0.21
2019/11/29	6.81	4.32	154	157	161	20.2	56.3	101	126	131	6.5	<3.0	0.15	<0.02	0.4	5.5	0.22
2019/12/16	6.84	4.50	152	140	159	21.0	52.7	89	117	118	5.8	<3.0	0.14	<0.02	0.4	8.2	0.20
2019/12/25	6.77	4.57	152	141	178	23.1	57.7	105	132	140	6.5	<3.0	0.17	<0.02	0.2	8.1	0.20
2020/1/15	6.90	4.48	144	132	158	31.6	52.6	99	131	137	5.6	<3.0	0.13	<0.02	0.3	7.8	0.21
2020/1/29	6.79	4.62	152	138	181	25.0	56.0	100	128	128	5.6	<3.0	0.16	<0.02	0.2	7.7	0.20
2020/2/14	6.89	4.70	148	127	174	40.5	58.2	97	158	132	5.9	<3.0	0.13	<0.02	0.4	7.2	0.21
2020/2/28	6.87	4.45	150	144	171	27.7	56.6	94	156	126	5.4	<3.0	0.13	<0.02	0.3	6.7	0.21
2020/3/16	6.99	4.05	138	141	143	26.9	55.1	86	131	111	5.0	<3.0	0.10	<0.02	0.2	7.6	0.25
2020/3/26	6.95	4.29	156	142	117	12.3	58.5	103	101	115	5.7	<3.0	0.11	<0.02	0.2	7.6	0.23
2020/4/15	7.07	4.24	154	141	154	20.6	54.9	91	189	102	6.1	<3.0	0.09	<0.02	0.4	7.2	0.22
2020/4/27	7.02	3.79	140	135	117	16.2	51.0	85	173	94	5.7	<3.0	0.10	<0.02	0.4	7.9	0.27
2020/5/15	6.95	4.37	173	161	144	19.6	53.0	96	196	106	6.9	<3.0	0.11	<0.02	0.7	8.1	0.23
2020/5/29	6.82	4.09	169	153	144	21.6	55.0	92	192	103	6.4	<3.0	0.15	<0.02	0.6	8.4	0.24
2020/6/15	6.93	3.20	116	112	96	33.0	51.9	73	92	92	6.5	<3.0	0.12	<0.02	0.5	7.5	0.45
2020/6/30	6.96	3.22	120	118	102	34.3	40.3	71	94	94	6.3	<3.0	0.11	<0.02	1.3	6.7	0.44
2020/7/15	6.90	2.79	104	94	84	19.7	50.6	73	80	79	6.1	<3.0	0.13	<0.02	0.4	7.7	0.49
2020/7/30	6.92	3.20	128	119	97	19.1	51.5	79	110	71	7.5	<3.0	0.12	<0.02	0.5	8.3	0.40
2020/8/13	6.85	3.70	154	137	118	18.2	53.4	90	138	81	9.1	<3.0	0.14	<0.02	0.6	8.9	0.27
2020/8/31	6.75	4.08	150	135	121	54.5	46.9	86	133	111	7.3	<3.0	0.18	<0.02	0.7	8.7	0.31
2020/9/15	6.99	3.64	144	127	113	22.7	51.7	83	125	102	6.8	<3.0	0.10	<0.02	0.5	8.7	0.29
2020/9/30	6.85	3.84	150	140	124	25.8	52.0	88	131	108	6.1	<3.0	0.14	<0.02	0.7	8.8	0.28
2020/10/15	6.87	3.95	154	147	129	29.5	51.1	89	135	111	6.6	<3.0	0.13	<0.02	0.4	9.3	0.27
2020/10/30	6.83	3.93	146	145	133	26.9	52.2	87	132	103	5.4	<3.0	0.15	<0.02	0.4	8.9	0.27

Note. The water year was defined as the period from November to October in the following year. *1, The data was 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 2020)

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 _e L ⁻¹									
2020/1/22	7.62	28.3	3010	12.8	39.6	10.3	51.3	770	1412	795	32.5	0.0	0.02
2020/2/20	7.84	27.4	3030	10.6	43.3	14.5	48.2	1327	1492	746	26.9	0.0	0.01
2020/5/20	7.50	40.7	3800	33.8	70.4	0.0	96.8	1074	1727	1086	82.9	0.0	0.03
2020/6/17	7.37	26.0	2870	7.1	49.1	24.4	56.1	652	1143	766	40.9	0.0	0.04
2020/7/15	7.64	21.8	2392	2.8	47.3	14.2	50.8	559	1003	683	38.7	0.0	0.02
2020/8/18	7.68	20.1	2610	8.7	41.0	9.1	50.8	561	943	640	13.0	0.0	0.02
2020/9/16	7.59	21.4	2660	0.0	76.6	7.7	56.4	674	1717	800	25.6	12.4	0.03
2020/10/21	7.95	16.9	1790	6.2	44.8	14.9	46.5	393	818	526	41.9	12.0	0.01
2020/11/18	7.78	19.9	2260	9.8	41.8	6.6	57.5	500	983	664	45.3	12.2	0.02
2020/12/18	7.73	21.1	2480	9.8	38.5	7.1	52.2	400	948	634	42.7	0.0	0.02

Note. The water year was defined as the period from November to October in the following year. *1, The data was 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 2019-2020)

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 _e ha ⁻¹												mg L ⁻¹ kg-C ha ⁻¹ kg-SiO ₂ ha ⁻¹ mm				
2019/10/29	2019/11/15	0.09	0.08	0.07	0.01	0.03	0.05	0.07	0.07	0.004	ND	7.00E-05	ND	0.33	5.1	58
2019/11/15	2019/11/29	0.06	0.06	0.06	0.01	0.02	0.04	0.05	0.05	0.003	ND	5.24E-05	ND	0.20	3.0	42
2019/11/29	2019/12/16	0.05	0.05	0.05	0.01	0.02	0.03	0.04	0.04	0.002	ND	4.84E-05	ND	0.13	2.3	33
2019/12/16	2019/12/25	0.03	0.03	0.03	0.00	0.01	0.02	0.02	0.02	0.001	ND	2.82E-05	ND	0.05	1.5	18
2019/12/25	2020/1/15	0.08	0.07	0.09	0.01	0.03	0.05	0.07	0.07	0.003	ND	7.73E-05	ND	0.13	4.1	52
2020/1/15	2020/1/29	0.04	0.04	0.05	0.01	0.01	0.03	0.04	0.04	0.002	ND	4.00E-05	ND	0.07	2.1	28
2020/1/29	2020/2/14	0.06	0.05	0.07	0.01	0.02	0.04	0.06	0.05	0.002	ND	5.93E-05	ND	0.12	3.0	41
2020/2/14	2020/2/28	0.06	0.05	0.07	0.01	0.02	0.04	0.06	0.05	0.002	ND	5.00E-05	ND	0.13	2.7	38
2020/2/28	2020/3/16	0.07	0.07	0.08	0.01	0.03	0.05	0.07	0.06	0.003	ND	5.95E-05	ND	0.14	3.7	52
2020/3/16	2020/3/26	0.04	0.04	0.03	0.00	0.01	0.02	0.03	0.03	0.001	ND	2.65E-05	ND	0.05	1.9	25
2020/3/26	2020/4/15	0.06	0.06	0.05	0.01	0.02	0.04	0.06	0.04	0.002	ND	3.96E-05	ND	0.12	2.9	40
2020/4/15	2020/4/27	0.08	0.07	0.07	0.01	0.03	0.05	0.10	0.05	0.003	ND	5.02E-05	ND	0.20	4.0	53
2020/4/27	2020/5/15	0.10	0.09	0.08	0.01	0.03	0.06	0.11	0.06	0.004	ND	6.40E-05	ND	0.31	4.9	61
2020/5/15	2020/5/29	0.09	0.08	0.08	0.01	0.03	0.05	0.10	0.05	0.003	ND	6.81E-05	ND	0.32	4.3	52
2020/5/29	2020/6/15	0.25	0.24	0.21	0.05	0.10	0.15	0.25	0.17	0.011	ND	2.40E-04	ND	0.95	14.1	178
2020/6/15	2020/6/30	0.28	0.27	0.24	0.08	0.11	0.17	0.22	0.22	0.015	ND	2.74E-04	ND	2.07	16.9	238
2020/6/30	2020/7/15	1.09	1.03	0.90	0.26	0.44	0.70	0.84	0.84	0.061	ND	1.17E-03	ND	7.82	70.1	972
2020/7/15	2020/7/30	0.59	0.54	0.46	0.10	0.26	0.39	0.48	0.38	0.035	ND	6.39E-04	ND	2.09	40.8	511
2020/7/30	2020/8/13	0.23	0.21	0.18	0.03	0.09	0.14	0.20	0.12	0.014	ND	2.14E-04	ND	0.90	14.1	164
2020/8/13	2020/8/31	0.19	0.17	0.15	0.05	0.06	0.11	0.17	0.12	0.011	ND	2.05E-04	ND	0.82	11.2	128
2020/8/31	2020/9/15	0.32	0.28	0.25	0.08	0.11	0.18	0.28	0.23	0.015	ND	3.02E-04	ND	1.27	18.8	216
2020/9/15	2020/9/30	0.18	0.16	0.14	0.03	0.06	0.10	0.15	0.13	0.008	ND	1.44E-04	ND	0.72	10.5	120
2020/9/30	2020/10/15	0.16	0.15	0.13	0.03	0.05	0.09	0.14	0.11	0.007	ND	1.39E-04	ND	0.54	9.3	103
2020/10/15	2020/10/30	0.16	0.15	0.14	0.03	0.05	0.09	0.14	0.11	0.006	ND	1.45E-04	ND	0.40	9.4	103

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

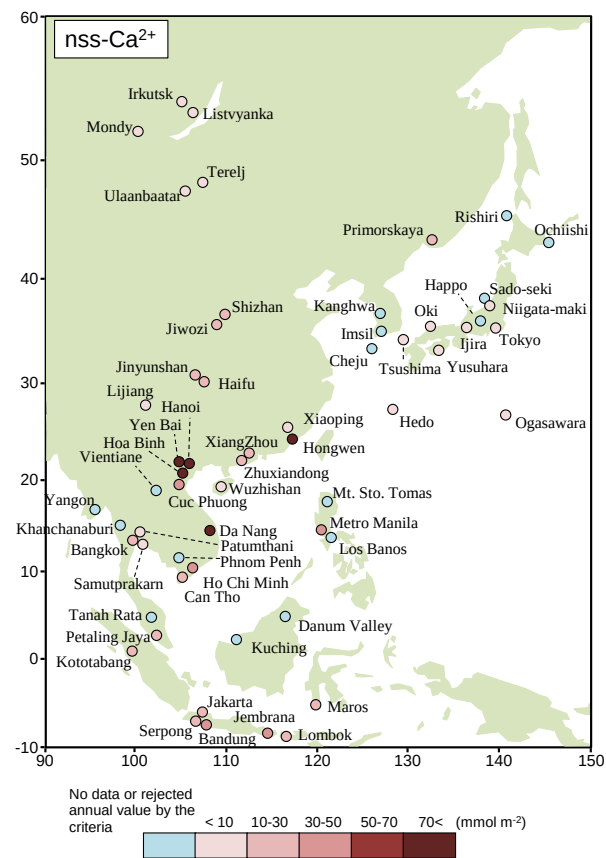
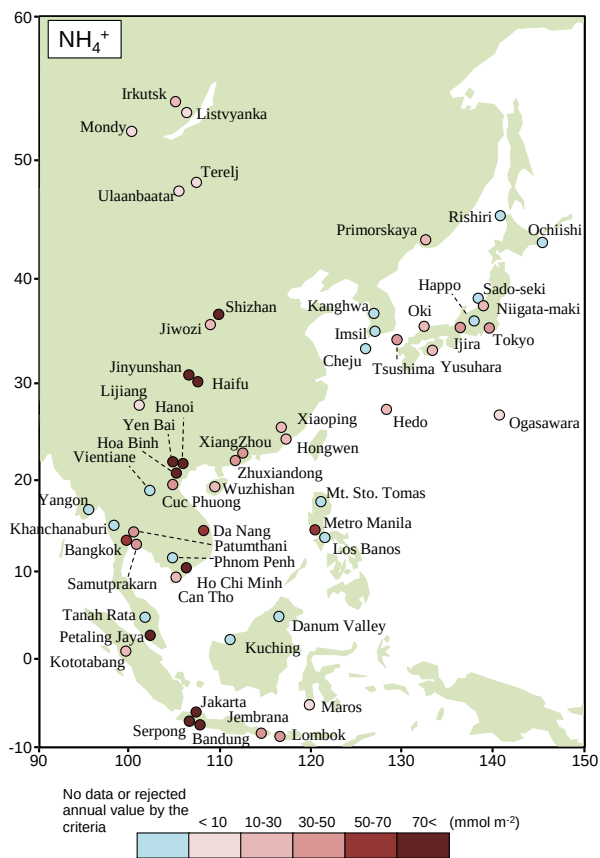
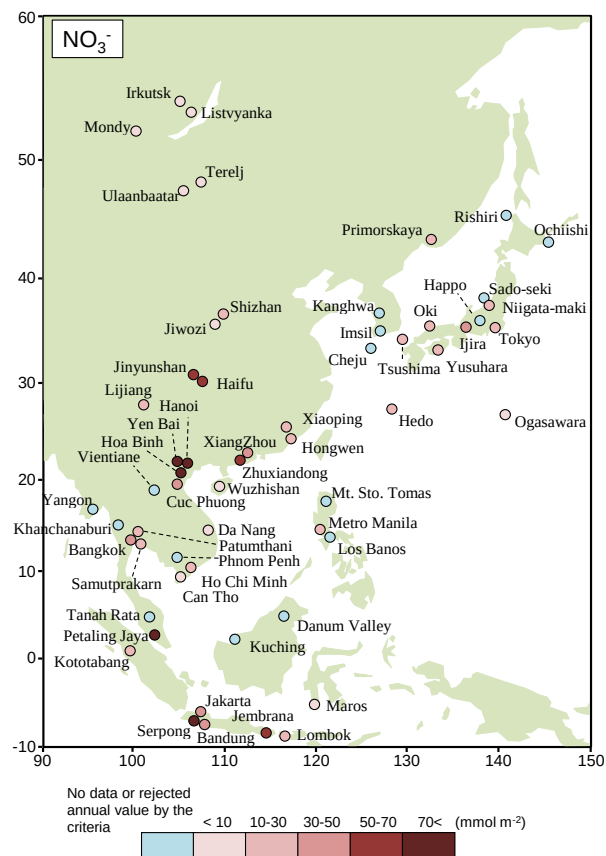
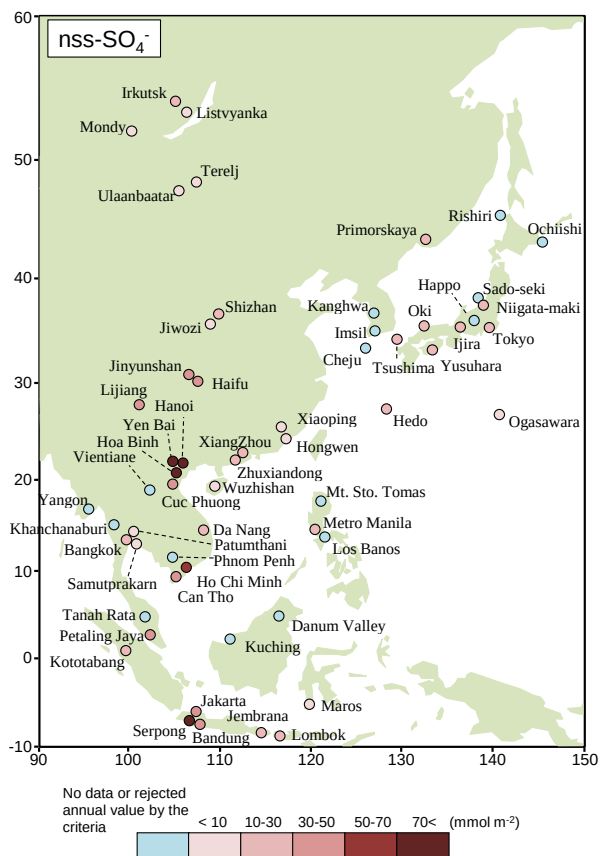
Table 7.9 Annual chemical discharges from the stream: Lake Ijira Catchment (Water year 2019-2020)

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	4.4	4.1	3.7	0.9	1.7	2.7	3.8	3.1	0.2	ND	0.0	ND	19.9	261
(previous equation)	4.8	4.5	4.1	1.0	1.8	3.0	4.2	3.5	0.2	ND	0.0	ND	21.8	289

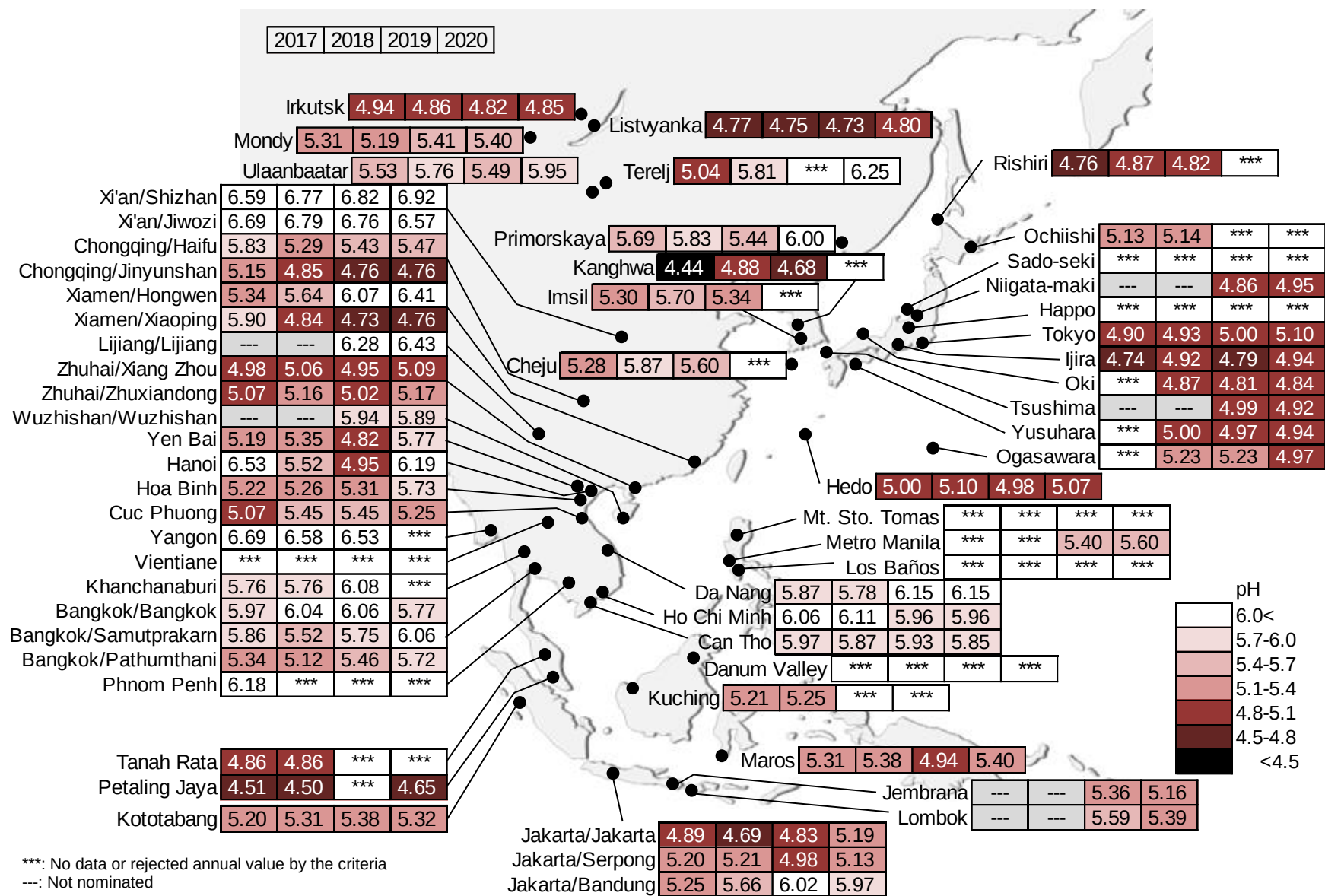
Note. The equation to estimate water discharge has been updated since WY 2018-2019. The values estimated using the previous equation is also shown for comparison.

Appendix 1

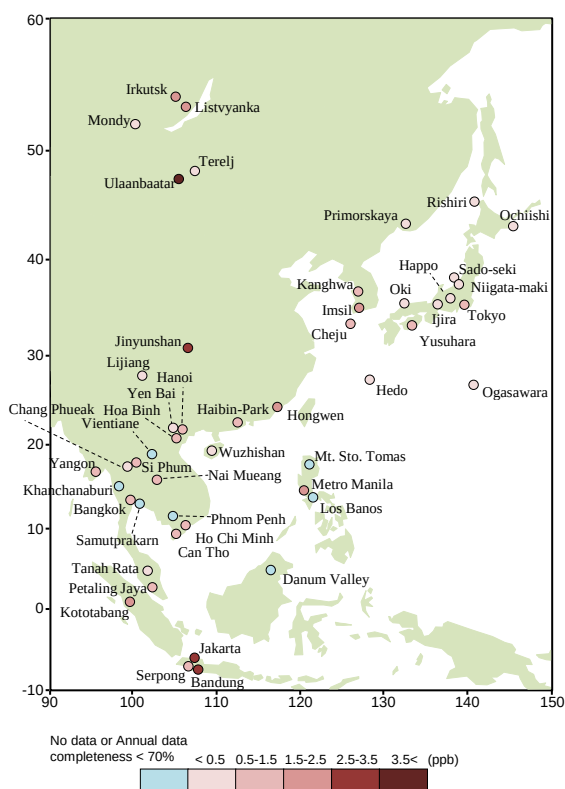
Overview of Data Report 2020



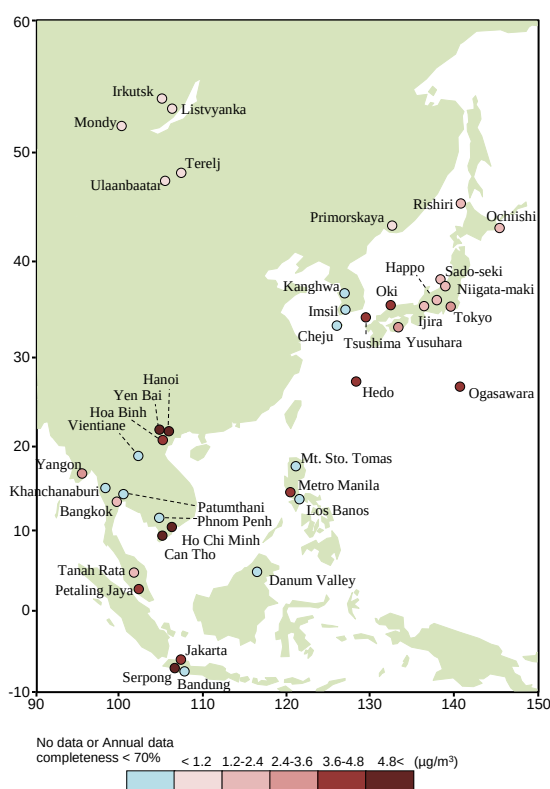
Appendix Fig. 1-1 Annual wet deposition levels of nss-SO₄²⁻, NO₃⁻, NH₄⁺ and nss-Ca²⁺ in 2020



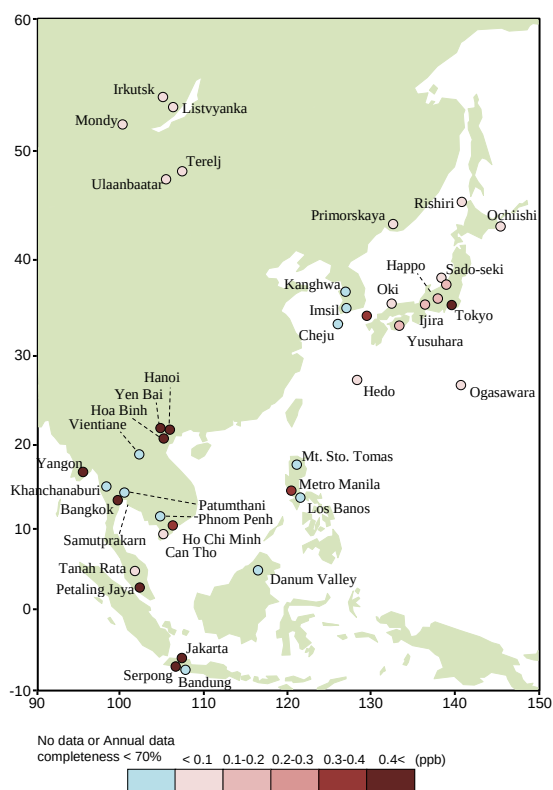
Appendix Fig. 1-2 Trends of pH in each EANET site from 2017 to 2020



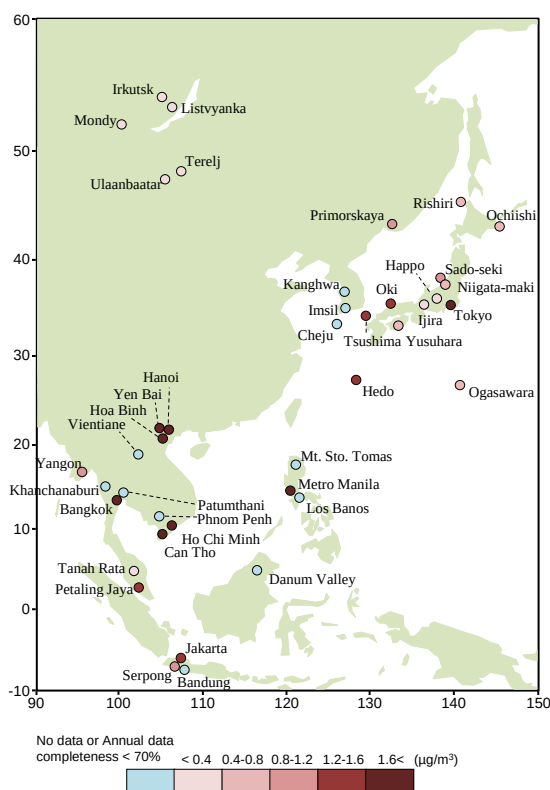
Appendix Fig. 1-3 Levels of annual SO_2 concentrations at EANET monitoring sites in 2020.



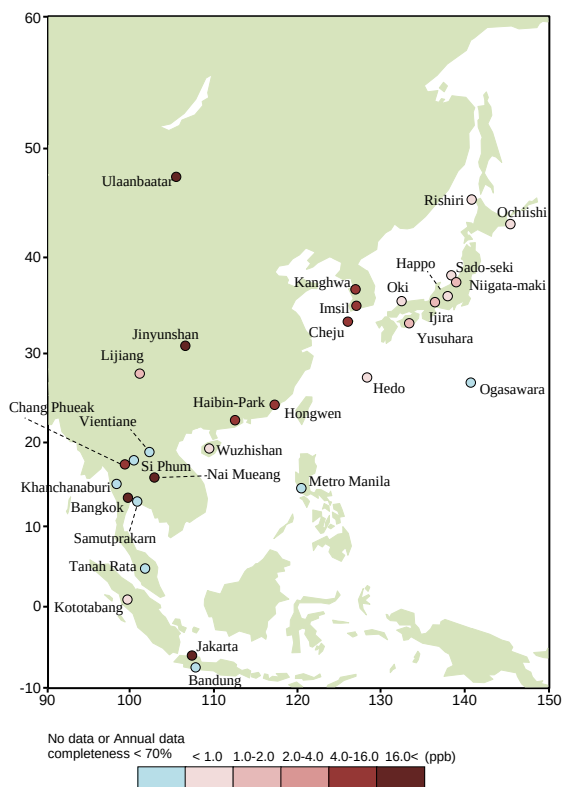
Appendix Fig. 1-4 Levels of annual particulate SO_4^{2-} concentrations at EANET monitoring sites in 2020.



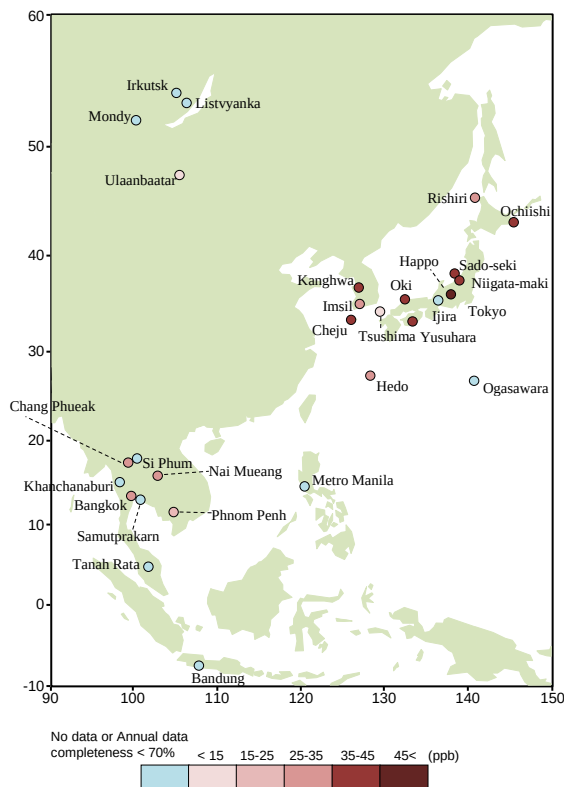
Appendix Fig. 1-5 Levels of annual HNO_3 concentrations at EANET monitoring sites in 2020.



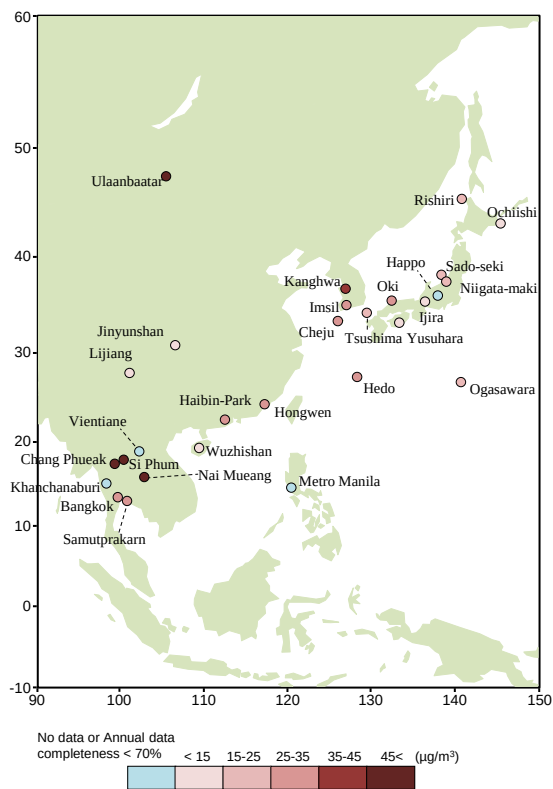
Appendix Fig. 1-6 Levels of annual particulate NO_3^- concentrations at EANET monitoring sites in 2020.



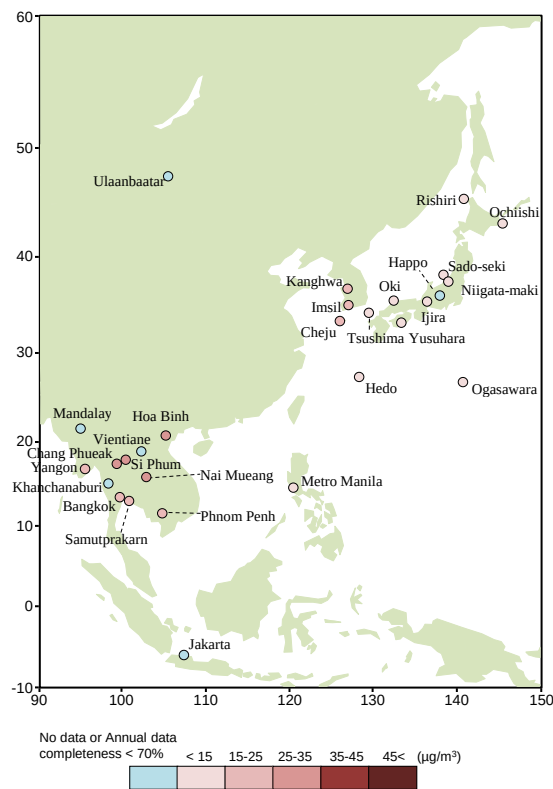
Appendix Fig. 1-7 Levels of annual NO_x or NO_2 concentrations at EANET monitoring sites in 2020.



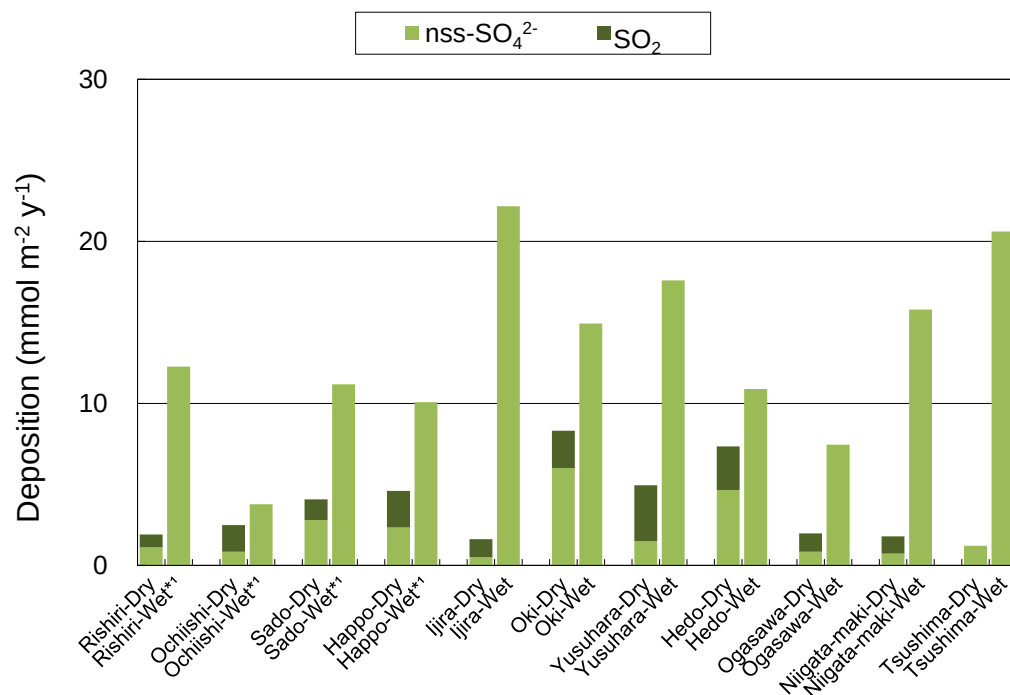
Appendix Fig. 1-8 Levels of annual O_3 concentrations at EANET monitoring sites in 2020.



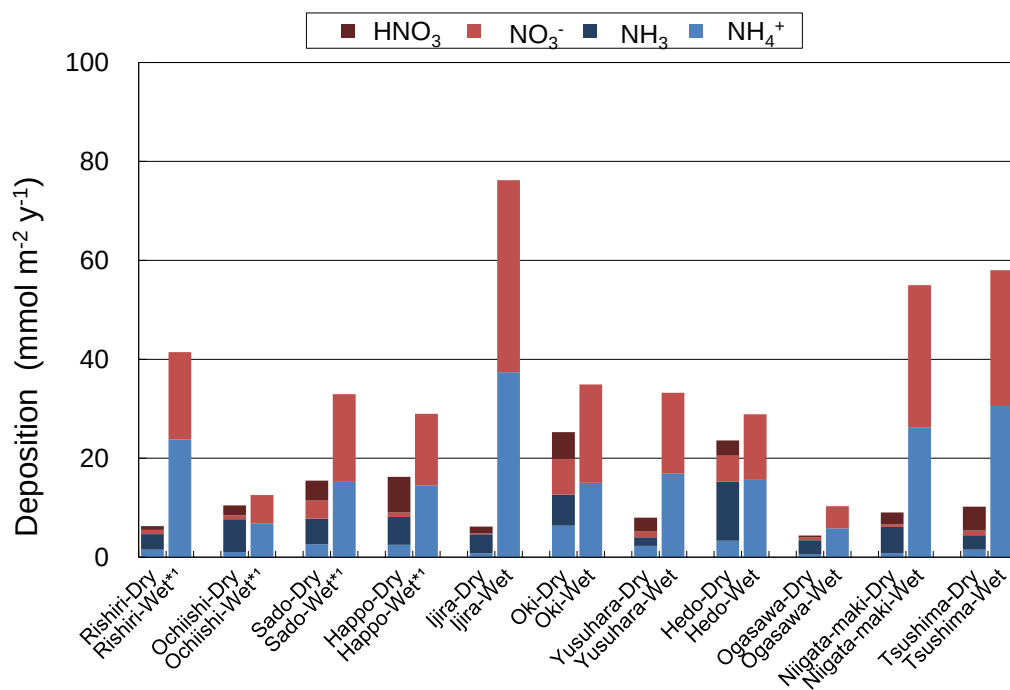
Appendix Fig. 1-9 Levels of annual PM_{10} concentrations at EANET monitoring sites in 2020.



Appendix Fig. 1-10 Levels of annual $\text{PM}_{2.5}$ concentrations at EANET monitoring sites in 2020.



Appendix Fig. 1-11 Annual dry and wet deposition amount of sulfur compounds at EANET sites in 2020.



Appendix Fig. 1-12 Annual dry and wet deposition amount of nitrogen compounds at EANET sites in 2020.

*1 The data completeness of wet deposition monitoring was less than 80% (EANET criteria).

Appendix 2

Meteorological Statistics at the Monitoring Sites

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

2020													
Month													
Items													
Temperature (°C)	monthly mean	-4.3	-4.7	1.0	3.6	9.5	14.3	18.2	19.2	18.1	11.0	3.9	-3.9
	max.daily mean	-0.3	2.9	5.9	7.2	14.5	16.9	20.6	22.6	24.0	17.0	12.3	1.9
	min.daily mean	-9.6	-10.7	-3.6	-0.6	4.6	10.7	15.6	14.2	11.2	6.4	-2.0	-11.2
Relative humidity (%)	monthly mean	67	69	67	73	82	88	88	90	85	75	70	64
	max.daily mean	87	93	91	91	97	97	98	98	96	93	92	80
	min.daily mean	49	52	43	48	44	66	71	78	68	51	54	51
Mean wind speed (m/s)		3.2	3.0	3.4	2.8	2.0	1.6	1.6	2.0	2.4	3.0	3.8	3.4
Most frequent wind direction (bearings)		NW	NNW	ENE	E	W	E	NE	E	E	N	NW	NW
Precipitation amount (mm/month)		28	35	62	25	63	126	91	259	91	218	186	56
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		141	204	364	491	498	379	568	349	379	273	111	89

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

2020													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-4.4	-5.5	-1.2	0.8	4.7	8.9	11.7	14.8	14.0	10.8	4.9	-2.7
	max.daily mean	-0.5	-0.9	1.9	4.0	11.1	12.6	14.3	17.4	18.8	13.4	11.9	2.8
	min.daily mean	-9.5	-13.1	-5.7	-2.5	0.6	6.7	9.3	11.0	10.4	6.8	-0.4	-9.0
Relative humidity (%)	monthly mean	69	74	83	84	89	96	98	96	91	77	70	61
	max.daily mean	100	100	100	100	100	100	100	100	100	100	100	94
	min.daily mean	44	56	55	68	63	73	92	83	68	57	47	47
Mean wind speed (m/s)		7.7	7.0	8.6	8.1	6.7	5.5	4.4	6.0	6.6	7.3	8.5	7.5
Most frequent wind direction (bearings)		NW	NNW	N	WSW	WSW	E	SW	SW	E	WSW	NW	NW
Precipitation amount (mm/month)		15	21	61	28	26	92	31	11	22	70	44	5
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		236	331	437	530	574	492	491	452	380	320	211	207

Appendix Table 2-3 Meteorological statistics at the monitoring site

Site : Sado-seki, Japan

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	--	--	8.4	9.4	16.1	20.5	22.2	26.1	23.5	16.4	5.0
	max.daily mean	--	--	14.9	15.2	20.2	25.0	25.8	29.6	31.1	21.9	10.2
	min.daily mean	--	--	4.9	5.1	11.1	16.8	19.9	23.0	17.5	10.5	-2.4
Relative humidity (%)	monthly mean	--	--	66	71	77	81	93	86	78	72	75
	max.daily mean	--	--	84	90	98	98	98	98	98	93	92
	min.daily mean	--	--	47	50	41	52	79	63	53	54	51
Mean wind speed (m/s)	5.7	6.8	6.1	6.5	3.7	3.0	2.7	3.0	4.3	4.5	5.6	6.2
Most frequent wind direction (bearings)	WNW	W	W	WSW	WSW	WSW	WSW	WSW	W	W	W	WNW
Precipitation amount (mm/month)	82	54	72	66	69	73	369	94	183	58	106	106
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	116	188	338	502	591	613	394	590	465	319	172	95

Appendix Table 2-4 Meteorological statistics at the monitoring site

Site : Happo, Japan

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	-5.1	-5.1	-1.3	0.1	9.1	13.4	14.6	18.3	12.8	5.1	-5.5
	max.daily mean	1.1	5.5	6.5	9.2	14.8	17.3	17.5	20.9	17.5	10.9	0.3
	min.daily mean	-9.6	-15.7	-10.0	-5.2	1.7	9.4	11.4	15.0	7.0	-1.8	-14.5
Relative humidity (%)	monthly mean	81	76	71	67	72	86	96	92	96	92	87
	max.daily mean	95	93	96	96	97	97	97	97	97	97	96
	min.daily mean	36	32	27	24	32	62	91	75	87	62	42
Mean wind speed (m/s)	4.3	4.9	5.0	5.0	2.7	2.3	2.2	2.0	2.6	2.0	2.6	4.2
Most frequent wind direction (bearings)	NW	NW	SSE	SSE	SSE	SSE	SSE	SE, SSE	SSE	SSE	SSE	NW
Precipitation amount (mm/month)	165	154	225	64	104	403	665	51	246	134	200	189
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	275	368	489	635	604	493	296	423	247	251	290	218

Appendix Table 2-5 Meteorological statistics at the monitoring site

Site : Ijira, Japan

												2020	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	5.0	4.2	7.5	10.1	17.1	21.2	22.4	26.0	21.9	14.7	10.5	4.3
	max.daily mean	9.0	9.5	12.3	15.4	20.1	23.1	24.9	28.5	25.8	19.9	16.2	8.3
	min.daily mean	2.3	-1.1	2.4	6.3	14.6	17.9	18.7	24.1	18.4	9.1	6.5	-0.6
Relative humidity (%)	monthly mean	92	89	84	69	77	84	95	87	90	86	86	90
	max.daily mean	99	99	99	97	97	97	98	97	98	98	98	98
	min.daily mean	72	75	57	44	49	64	83	67	71	59	74	70
Mean wind speed (m/s)		0.4	0.4	0.5	0.7	0.5	0.4	0.3	0.4	0.4	0.5	0.4	0.4
Most frequent wind direction (bearings)		Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm
Precipitation amount (mm/month)		105	145	228	240	208	493	1091	197	348	214	53	123
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		184	234	349	507	497	442	268	548	319	263	201	165

Appendix Table 2-6 Meteorological statistics at the monitoring site

Site : Yusuhara, Japan

												2020	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	4.0	3.9	7.0	8.8	15.7	19.6	20.9	24.6	--	12.4	10.3	3.2
	max.daily mean	10.9	10.8	13.1	13.3	18.6	22.8	24.7	27.4	--	16.3	15.6	8.8
	min.daily mean	0.3	-3.3	0.4	1.9	11.9	15.7	16.9	22.6	--	8.1	4.0	-4.9
Relative humidity (%)	monthly mean	77	71	73	62	77	85	93	82	--	79	81	72
	max.daily mean	97	97	97	97	98	98	99	99	--	99	99	91
	min.daily mean	56	31	36	37	39	64	78	53	--	57	50	59
Mean wind speed (m/s)		2.1	2.1	1.8	2.1	--	--	--	1.2	--	1.6	1.6	2.3
Most frequent wind direction (bearings)		N	N	N	N	--	--	--	SSE, NNW	--	NNW	NNW	N
Precipitation amount (mm/month)		172	132	147	173	268	418	661	45	--	97	86	28
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		260	350	422	611	588	476	404	481	--	267	322	301

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

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	17.6	17.6	18.8	18.8	23.3	27.2	28.3	28.5	26.1	22.6	18.4
	max.daily mean	21.7	22.7	22.8	22.4	26.1	29.0	29.8	29.3	31.3	28.9	21.7
	min.daily mean	13.8	12.5	14.4	16.5	19.4	24.0	26.0	25.8	22.3	19.3	12.2
Relative humidity (%)	monthly mean	78	78	85	77	95	97	83	11	11	11	10
	max.daily mean	99	97	99	98	99	99	99	11	11	11	11
	min.daily mean	59	53	52	53	62	92	11	11	11	11	10
Mean wind speed (m/s)	4.7	4.8	4.4	4.7	4.3	4.4	3.5	4.0	3.8	5.7	6.3	7.0
Most frequent wind direction (bearings)	NW	NNW	NW	NNE	E	SSW	S	ESE	SSE	NE	NNE	NNE
Precipitation amount (mm/month)	46	28	159	82	360	233	234	343	196	62	27	171
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	279	346	381	454	461	587	620	568	464	424	300	161

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

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	17.8	16.5	18.0	18.8	22.6	25.2	--	--	--	--	--
	max.daily mean	21.0	21.3	21.9	22.6	25.3	26.3	--	--	--	--	--
	min.daily mean	15.3	13.2	14.5	16.0	18.2	24.3	--	--	--	--	--
Relative humidity (%)	monthly mean	78	74	81	88	94	93	--	--	--	--	--
	max.daily mean	99	90	98	98	98	97	--	--	--	--	--
	min.daily mean	63	59	57	66	84	83	--	--	--	--	--
Mean wind speed (m/s)	1.6	1.7	1.7	1.6	2.0	1.7	1.3	1.0	1.3	1.6	1.8	1.7
Most frequent wind direction (bearings)	WSW	SSW	SSW	SSW	SSW	SSW	SSW	NE	SSW	NE	ENE	WSW
Precipitation amount (mm/month)	64	31	161	99	217	18	83	78	159	243	259	253
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	355	447	511	446	459	656	698	625	565	376	355	217

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

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	4.7	4.6	7.5	9.8	17.0	22.2	23.3	27.4	23.9	15.9	4.7
	max.daily mean	8.4	10.4	12.9	15.2	20.9	25.3	25.5	30.7	32.2	21.0	10.1
	min.daily mean	2.6	-1.8	3.9	6.4	12.2	19.2	20.5	22.7	17.9	10.9	-1.5
Relative humidity (%)	monthly mean	75	75	69	69	72	72	85	76	73	72	79
	max.daily mean	89	91	94	86	91	89	94	92	93	85	92
	min.daily mean	56	62	50	47	56	56	75	65	56	57	58
Mean wind speed (m/s)	4.7	5.4	4.8	4.7	3.3	3.1	2.8	2.7	3.3	3.6	4.1	5.4
Most frequent wind direction (bearings)	WNW	WNW	W	W	WSW	SE	SE	WSW	SE	SE	SE	WNW
Precipitation amount (mm/month)	166	118	111	119	115	87	582	122	261	77	124	231
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	171	231	424	509	640	641	425	628	456	317	213	131

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

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)	3.0	3.1	3.0	3.2	2.8	2.6	2.4	2.8	2.7	2.4	2.9	3.3
Most frequent wind direction (bearings)	N	WSW	ENE	WSW	WSW	WSW	SW	SW	ENE	ENE	NNW	NNW
Precipitation amount (mm/month)	135	97	130	96	123	476	822	153	242	49	41	36
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-11 Meteorological statistics at the monitoring site

Site : Ulaanbaatar, Mongolia

2020													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	-17.1	-12.6	-5.3	6.8	10.9	17.2	18.7	16.4	11.3	0.1	-6.7	-21.9
	max.daily mean	-11.4	-5.2	5.3	19.0	19.5	24.0	24.7	20.4	19.7	5.4	-0.6	-15.6
	min.daily mean	-21.6	-21.4	-15.8	-4.9	3.5	10.6	13.2	11.7	4.3	-4.5	-21.5	-28.8
Relative humidity (%)	monthly mean	62	59	50	29	40	46	57	62	54	46	54	60
	max.daily mean	70	66	68	62	76	73	78	79	75	51	68	71
	min.daily mean	55	51	29	13	18	23	32	39	29	37	39	54
Mean wind speed (m/s)		1.1	1.4	1.7	2.1	2.0	1.6	1.5	1.5	1.7	1.8	1.8	1.2
Most frequent wind direction (bearings)		WSW	NE	NE	ENE	ENE	ENE	NNE	ENE	ENE	ESE	ESE	W
Precipitation amount (mm/month)		0	0	0	1	2	79	115	135	32	1	0	0
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-12 Meteorological statistics at the monitoring site

Site : Metro Manila*, Philippines

Site : Metro Manila , Philippines

												2020	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	26.6	26.3	28.6	29.5	30.6	29.6	29.0	28.4	28.9	27.8	27.4	27.3
	max.daily mean	30.9	30.7	33.4	34.2	34.8	33.6	32.9	31.7	32.7	30.8	30.9	30.4
	min.daily mean	22.3	21.9	23.9	24.8	26.4	25.6	25.2	25.1	25.0	24.8	24.0	24.2
Relative humidity (%)	monthly mean	73	68	62	61	68	72	76	80	78	83	80	81
	max.daily mean	82	85	69	72	94	84	91	90	87	95	92	95
	min.daily mean	64	59	50	40	56	62	64	70	70	71	68	62
Mean wind speed (m/s)		1.3	1.2	1.2	1.3	1.2	1.1	1.1	1.2	1.0	1.1	1.3	1.0
Most frequent wind direction (bearings)		N	NE	S	SE	SW	S	N	NNE	N	S	N	WNW
Precipitation amount (mm/month)		9	64	1	41	199	213	360	348	320	429	302	186
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 (DO)

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

												2020	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	--	25.6	27.9	28.7	29.6	29.1	28.3	28.0	28.5	27.8	27.1	26.9
	max.daily mean	--	29.3	32.7	33.3	34.4	33.4	32.7	31.8	32.6	31.0	30.5	29.8
	min.daily mean	--	21.8	23.0	24.0	24.9	24.8	23.9	24.2	24.3	24.5	23.7	24.1
Relative humidity (%)	monthly mean	--	--	--	--	--	--	--	--	--	--	--	--
	max.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
	min.daily mean	--	--	--	--	--	--	--	--	--	--	--	--
Mean wind speed (m/s)		--	2.8	2.5	2.9	2.2	2.2	1.6	1.7	1.5	1.9	2.0	1.6
Most frequent wind direction (bearings)		--	ENE	ENE	NE	E	E	NE	NE	NNE	NE, E, S	E	NE
Precipitation amount (mm/month)		--	59	4	81	269	127	338	354	125	535	485	263
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

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

(Latitude: 14°10'20"N Longitude: 121°14'29"E Altitude: 21.7 m)

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

Appendix Table 2-14 Meteorological statistics at the monitoring site
Site : Bangkok, Thailand

2020													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	28.7	28.9	30.2	30.5	31.1	29.4	28.9	28.8	28.5	26.3	27.7	26.7
	max.daily mean	29.7	30.2	31.2	32.3	32.7	31.3	30.9	31.8	30.1	28.8	30.0	28.7
	min.daily mean	27.4	27.7	26.6	27.5	27.8	25.9	26.8	25.4	26.0	22.7	24.2	23.3
Relative humidity (%)	monthly mean	63	58	66	66	67	71	74	71	77	80	64	59
	max.daily mean	74	73	81	80	82	91	87	91	88	96	86	80
	min.daily mean	47	39	54	59	59	60	61	54	63	57	47	50
Mean wind speed (m/s)		0.6	0.7	0.9	0.7	0.6	0.6	0.5	0.6	0.5	0.4	0.4	0.5
Most frequent wind direction (bearings)		WSW	WSW	WSW	WSW	WSW	W	WNW	WNW	WNW	NE	NE	NE
Precipitation amount (mm/month)		0	0	2	94	132	147	366	184	412	337	38	2
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-15 Meteorological statistics at the monitoring site
Site : Samutprakarn, Thailand

2020													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	28.6	28.6	29.6	30.2	31.1	29.6	29.5	29.1	28.9	26.9	28.0	27.0
	max.daily mean	29.8	30.1	30.7	31.7	32.8	31.9	31.5	31.8	30.7	29.3	30.4	29.0
	min.daily mean	27.2	27.4	28.1	27.7	28.3	26.6	27.8	26.3	26.5	23.3	24.6	23.2
Relative humidity (%)	monthly mean	70	65	76	74	73	78	77	78	83	86	67	61
	max.daily mean	84	80	82	84	85	92	90	93	96	99	94	86
	min.daily mean	49	39	63	65	62	62	64	58	67	57	45	49
Mean wind speed (m/s)	1.4	1.6	2.3	1.9	1.9	1.5	1.4	1.5	1.4	1.1	1.3	1.3	
Most frequent wind direction (bearings)	S	S	S	S	S	S	S	S	S	NW	E	E	
Precipitation amount (mm/month)	0	0	0	50	110	165	182	205	299	286	26	0	
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--	
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--	

Appendix Table 2-16 Meteorological statistics at the monitoring site
Site : Khanchanaburi, Thailand

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	--	--	28.8	29.4	29.0	26.9	--	--	--	--	--
	max.daily mean	--	--	30.0	32.5	31.5	28.9	--	--	--	--	--
	min.daily mean	--	--	27.2	26.4	26.3	25.1	--	--	--	--	--
Relative humidity (%)	monthly mean	--	--	59	62	76	84	--	--	--	--	--
	max.daily mean	--	--	74	83	88	92	--	--	--	--	--
	min.daily mean	--	--	52	48	65	75	--	--	--	--	--
Mean wind speed (m/s)	--	--	0.2	0.2	0.2	0.2	--	--	--	--	--	--
Most frequent wind direction (bearings)	--	--	SSW	SSW	SSW	SSW	--	--	--	--	--	--
Precipitation amount (mm/month)	--	--	13	93	76	153	--	--	--	--	--	--
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-17 Meteorological statistics at the monitoring site
Site : Chang Phueak, Thailand

2020													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	22.3	24.6	28.4	29.9	30.0	28.3	28.0	26.4	27.0	25.8	25.2	22.0
	max.daily mean	24.4	26.6	30.1	33.2	32.2	31.5	30.2	29.6	29.3	27.5	26.7	24.4
	min.daily mean	18.3	22.7	26.6	25.3	26.2	24.9	25.4	24.4	24.3	22.1	23.2	18.4
Relative humidity (%)	monthly mean	58	48	38	45	59	71	74	84	80	74	67	65
	max.daily mean	69	57	49	81	81	92	88	99	96	85	82	71
	min.daily mean	43	38	31	31	47	54	63	70	69	59	48	55
Mean wind speed (m/s)	0.4	0.5	0.6	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.6	0.4	0.4
Most frequent wind direction (bearings)	NNW	NNW	SSE	SSE	NNW	NW	S	NW	NNW	NNW	NNW	NNW	NNW
Precipitation amount (mm/month)	1	0	0	0	13	105	123	210	198	56	5	1	
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--	--

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

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	25.8	28.1	31.9	32.9	33.1	31.2	30.8	--	--	--	25.3
	max.daily mean	27.5	30.0	33.9	36.1	35.3	34.2	33.1	--	--	--	27.3
	min.daily mean	22.3	26.4	30.3	27.6	28.6	27.4	28.6	--	--	--	21.8
Relative humidity (%)	monthly mean	56	44	36	43	58	68	66	--	--	--	66
	max.daily mean	70	55	52	87	86	72	78	--	--	--	74
	min.daily mean	39	35	28	28	48	57	55	--	--	--	56
Mean wind speed (m/s)	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.6	0.4	0.3
Most frequent wind direction (bearings)	NE	NE	SE	SE	NNE	SE	SE	SE	SE	N	NNE	NE
Precipitation amount (mm/month)	--	--	--	--	--	--	--	--	--	--	--	--
Sunshine duration (hours/month)	--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

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

												2020	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	26.3	26.6	30.0	29.5	29.9	28.6	28.5	27.7	27.5	24.3	25.3	23.4
	max.daily mean	29.1	29.8	32.7	33.3	32.7	31.8	30.1	30.2	29.3	27.5	28.3	27.5
	min.daily mean	21.7	22.1	25.0	25.0	25.8	24.6	26.7	24.8	24.4	20.8	21.6	18.6
Relative humidity (%)	monthly mean	53	48	54	57	64	69	69	72	76	82	67	63
	max.daily mean	61	54	81	74	83	87	81	84	92	96	78	69
	min.daily mean	48	36	35	41	54	55	58	58	66	62	53	55
Mean wind speed (m/s)		1.1	1.3	1.1	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.6	1.6
Most frequent wind direction (bearings)		E	ENE	SW	E	SW	SW	W	W	W	E	ENE	ENE
Precipitation amount (mm/month)		0	0	2	44	176	285	170	224	387	312	7	1
Sunshine duration (hours/month)		--	--	--	--	--	--	--	--	--	--	--	--
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-20 Meteorological statistics at the monitoring site
Site : Hanoi, Vietnam

												2020	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	19.2	18.0	22.9	21.3	29.4	30.5	28.8	31.1	27.8	24.2	22.5	18.0
	max.daily mean	22.7	22.6	26.4	25.9	34.2	37.1	35.9	32.9	32.2	28.1	27.6	21.6
	min.daily mean	17.2	17.0	20.8	19.7	19.1	27.7	27.7	25.8	25.0	21.8	20.5	15.4
Relative humidity (%)	monthly mean	88	83	93	86	88	80	89	83	85	83	79	77
	max.daily mean	95	88	98	92	98	90	95	93	92	91	89	89
	min.daily mean	79	77	87	79	77	67	78	70	75	72	65	67
Mean wind speed (m/s)		1.7	1.1	1.5	1.5	1.8	1.9	1.3	2.0	1.4	1.8	1.3	1.7
Most frequent wind direction (bearings)		NE,	NE	SE	NE	SE	SE	SE	SE	SE	NE	NE,	NE
Precipitation amount (mm/month)		80	19	143	78	176	69	55	425	283	213	36	1
Sunshine duration (hours/month)		60	50	38	59	185	234	126	190	123	101	121	67
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-21 Meteorological statistics at the monitoring site**Site : Hoa Binh*, Vietnam**

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	19.5	19.7	23.3	22.3	29.3	30.9	30.5	28.3	28.5	23.7	17.9
	max.daily mean	23.6	23.9	27.1	26.6	34.9	37.2	36.1	33.3	33.4	27.7	22.1
	min.daily mean	17.0	17.2	21.1	19.4	25.3	26.9	26.0	25.5	25.9	21.5	15.3
Relative humidity (%)	monthly mean	85	83	85	85	80	76	78	85	86	86	78
	max.daily mean	94	92	93	94	89	87	89	93	94	93	88
	min.daily mean	69	69	71	70	63	55	58	72	70	71	62
Mean wind speed (m/s)	1	1	1	1	1	1	1	1	1	1	1	1
Most frequent wind direction (bearings)	NE	NE	SE	N	NE	SW	SE	NE	N	NW	NE	NE
Precipitation amount (mm/month)	82	5	126	116	192	87	232	554	343	395	32	1
Sunshine duration (hours/month)	67	79	73	47	231	250	228	153	155	105	129	78
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 2-22 Meteorological statistics at the monitoring site**Site : Cuc Phuong, Vietnam**

2020												
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items												
Temperature (°C)	monthly mean	18.7	18.7	22.1	21.1	27.9	29.9	29.1	27.3	27.1	22.5	16.7
	max.daily mean	27.4	29.3	34.5	31.0	38.4	37.9	37.7	36.1	35.8	31.2	27.2
	min.daily mean	8.6	12.2	14.9	13.6	20.9	23.1	24.0	22.8	21.7	14.2	9.0
Relative humidity (%)	monthly mean	86	87	89	87	83	75	83	90	90	84	80
	max.daily mean	99	100	100	99	99	98	100	100	100	100	100
	min.daily mean	42	46	27	45	45	47	48	58	60	37	38
Mean wind speed (m/s)	1	1	1	1	1	1	1	1	1	1	1	1
Most frequent wind direction (bearings)	N	NE	E	NE	SW	SW	SW	SE	SW	NW	NW	NE
Precipitation amount (mm/month)	116	32	131	92	103	151	31	550	304	366	66	11
Sunshine duration (hours/month)	54	57	38	51	194	243	218	152	137	91	114	83
Solar radiation (MJ/m ² /month)	--	--	--	--	--	--	--	--	--	--	--	--

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

2020													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	27.1	23.6	27.3	26.4	29.4	30.3	29.6	29.3	29.4	25.9	25.0	22.3
	max.daily mean	25.2	26.1	28.0	28.0	32.5	32.5	31.5	32.2	30.5	29.5	27.0	25.5
	min.daily mean	20.1	20.1	24.0	22.3	27.4	29.0	27.7	27.4	27.0	23.1	21.9	18.2
Relative humidity (%)	monthly mean	79	78	80	80	77	71	74	75	74	87	84	84
	max.daily mean	83	86	85	85	86	77	84	85	85	96	94	95
	min.daily mean	75	68	77	71	64	60	67	64	66	72	74	72
Mean wind speed (m/s)		1	1	1	1	2	2	2	1	1	1	2	2
Most frequent wind direction (bearings)		ESE	ESE	ESE	ESE	E	E	E	NNW	NNE	NNE	ENE	NW
Precipitation amount (mm/month)		50	4	30	115	64	0	64	59	309	1743	482	145
Sunshine duration (hours/month)		155	189	211	161	269	276	309	202	248	56	102	306
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-24 Meteorological statistics at the monitoring site
Site : Can Tho, Vietnam

												2020	
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	27.0	27.0	28.3	29.4	30.1	28.0	27.7	28.0	27.3	27.0	27.5	27.9
	max.daily mean	32.5	32.8	34.0	34.7	35.4	33.1	32.9	32.8	32.5	31.0	34.0	34.5
	min.daily mean	23.2	23.5	24.8	26.0	26.9	25.0	24.7	24.3	25.0	24.0	23.0	23.5
Relative humidity (%)	monthly mean	74	72	74	74	77	85	84	82	87	89	80	82
	max.daily mean	83	88	87	89	88	89	90	93	92	92	92	90
	min.daily mean	40	41	40	40	42	47	50	52	48	51	47	49
Mean wind speed (m/s)		1.3	1.3	1.3	1.1	1.4	1.3	1.3	1.3	1.4	1.2	1.6	1.6
Most frequent wind direction (bearings)		NE	SE	SE	SE	SW	SW	SW	SW	SW	E	SE	SE
Precipitation amount (mm/month)		-	3	-	54	53	167	336	62	421	398	113	47
Sunshine duration (hours/month)		272	266	300	269	258	178	195	199	182	230	203	217
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix Table 2-25 Meteorological statistics at the monitoring site
Site : Ho Chi Minh*, Vietnam

2020													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Items													
Temperature (°C)	monthly mean	28.4	28.5	29.7	30.5	31.2	29.1	29.3	29.0	28.4	27.6	28.2	27.6
	max.daily mean	33.8	34.3	35.0	35.7	36.1	34.1	32.3	33.7	33.3	31.6	32.3	34.1
	min.daily mean	24.8	24.6	26.7	27.4	28.1	26.3	24.7	26.2	25.7	25.5	24.2	23.1
Relative humidity (%)	monthly mean	65	60	68	69	69	75	73	73	79	79	78	79
	max.daily mean	85	74	77	75	83	84	82	84	88	88	87	86
	min.daily mean	37	38	38	36	39	41	43	45	41	39	39	39
Mean wind speed (m/s)	1.4	1.3	1.2	1.1	1.2	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Most frequent wind direction (bearings)	SE	SE	SE	SE	W	W	W	W	W	W	SE	SE	SE
Precipitation amount (mm/month)	-	-	-	-	49	269	429	405	571	578	97	131	131
Sunshine duration (hours/month)	213	219	244	213	206	147	154	174	152	185	176	188	188
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 : Yen Bai, Vietnam

2020													
Month		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Items													
Temperature (°C)	monthly mean	18.9	18.7	22.2	21.6	28.5	30.1	29.5	28.3	27.8	23.9	22.6	17.4
	max.daily mean	21.6	21.8	25.3	24.9	32.6	34.9	34.0	32.4	32.3	21.8	27.0	20.9
	min.daily mean	17.2	16.1	21.0	19.3	25.3	26.8	26.5	25.9	25.4	21.4	20.2	15.3
Relative humidity (%)	monthly mean	88	88	90	89	84	80	85	87	87	86	85	85
	max.daily mean	99	98	99	99	96	95	97	94	98	97	96	97
	min.daily mean	78	76	79	76	71	65	67	74	70	69	66	67
Mean wind speed (m/s)		1	1	1	2	2	2	1	1	2	2	1	2
Most frequent wind direction (bearings)		N	ESE	NW	SE	ESE	SE	WNW	ESE	N	NW	SE	NW
Precipitation amount (mm/month)		13	22	109	204	138	56	161	439	297	230	23	0
Sunshine duration (hours/month)		24	39	34	47	143	170	163	139	123	131	116	52
Solar radiation (MJ/m ² /month)		--	--	--	--	--	--	--	--	--	--	--	--

Appendix 3

Corrigenda of scientific name in reports of EANET vegetation monitoring

Corrigenda of scientific name in reports of EANET vegetation monitoring

EANET Network Center

Names of plants are to be recorded by Latin scientific name for reporting EANET vegetation monitoring. Because of the complexity of scientific name, considerable number of mistakes have been accumulated to date.

This correction has two purposes;

1. Simply correcting typos
2. Unifying synonyms to avoid duplicate counting

Therefore, there are three types of correction in the corrigenda;

A) Correct typos

ex.) *Acasia confusa* -> *Acacia confusa*

B) Remove author from scientific name

ex.) *Acacia confusa* Merr. -> *Acacia confusa*

Part of author in scientific name is the main cause of multiple naming (= synonyms). Therefore, scientific name should be consisted of only two orders, which are genus and species, and if necessary, variation (var.), subspecies (ssp.) or form (f.) should follow. It is also favorable to save reporting space.

C) Unify synonyms

ex.) *Rhus succedanea* -> *Toxicodendron succedaneum*

Although *Rhus succedanea* is recognized as Japanese waxtree, the synonym of *Toxicodendron succedaneum* is more common as a scientific name. There were some sites reporting the same plant by different synonyms between different years. To avoid multiple counting of same plant, scientific name was unified into the common one.

GBIF (the Global Biodiversity Information Facility, <https://www.gbif.org/>) was referred to obtain correct and common scientific names.

This corrigenda list covers three kinds of reports of EANET monitoring, i) observation of tree decline, ii) description of trees, and iii) description of understory vegetation. Also, it is applied to all past monitoring records up to the year of 2019. The list will be published on EANET data download site, and the subsequent monitoring report will be published following this list.

Observation of Tree Decline					Type of correction		
Site code	Site name	Reported name	Correct scientific name	English name	A	B	C
CNS004_2	Jinyunshan2	<i>Elaeocarpus japonicus</i>	<i>Elaeocarpus japonicus</i>	—	1		
		<i>Michilus pingii</i>	<i>Machilus pingii</i>	—	1		
CNS007	Dabagou	<i>Pinus armandi</i>	<i>Pinus armandii</i>	Armand pine	1		
		<i>Pinus armandi</i> Fanch	<i>Pinus armandii</i>	Armand pine	1	1	
		<i>Pinus armandii</i> Franch	<i>Pinus armandii</i>	Armand pine		1	
CNS009	Xiaoping	<i>Michelia macclurei</i> Dandy	<i>Michelia macclurei</i>	—		1	
		<i>Michelia.Macclurei</i> Dandy	<i>Michelia macclurei</i>	—	1	1	
CNS011_1	Zhuxiaodong1	<i>Michelia.Macclurei</i> Dandy	<i>Michelia macclurei</i>	—	1	1	
		<i>Pinus elliotii</i>	<i>Pinus elliotii</i>	American pitch pine	1		
CNS011_2	Zhuxiaodong2	<i>Acacia confusa</i> Merr.	<i>Acacia confusa</i>	Formosa acacia		1	
		<i>Cleistanthus monoicusa</i>	<i>Cleistanthus monoicus</i>	—	1		
		<i>Machilus velutina</i> Champ. ex Benth	<i>Machilus velutina</i>	—		1	
		<i>Mallotus paniculatus</i> (Lam.) Muell. Arg.	<i>Mallotus paniculatus</i>	—		1	
		<i>Microcos paniculata</i> L	<i>Microcos paniculata</i>	—		1	
		<i>Syzygium levinei</i> Merr. et Perry	<i>Syzygium levinei</i>	—		1	
CNS011_3	Zhuxiaodong3	<i>Acacia confusa</i>	<i>Acacia confusa</i>	Formosa acacia	1		
		<i>Aporosa dioica</i>	<i>Aporosa dioica</i>	—	1		
		<i>Abarema lucida</i>	<i>Archidendron lucidum</i>	—			1
		<i>Rhus succedanea</i>	<i>Toxicodendron succedaneum</i>	Japanese waxtree			1
		<i>Sapium discolor</i> ;B: <i>Machilus velutina</i>	<i>Triadica cochinchinensis</i>	—	1		
		<i>Sapium discolor</i>	<i>Triadica cochinchinensis</i>	—			1
IDS002	Bogor Research Forest	<i>Maesopsis emenii</i>	<i>Maesopsis eminii</i>	—	1		
JPS005	Sekido-san	<i>Acer mono</i>	<i>Acer pictum</i>	Painted maple			1
		<i>Prunus jamasakura</i>	<i>Cerasus jamasakura</i>	—			1
		<i>Quercus mongolica</i> ssp. <i>Crispula</i>	<i>Quercus crispula</i> var. <i>crispula</i>	—			1
JPS008	Banryu-2	<i>Castanopsis cuspidata</i> var. <i>sieboldii</i>	<i>Castanopsis sieboldii</i>	—			1
		<i>Acanthopanax sciadophylloides</i>	<i>Chengiopanax sciadophylloides</i>	—			1
		<i>Clethra barbinervis</i>	<i>Clethra barbinervis</i>	Japanese Clethra	1		
		<i>Machilus Thunbergii</i>	<i>Machilus thunbergii</i>	—	1		
		<i>Styrax japonicus</i>	<i>Styrax japonica</i>	—	1		
		<i>Symplocos lucida</i>	<i>Symplocos kuroki</i>	—			1
JPS105	Horyu-zan	<i>Quercus mongolica</i> ssp. <i>Crispula</i>	<i>Quercus crispula</i> var. <i>crispula</i>	—			1
JPS108	Iwami "rinku" Factory Park	<i>Castanopsis cuspidata</i> var. <i>sieboldii</i>	<i>Castanopsis sieboldii</i>	—			1
		<i>Machilus Thunbergii</i>	<i>Machilus thunbergii</i>	—	1		
PHS001	La Mesa Watershed	<i>Pterocarpus indicus</i> forma <i>echinatus</i>	<i>Pterocarpus indicus</i>	Amboyna-wood		1	
		<i>Pterocarpus indicus</i> forma <i>echinatus</i>	<i>Pterocarpus indicus</i>	Amboyna-wood	1		
PHS002	Mt. Makiling	<i>Nephelium ramboutan</i>	<i>Nephelium ramboutan-ake</i>	—	1		
		<i>Pisonia umbellifera</i>	<i>Pisonia umbellifera</i>	Umbrella catchbirdtree	1		

Observation of Tree Decline					Type of correction		
Site code	Site name	Reported name	Correct scientific name	English name	A	B	C
RUS004	Primorskaya	<i>Abies holophylla</i>	<i>Abies holophylla</i>	Manchurian fir	1		
		<i>Acer mono</i>	<i>Acer pictum</i> ssp. <i>mono</i>	Painted maple			1

Description of Trees		Reported name	Correct scientific name	English name	Type of correction		
Site code	Site name				A	B	C
CNS004_1	Jinyunshan-1	<i>Elaeocarpus duclouxii</i>	<i>Elaeocarpus duclouxii</i>	—	1		
		<i>Elaeocarpus japonicus</i>	<i>Elaeocarpus japonicus</i>	—	1		
		<i>Michilus pingii</i>	<i>Machilus pingii</i>	—	1		
CNS004_2	Jinyunshan-2	<i>Elaeocarpus japonicus</i>	<i>Elaeocarpus japonicus</i>	—	1		
		<i>Michilus pingii</i>	<i>Machilus pingii</i>	—	1		
		<i>Mahoni fortunei</i>	<i>Mahonia fortunei</i>	—	1		
		<i>Quercus fabri</i>	<i>Quercus fabrei</i>	—	1		
		<i>Symplocos lancifolia</i>	<i>Symplocos lancifolia</i>	—	1		
CNS007	Dabagou	<i>Celastrus orbiculatus</i> Thunb	<i>Celastrus orbiculatus</i>	—		1	
		<i>Larix gmelini</i>	<i>Larix gmelinii</i>	—	1		
		<i>Larix gmelini</i> Rupr.	<i>Larix gmelinii</i>	—		1	
		<i>Larix gmelinii</i> Rupr.	<i>Larix gmelinii</i>	—		1	
		<i>Pinus armandi</i>	<i>Pinus armandii</i>	Armand pine	1		
		<i>Pinus armandi</i> Fanch	<i>Pinus armandii</i>	Armand pine	1	1	
CNS009	Xiaoping_XPT1	<i>Michelia macclurei</i>	<i>Michelia macclurei</i>	—	1		
		<i>Michelia Macclurei</i> Dandy	<i>Michelia macclurei</i>	—	1	1	
		<i>Micheliamacclurei</i> Dandyrar Sublaneu Dandy	<i>Michelia macclurei</i>	—	1	1	
		<i>Sapiumsebiferum</i>	<i>Sapium sebiferum</i>	Chinese tallow	1		
		<i>Schima Su-perba</i> Gardn.et Champ	<i>Schima superba</i>	—	1		
CNS011_1	Zhuxiaodong-1	<i>Acacia confusa</i> Merr.	<i>Acacia confusa</i>	Formosa acacia		1	
		<i>Aporosa dioica</i>	<i>Aporosa dioica</i>	—	1		
		<i>Archidendron lucidum</i> (Benth.) Nielsen	<i>Archidendron lucidum</i>	—		1	
		<i>Cratoxylum cochinchinense</i> (Lour.) Bl.	<i>Cratoxylum cochinchinense</i>	—		1	
		<i>Cratoxylum cochinchinensis</i>	<i>Cratoxylum cochinchinense</i>	—	1		
		<i>Eurya groffii</i>	<i>Eurya groffii</i>	—	1		
		<i>Eurya nitida</i> Korthals	<i>Eurya nitida</i>	—		1	
		<i>Fagerlindia depauperata</i> (Drake) Tirveng.	<i>Fagerlindia depauperata</i>	—		1	
		<i>Ficus hirta</i> Vahl	<i>Ficus hirta</i>	—		1	
		<i>Ficus variolosa</i> Lindl. ex Benth.	<i>Ficus variolosa</i>	—		1	
		<i>Glochidion lanceolarium</i> (Roxb.) Voigt.	<i>Glochidion lanceolarium</i>	—		1	
		<i>Ilex asprella</i> (Hook. et Arn.) Champ. ex Benth.	<i>Ilex asprella</i>	—		1	
		<i>Litsea glutinosa</i> (Lour.) C. B. Rob.	<i>Litsea glutinosa</i>	Indian-laurel		1	
		<i>Litsea rotundifolia</i> Hemsl. var. <i>oblongifolia</i> (Nees) Allen	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	—		1	
		<i>Microcos paniculata</i>	<i>Microcos paniculata</i>	Microcos	1		
		<i>Microcos paniculata</i> L.	<i>Microcos paniculata</i>	Microcos		1	
		<i>Pinus elliottii</i> Engelm.	<i>Pinus elliottii</i>	American pitch pine		1	
		<i>Pinus massoniana</i> Lamb.	<i>Pinus massoniana</i>	Chinese red pine		1	

Description of Trees		Reported name	Correct scientific name	English name	Type of correction		
Site code	Site name				A	B	C
CNS011_1	Zhuxiaodong-1	<i>Psychotria asiatica</i> L.	<i>Psychotria asiatica</i>	—		1	
		<i>Psychotria rubra</i>	<i>Psychotria asiatica</i>	—			1
		<i>Raphiolepis indica</i>	<i>Raphiolepis indica</i>	—			1
		<i>Raphiolepis indica</i> (L.) Lindl.	<i>Raphiolepis indica</i>	—		1	1
		<i>Rhodomyrtus tomentosa</i>	<i>Rhodomyrtus tomentosa</i>	Ceylon hill-cherry	1		
		<i>Schefflera heptaphylla</i> (L.) Frodin	<i>Schefflera heptaphylla</i>	—		1	
		<i>Schefflera octophylla</i>	<i>Schefflera heptaphylla</i>	—			1
		<i>Strophanthus divaricatus</i> (Lour.) Hook. et Arn.	<i>Strophanthus divaricatus</i>	—		1	
		<i>Rhus succedanea</i>	<i>Toxicodendron succedaneum</i>	Japanese waxtree			1
		<i>Toxicodendron sylvestris</i> (Sieb. et Zucc.) Tardieu	<i>Toxicodendron sylvestris</i>	—		1	
		<i>Sapium discolor</i>	<i>Triadica cochinchinensis</i>	—			1
		<i>Wendlandia uvariifolia</i> Hance	<i>Wendlandia uvariifolia</i>	—		1	
		<i>Zanthoxylum avicennae</i>	<i>Zanthoxylum avicennae</i>	—	1		
		<i>Zanthoxylum avicennae</i> (Lam.) DC.	<i>Zanthoxylum avicennae</i>	—		1	
		<i>Zanthoxylum nitidum</i> (Roxb.) DC.	<i>Zanthoxylum nitidum</i>	Shiny-leaf prickly-ash		1	
CNS011_2	Zhuxiaodong-2	<i>Acacia confusa</i> Merr.	<i>Acacia confusa</i>	Formosa acacia		1	
		<i>Aporosa dioica</i> Muell. Arg.	<i>Aporosa dioica</i>	—		1	
		<i>Aporosa dioica</i>	<i>Aporosa dioica</i>	—	1		
		<i>Archidendron lucidum</i> (Benth.) Nielsen	<i>Archidendron lucidum</i>	—		1	
		<i>Pithecellobium lucidum</i>	<i>Archidendron lucidum</i>	—			1
		<i>Fagerlindia depauperata</i>	<i>Benkara depauperata</i>	—			1
		<i>Fagerlindia depauperata</i> (Drake) Tirveng.	<i>Benkara depauperata</i>	—		1	1
		<i>Fagerlindia scandens</i>	<i>Benkara scandens</i>	—			1
		<i>Bridelia tomentosa</i> Bl.	<i>Bridelia tomentosa</i>	—		1	
		<i>Cratoxylum cochinchinense</i> (Lour.) Bl.	<i>Cratoxylum cochinchinense</i>	—		1	
		<i>Desmos chinensis</i> Lour.	<i>Desmos chinensis</i>	—		1	
		<i>Elaeagnus pungens</i> Thunb	<i>Elaeagnus pungens</i>	Spiny oleaster		1	
		<i>Ficus hirta</i> Vahl	<i>Ficus hirta</i>	—		1	
		<i>Ilex asprella</i> (Hook. et Arn.) Champ. ex Benth.	<i>Ilex asprella</i>	—		1	
		<i>Indocalamus tessellatus</i> (Munro) Keng. f.	<i>Indocalamus tessellatus</i>	—		1	
		<i>Litsea glutinosa</i> (Lour.) C. B. Rob.	<i>Litsea glutinosa</i>	Indian-laurel		1	
		<i>Litsea glutinosa oblongifolia</i>	<i>Litsea glutinosa</i>	Indian-laurel	1		
		<i>Litsea rotundifolia</i> Hemsl. var. <i>oblongifolia</i> (Nees) Allen	<i>Litsea rotundifolia</i>	—		1	
		<i>Machilus velutina</i> Champ. ex Benth.	<i>Machilus velutina</i>	—		1	
		<i>Mallotus paniculata</i>	<i>Mallotus paniculatus</i>	—	1		
		<i>Mallotus paniculatus</i> (Lam.) Muell. Arg.	<i>Mallotus paniculatus</i>	—		1	
		<i>Microcos paniculata</i>	<i>Microcos paniculata</i>	Microcos	1		
		<i>Microcos paniculata</i> L.	<i>Microcos paniculata</i>	Microcos		1	

Description of Trees		Reported name	Correct scientific name	English name	Type of correction		
Site code	Site name				A	B	C
CNS011_2	Zhuxiaodong-2	<i>Psychotria rubra</i>	<i>Psychotria asiatica</i>	—			1
		<i>Scolopia saeva</i> (Hance) Hance	<i>Scolopia saeva</i>	—		1	
		<i>Sterculia lanceata</i>	<i>Sterculia lanceolata</i>	—	1		
		<i>Syzygium levinei</i> (Merr.) Merr.	<i>Syzygium levinei</i>	—		1	
		<i>Syzygium odoratum</i> (Lour.) DC.	<i>Syzygium odoratum</i>	—		1	
CNS011_3	Zhuxiaodong-3	<i>Acacia confusa</i> Merr.	<i>Acacia confusa</i>	Formosa acacia		1	
		<i>Aporosa dioica</i> Muell. Arg.	<i>Aporosa dioica</i>	—		1	
		<i>Aporosa dioica</i>	<i>Aporosa dioica</i>	—	1		
		<i>Archidendron lucidum</i> (Benth.) Nielsen	<i>Archidendron lucidum</i>	—		1	
		<i>Pithecellobium lucidum</i>	<i>Archidendron lucidum</i>	—			1
		<i>Clerodendron canescens</i> Wall.	<i>Clerodendrum canescens</i>	—	1	1	
		<i>Cratoxylum cochinchinense</i> (Lour.) Bl.	<i>Cratoxylum cochinchinense</i>	—		1	
		<i>Dalbergia hancei</i> Benth.	<i>Dalbergia hancei</i>	—		1	
		<i>Eurya nitida</i> Korthals	<i>Eurya nitida</i>	—		1	
		<i>Glochidion lanceolaris</i>	<i>Glochidion lanceolarium</i>	—	1		
		<i>Ilex asprella</i> (Hook. et Arn.) Champ. ex Benth.	<i>Ilex asprella</i>	—		1	
		<i>Litsea glutinosa</i> (Lour.) C. B. Rob.	<i>Litsea glutinosa</i>	Indian-laurel		1	
		<i>Litsea glutinosa oblongifolia</i>	<i>Litsea glutinosa</i>	Indian-laurel	1		
		<i>Litsea rotundifolia</i> Hemsl. var. <i>Oblongifolia</i> (Nees) Allen	<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	—		1	
		<i>Machilus velutina</i> Champ. ex Benth.	<i>Machilus velutina</i>	—		1	
		<i>Mallotus paniculata</i>	<i>Mallotus paniculatus</i>	—	1		
		<i>Mallotus paniculatus</i> (Lam.) Muell. Arg.	<i>Mallotus paniculatus</i>	—		1	
		<i>Psychotria asiatica</i> L.	<i>Psychotria asiatica</i>	—		1	
		<i>Psychotria rubra</i>	<i>Psychotria asiatica</i>	—			1
		<i>Raphiolepis indica</i>	<i>Raphiolepis indica</i>	—			1
		<i>Raphiolepis indica</i> (L.) Lindl.	<i>Raphiolepis indica</i>	—		1	1
		<i>Rhodomyrtus tomentosa</i> (Ait.) Hassk.	<i>Rhodomyrtus tomentosa</i>	Ceylon hill-cherry		1	
		<i>Schefflera heptaphylla</i> (L.) Frodin	<i>Schefflera heptaphylla</i>	—		1	
		<i>Schefflera octophylla</i>	<i>Schefflera heptaphylla</i>	—			1
		<i>Rhus succedanea</i>	<i>Toxicodendron succedaneum</i>	Japanese waxtree			1
		<i>Toxicodendron sylvestris</i> (Sieb. et Zucc.) Tardieu	<i>Toxicodendron sylvestris</i>	—		1	
		<i>Sapium discolor</i>	<i>Triadica cochinchinensis</i>	—			1
		<i>Sapium discolor</i> (Champ. ex Benth.) Muell. Arg.	<i>Triadica cochinchinensis</i>	—		1	1
IDS002	Bogor Research Forest	<i>Secrofia peltata</i>	<i>Cecropia peltata</i>	—	1		
		<i>Khaya anthoteca</i>	<i>Khaya anthotecta</i>	Nyasaland mahogany	1		
		<i>Khaya grandifolium</i>	<i>Khaya grandifolia</i>	—	1		
		<i>Maesopsis emenii</i>	<i>Maesopsis eminii</i>	—	1		
JPS008	Banryu-2	<i>Castanopsis cuspidata</i> var. <i>sieboldii</i>	<i>Castanopsis sieboldii</i>	—			1

Description of Trees		Reported name	Correct scientific name	English name	Type of correction		
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JPS008	Banryu-2	<i>Acanthopanax sciadophylloides</i>	<i>Chengiopanax sciadophylloides</i>	—			1
		<i>Lyonia ovalifolia</i> var. <i>elliptica</i>	<i>Lyonia ovalifolia</i>	—			1
		<i>Myrica rubra</i>	<i>Morella rubra</i>	—			1
		<i>Styrax japonicus</i>	<i>Styrax japonica</i>	—			1
		<i>Symplocos lucida</i>	<i>Symplocos kuroki</i>	—			1
		<i>Rhus succedanea</i>	<i>Toxicodendron succedaneum</i>	—			1
JPS108	Iwami "rinku" Factory Park	<i>Castanopsis cuspidata</i> var. <i>sieboldii</i>	<i>Castanopsis sieboldii</i>	—			1
		<i>Machilus Thunbergii</i>	<i>Machilus thunbergii</i>	—	1		
		<i>Symplocos lucida</i>	<i>Symplocos kuroki</i>	—			1
		<i>Rhus succedanea</i>	<i>Toxicodendron succedaneum</i>	—			1
KRS003	Mt. Naejang	<i>Sorbus alnifolia</i>	<i>Aria alnifolia</i>	—			1
PHS001	La Mesa Watershed	<i>Acacia auriculiformis</i>	<i>Acacia auriculiformis</i>	Darwin black wattle	1		
		<i>Ardisia aquamulosa</i>	<i>Ardisia squamulosa</i>	—	1		
		<i>Chrysophyllum cainito</i>	<i>Chrysophyllum cainito</i>	Star apple	1		
		<i>Harpullia arborea</i>	<i>Harpullia arborea</i>	Tulip-wood tree	1		
		<i>Pterocarpus indicus</i> forma <i>echinatus</i>	<i>Pterocarpus indicus</i> f. <i>echinatus</i>	—	1		
		<i>Swietenia macrophylla</i>	<i>Swietenia macrophylla</i>	Honduran mahogany	1		
		<i>Syzygium cumini</i>	<i>Syzygium cumini</i>	Java plum	1		
PHS002	Mt. Makiling	<i>Aglaia edulis</i> (Roxb.) Wall.	<i>Aglaia edulis</i>	—			1
		<i>Ailanthus integrifolia</i> Lam.	<i>Ailanthus integrifolia</i>	White Siris			1
		<i>Alangium meyeri</i> Merr.	<i>Alangium meyeri</i>	—			1
		<i>Ardisia pyramidalis</i> (Cav.) Pers.	<i>Ardisia pyramidalis</i>	—			1
		<i>Calophyllum blancoi</i> Pl. & Tr.	<i>Calophyllum blancoi</i>	—			1
		<i>Camelia lanceolata</i>	<i>Camellia lanceolata</i>	—	1		
		<i>Camelia lanceolata</i> (Blume) Seem.	<i>Camellia lanceolata</i>	—	1	1	
		<i>Canarium luzonicum</i> (Blume) A. Gray	<i>Canarium luzonicum</i>	—			1
		<i>Casearia fuliginosa</i> (Blanco) Blanco	<i>Casearia fuliginosa</i>	—			1
		<i>Celtis luzonica</i> Warb.	<i>Celtis luzonica</i>	—			1
		<i>Chisocheton pentandrus</i> (Blanco) Merr. ssp. <i>pentandrus</i>	<i>Chisocheton pentandrus</i> ssp. <i>pentandrus</i>	—			1
		<i>Chisocheton pentandrus</i> ssp. <i>pentandrus</i>	<i>Chisocheton pentandrus</i> ssp. <i>pentandrus</i>	—	1		
		<i>Clausena anisum-olens</i> (Blanco) Merr.	<i>Clausena anisum-olens</i>	—			1
		<i>Coffea arabica</i> L	<i>Coffea arabica</i>	Arabian coffee			1
		<i>Coffea arabica</i> L.	<i>Coffea arabica</i>	Arabian coffee			1
		<i>Cynometra ramiflora</i> L.	<i>Cynometra ramiflora</i>	—			1
		<i>Dendrocnide meyeniana</i> (Walp.) Chew	<i>Dendrocnide meyeniana</i>	—			1
		<i>Dillenia indica</i> L.	<i>Dillenia indica</i>	Chulta			1
		<i>Diospyros philippinensis</i>	<i>Diospyros philippensis</i>	—	1		
		<i>Diospyros philippinensis</i> (Desr.) Gurke	<i>Diospyros philippensis</i>	—	1	1	

Description of Trees		Reported name	Correct scientific name	English name	Type of correction		
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PHS002	Mt. Makiling	<i>Diplodiscus paniculatus</i> Turcz.	<i>Diplodiscus paniculatus</i>	—		1	
		<i>Dracontomelon dao</i> (Blanco) Merr.	<i>Dracontomelon dao</i>	Argus pheasant tree		1	
		<i>Drypetes maquilengensis</i>	<i>Drypetes maquilengensis</i>	—	1		
		<i>Drypetes maquilengensis</i> (Merr.) Pax and K. Hoffm.	<i>Drypetes maquilengensis</i>	—	1	1	
		<i>Dysoxylum arborescens</i> (Blume) Miq.	<i>Dysoxylum arborescens</i>	—		1	
		<i>Ficus congesta</i> Roxb.	<i>Ficus congesta</i>	Cluster fig		1	
		<i>Ficus minahassae</i> (Teijsm & de Vr.) Miq.	<i>Ficus minahassae</i>	—		1	
		<i>Kingiodendron alternifolium</i> (Elm.) Merr. & Rolfe	<i>Kingiodendron alternifolium</i>	—		1	
		<i>Knema glomerata</i> (Blanco) Merr.	<i>Knema glomerata</i>	—		1	
		<i>Lagerstroemia speciosa</i> (L.) Pers.	<i>Lagerstroemia speciosa</i>	Pride of India		1	
		<i>Leea philippinensis</i> Merr.	<i>Leea philippinensis</i>	—		1	
		<i>Litsea garciae</i> Vid.	<i>Litsea garciae</i>	—		1	
		<i>Macaranga tanarius</i> (L.) Muell. –Arg.	<i>Macaranga tanarius</i>	Blush macaranga		1	
		<i>Microcos stylocarpa</i> (Warb.) Burr.	<i>Microcos stylocarpa</i>	—		1	
		<i>Duguan Myristica philippinensis</i>	<i>Myristica philippensis</i>	—	1		
		<i>Myristica philippinensis</i> Lam.	<i>Myristica philippinensis</i>	Nutmeg-tree		1	
		<i>Neolitsea vidalii</i> Merr.	<i>Neolitsea vidalii</i>	—		1	
		<i>Neonauclea bartlingii</i> (DC) Merr.	<i>Neonauclea bartlingii</i>	—		1	
		<i>Neotrewia cumingii</i> (Muell.-Arg.) Pax & K. Hoffm.	<i>Neotrewia cumingii</i>	—		1	
		<i>Nephelium ramboutan-ake</i> (Labill.) Leenh	<i>Nephelium ramboutan-ake</i>	—		1	
		<i>Nephelium ramboutan-ake</i> (Labill.) Leenh.	<i>Nephelium ramboutan-ake</i>	—		1	
		<i>Palaquium foxworthyi</i> Merr.	<i>Palaquium foxworthyi</i>	—		1	
		<i>Parashorea malaanonan</i> (Blanco) Merr,	<i>Parashorea malaanonan</i>	Philippine-mahogany		1	
		<i>Pisonia umbellifera</i>	<i>Pisonia umbellifera</i>	Umbrella catchbirdtree	1		
		<i>Pisonia umbellifera</i> (Fast.) Seem.	<i>Pisonia umbellifera</i>	Umbrella catchbirdtree	1	1	
		<i>Planchonia spectabilis</i> Merr.	<i>Planchonia spectabilis</i>	—		1	
		<i>Pterocymbium tinctorium</i> (Blanco) Merr.	<i>Pterocymbium tinctorium</i>	—		1	
		<i>Radermachera pinnata</i> ssp. <i>pinnata</i>	<i>Radermachera pinnata</i>	—	1		
		<i>Shorea contorta</i> Vid.	<i>Shorea contorta</i>	White lauan		1	
		<i>Strombosia philippinensis</i> (Baill.) Rolfe	<i>Strombosia philippinensis</i>	—		1	
		<i>Syzygium nitidum</i> Benth.	<i>Syzygium nitidum</i>	—		1	
		<i>Voacanga globosa</i> (Blanco) Merr.	<i>Voacanga globosa</i>	—		1	
PHS102	UP Quezon, Land Grant	<i>Acacia mangium</i> .	<i>Acacia mangium</i>	Black-wattle	1		
		<i>Agelai</i> spp.	<i>Aglaia</i> spp.	—	1		
		<i>Aglaia</i> spp	<i>Aglaia</i> spp.	—	1		
		<i>Ardisia</i> spp	<i>Aglaia</i> spp.	—	1		
		<i>Arthrophyllum diversifolium</i>	<i>Arthrophyllum diversifolium</i>	—	1		
		<i>Beilschmiedia glomerata</i>	<i>Beilschmiedia glomerata</i>	—	1		

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Site code	Site name				A	B	C
PHS102	UP Quezon, Land Grant	<i>Calophyllum inophyllum</i> .	<i>Calophyllum inophyllum</i>	Alexandrian laurel	1		
		<i>Canarium vrieseanum</i> forma <i>stenophyllum</i>	<i>Canarium vrieseanum</i> f. <i>stenophyllum</i>	—	1		
		<i>Cryptocaria glauca</i>	<i>Cryptocarya glauca</i>	—	1		
		<i>Euphoria gracilis</i>	<i>Dimocarpus longan</i> ssp. <i>longan</i>	Longan			1
		<i>Dimocarpus longan</i> ssp. <i>malesianus</i> var. <i>echinatus</i>	<i>Dimocarpus longan</i> ssp. <i>malesianus</i>	—	1		
		<i>Dimocarpus longan</i> ssp. <i>malesianus</i> var. <i>malesianus</i>	<i>Dimocarpus longan</i> ssp. <i>malesianus</i>	—	1		
		<i>Diospyros pilosanthera</i> var. <i>philosanthera</i>	<i>Diospyros pilosanthera</i>	—	1		
		<i>Dipterocarpus philippinensis</i>	<i>Dipterocarpus alatus</i>	—			1
		<i>Elaeocarpus candolei</i>	<i>Elaeocarpus candollei</i>	—	1		
		<i>Ficus congesta</i> var. <i>congesta</i>	<i>Ficus congesta</i>	Cluster fig	1		
		<i>Hopea foxworthy</i>	<i>Hopea foxworthyi</i>	Dalingdingan	1		
		<i>Litchi chinensis</i> spp. <i>philippinensis</i>	<i>Litchi chinensis</i> ssp. <i>philippinensis</i>	—	1		
		<i>Mallotus korthasii</i>	<i>Mallotus korthalsii</i>	—	1		
		<i>Palaquium luzonensis</i>	<i>Palaquium luzonensis</i>	—	1		
		<i>Palaquium merrillii</i>	<i>Palaquium merrillii</i>	—	1		
		<i>Pandanacea</i> spp.	<i>Pandanus</i> spp.	—	1		
		<i>Pandanus</i> spp.	<i>Pandanus</i> spp.	—	1		
		<i>Polycias nodosa</i>	<i>Polyscias nodosa</i>	—	1		
		<i>Pterocarpus indicus</i> .	<i>Pterocarpus indicus</i>	Amboyna-wood	1		
		<i>Syzygium nitidum</i>	<i>Syzygium nitidum</i>	—	1		
		<i>Xanthophyllum excelsis</i>	<i>Xanthophyllum flavescens</i>	—			1
RUS004	Primorskaya	<i>Acer mono</i>	<i>Acer pictum</i> ssp. <i>mono</i>	The Painted Maple			1
THS004	Vajiralongkorn Dam	<i>Amorphallus campanulatus</i>	<i>Amorphophallus campanulatus</i>	Elephant-yam	1		
		<i>Millettia brandisiana</i>	<i>Millettia brandisiana</i>	—	1		
		<i>Terminalia calamansanai</i>	<i>Terminalia calamansanay</i>	—	1		
THS104	Vajiralongkorn Puye	<i>Aphaenandra polystachya</i>	<i>Aphanamixis polystachya</i>	Rohituka Tree	1		
		<i>Aphanamixis ploystachya</i>	<i>Aphanamixis polystachya</i>	Rohituka Tree	1		
		<i>Millettia brandisiana</i> kurz	<i>Millettia brandisiana</i>	—		1	
		<i>Paranepelium xestophyllum</i>	<i>Paranephelium xestophyllum</i>	—	1		
		<i>Polygala glabrum</i>	<i>Polygala glabra</i>	—	1		

Description of Understory Vegetation					Type of correction		
Site code	Site name	Reported name	Correct scientific name	English name	A	B	C
CNS004	Jinyunshan-1	<i>Aidia cochinchinensis</i> Lour.	<i>Aidia cochinchinensis</i>	—		1	
		<i>Aleurites fordii</i> Hemsl.	<i>Aleurites fordii</i>	—		1	
		<i>Arachniodea omaena</i>	<i>Arachniodes omaena</i>	—	1		
		<i>Daphniphyllum oldhami</i>	<i>Daphniphyllum oldhamii</i>	—	1		
		<i>Elaeocarpus duclouxii</i>	<i>Elaeocarpus duclouxii</i>	—	1		
		<i>Elaeocarpus japonicus</i>	<i>Elaeocarpus japonicus</i>	—	1		
		<i>Fordiophyton faberi</i> Stapf	<i>Fordiophyton faberi</i>	—		1	
		<i>Ilex tetramera</i> (Rehder) C.J. Tseng	<i>Ilex tetramera</i>	—		1	
		<i>Ilex viridis</i> var. <i>brevipedicelata</i>	<i>Ilex viridis</i> var. <i>brevipedicellata</i>	—	1		
		<i>Laurocerasus spinulosa</i> (Sieb. et zucc.) Schneid.	<i>Laurocerasus spinulosa</i>	—		1	
		<i>Lindera kwantungensis</i>	<i>Lindera kwantungensis</i>	—	1		
		<i>Litsea mollifolia</i>	<i>Litsea mollis</i>	—			1
		<i>Lysimachia paridiformis</i>	<i>Lysimachia paridiformis</i>	—	1		
		<i>Michilus pingii</i>	<i>Machilus pingii</i>	—	1		
		<i>Measa japonica</i>	<i>Maesa japonica</i>	—	1		
		<i>Mahoni fortunei</i>	<i>Mahonia fortunei</i>	—	1		
		<i>Mallotus philipponensis</i>	<i>Mallotus philippensis</i>	Kamala tree	1		
		<i>Neolitea aurata</i> var. <i>glauc</i>	<i>Neolitsea aurata</i> var. <i>glauc</i>	—	1		
		<i>Photinia glabra</i> (Thunb.) Maxim.	<i>Photinia glabra</i>	Japanese photinia		1	
		<i>Rhododendron simsii</i> Planch.	<i>Rhododendron simsii</i>	—		1	
		<i>Sabia swinhoei</i>	<i>Sabia swinhoei</i>	—	1		
		<i>Simplocos setchuenensis</i>	<i>Symplocos setchuenensis</i>	—	1		
		<i>Trachycarpa fortunei</i>	<i>Trachycarpus fortunei</i>	Chinese windmill palm	1		
		<i>Woodwardia japonica</i>	<i>Woodwardia japonica</i>	—	1		
CNS007	Dabagou	<i>Cardamina leucantha</i>	<i>Cardamine leucantha</i>	—	1		
		<i>Celastrus orbiculatus</i> Thunb	<i>Celastrus orbiculatus</i>	—		1	
		<i>Chimaphila japonica</i>	<i>Chimaphila japonica</i>	—	1		
		<i>Equisetum hiemale</i>	<i>Equisetum hyemale</i>	Common scouring-rush	1		
		<i>euonymus alatus</i>	<i>Euonymus alatus</i>	—	1		
		<i>fargesia spathacea</i>	<i>Fargesia spathacea</i>	Chinese Fountain-bamboo	1		
		<i>Glechoma lonituba</i>	<i>Glechoma longituba</i>	—	1		
		<i>rubus masogaeus</i>	<i>Rubus mesogaeus</i>	—	1		
		<i>Sanguisorba officinalis</i>	<i>Sanguisorba officinalis</i>	Burnet bloodwort	1		
CNS009	Xiaoping	<i>Adina pilulifera</i> (Lam) Franch ex Drake	<i>Adina pilulifera</i>	—		1	
		<i>Blechnum orientale</i>	<i>Blechnopsis orientalis</i>	—			1
		<i>Blechnum orientale</i> Linn	<i>Blechnopsis orientalis</i>	—		1	1
		<i>Buxus harlandii</i> Hance	<i>Buxus harlandii</i>	Harland's boxwood		1	
		<i>Diospyros eriantha</i> champ	<i>Diospyros eriantha</i>	—		1	

Description of Understory Vegetation		Reported name	Correct scientific name	English name	Type of correction		
Site code	Site name				A	B	C
CNS009	Xiaoping	<i>Ilex purpurea</i> Hassk	<i>Ilex purpurea</i>	Kashi holly		1	
		<i>Common Melastoma</i> Herb	<i>Melastoma</i> sp.	—	1		
		<i>Common Melastoma</i> Herb, Common Melastoma	<i>Melastoma</i> sp.	—	1		
		<i>Michelia.Macclurei</i> Dandy	<i>Michelia macclurei</i>	—	1	1	
		<i>Miscanthus Floridulus</i>	<i>Miscanthus floridulus</i>	Japanese silver grass	1		
		<i>Mussaenda pubescens</i> Ait	<i>Mussaenda pubescens</i>	—		1	
		<i>Mussaenda pubescens</i> Ait f	<i>Mussaenda pubescens</i>	—		1	
		<i>Cyclobalanopsis gilva</i> (Blume) Oerst	<i>Quercus gilva</i>	Redbark Oak		1	1
		<i>Schefflera octophylla</i> (Lour.) Harms	<i>Schefflera octophylla</i>	—		1	
CNS011	Zhuxiandong-1	<i>Schima Su-perba</i> Gardn.et Champ	<i>Schima su-perba</i>	—	1	1	
		<i>Alocasia macrorrhiza</i>	<i>Alocasia macrorrhizos</i>	Ape			1
		<i>Aporosa dioica</i> .	<i>Aporosa dioica</i>	—	1		
		<i>Pithecellobium lucidum</i>	<i>Archidendron lucidum</i>	—			1
		<i>Randia depauperata</i>	<i>Benkara depauperata</i>	—			1
		<i>Blechnum orientale</i>	<i>Blechnopsis orientalis</i>	—			1
		<i>Eurya groffii</i>	<i>Eurya groffii</i>	—	1		
		<i>Glochidion lanceolaris</i>	<i>Glochidion lanceolarium</i>	—	1		
		<i>Lindsaea orbiculata</i> var. <i>orbiculata</i>	<i>Lindsaea orbiculata</i>	—			1
		<i>Mallotus paniculata</i>	<i>Mallotus paniculatus</i>	—	1		
		<i>Melastoma affine</i>	<i>Melastoma malabathricum</i>	Indian-rhododendron			1
		<i>Psychotria rubra</i>	<i>Psychotria asiatica</i>	—			1
		<i>Schefflera octophylla</i>	<i>Schefflera heptaphylla</i>	—			1
		<i>Rhus succedanea</i>	<i>Toxicodendron succedaneum</i>	Japanese waxtree			1
IDS002	Bogor Research Forest	<i>Alpinia galanga</i> Sw	<i>Alpinia galanga</i>	Siamese-ginger		1	
		<i>Calophyllum soulattri</i> Burm F	<i>Calophyllum soulattri</i>	Nicobar canoetree		1	
		<i>Driopteris iregularis</i> Pr	<i>Driopteris iregularis</i>	—		1	
		<i>Elalis guinensis</i> Jack Pr	<i>Elaeis guineensis</i>	African oil palm	1	1	
		<i>Enterolobium cyclocarpum</i> Grisb	<i>Enterolobium cyclocarpum</i>	Earpod Tree		1	
		<i>Eugenia cymosa</i> Lamk	<i>Eugenia cymosa</i>	—		1	
		<i>Evodia aromatica</i> Blume	<i>Evodia aromatica</i>	—		1	
		<i>Hopea mengrawan</i> Miq	<i>Hopea mengarawan</i>	—	1	1	
		<i>Hopea odorata</i> Roxb	<i>Hopea odorata</i>	—		1	
		<i>Khaya grandifolia</i> C.DC	<i>Khaya grandifolia</i>	—		1	
		<i>Lansium domesticum</i> Jack	<i>Lansium domesticum</i>	Langsat		1	
		<i>Maesopsis emenii</i> Engl	<i>Maesopsis eminii</i>	—	1	1	
		<i>Melia excelsa</i> Jack	<i>Melia excelsa</i>	Neem Tree		1	
		<i>Palaquium javense</i> Burck	<i>Palaquium javense</i>	—	1	1	
		<i>Parinari corymbosum</i> Blume	<i>Parinari corymbosa</i>	—	1	1	

Description of Understory Vegetation		Reported name	Correct scientific name	English name	Type of correction		
Site code	Site name				A	B	C
IDS002	Bogor Research Forest	<i>Shorea selanica</i> Blume	<i>Shorea selanica</i>	—		1	
		<i>Strombosia javanica</i> Blume	<i>Strombosia javanica</i>	—		1	
		<i>Taenitis blanchoides</i> Sw	<i>Taenitis blechnoides</i>	—	1	1	
		<i>Tetracera indica</i> L	<i>Tetracera indica</i>	—		1	
		<i>Zalaca edulis</i> Reinw	<i>Zalacca edulis</i>	—	1	1	
JPS006	Ijira-1	<i>Acer palmatum</i> var. <i>matsumurae</i>	<i>Acer amoenum</i> var. <i>matsumurae</i>	—			1
		<i>Albizia Julibrissin</i>	<i>Albizia julibrissin</i>	Mimosa	1		
		<i>Sorbus japonica</i>	<i>Aria japonica</i>	—			1
		<i>Thea sinensis</i>	<i>Camellia sinensis</i>	Chai			1
		<i>Castanopsis cuspidata</i> var. <i>cuspidata</i>	<i>Castanopsis cuspidata</i>	—			1
		<i>Chamaecyparis obtusa</i> Endl.	<i>Chamaecyparis obtusa</i>	Japanese cypress		1	
		<i>Cinnamomum japonicum</i>	<i>Cinnamomum yabunikkei</i>	—			1
		<i>Clerodendron trichotomum</i>	<i>Clerodendrum trichotomum</i> var. <i>trichotomum</i>	Glorytree	1		
		<i>Cornus kousa</i>	<i>Cornus kousa</i> ssp. <i>kousa</i>	Japanese dogwood			1
		<i>Dennstaedtia scabra</i>	<i>Dennstaedtia zeylanica</i>	—			1
		<i>Tripetaleia paniculata</i>	<i>Elliottia paniculata</i>	—			1
		<i>Eurya japonica</i>	<i>Eurya japonica</i> var. <i>japonica</i>	—			1
		<i>Prunus spinulosa</i>	<i>Laurocerasus spinulosa</i>	—			1
		<i>Parabenzoin trilobum</i>	<i>Lindera triloba</i>	—			1
		<i>Paederia scandens</i> var. <i>Mairei</i>	<i>Paederia foetida</i>	Skunkvine			1
		<i>Scizocodon soldanelloides</i>	<i>Schizocodon soldanelloides</i>	—	1		
		<i>Styrax japonica</i>	<i>Styrax japonicus</i>	Japanese snowbell	1		
		<i>Stegnogramma pozoi</i> ssp. <i>mollissima</i>	<i>Thelypteris pozoi</i> ssp. <i>mollissima</i>	—			1
		<i>Rhus trichocarpa</i>	<i>Toxicodendron trichocarpum</i>	—			1
		<i>Viburnum erosum</i> var. <i>punctatum</i>	<i>Viburnum erosum</i>	—			1
		<i>Viola violacea</i>	<i>Viola violacea</i>	—	1		
JPS008	Banryu-2	<i>Acanthopanax sciadophylloides</i>	<i>Chengiopanax sciadophylloides</i>	—			1
		<i>Gleichenia japonica</i>	<i>Diplopterygium glaucum</i>	—			1
		<i>Eurya japonica</i>	<i>Eurya japonica</i> var. <i>japonica</i>	—			1
		<i>Rhus javanica</i> var. <i>roxburgii</i>	<i>Rhus javanica</i>	—			1
		<i>Rubus palmatus</i>	<i>Rubus palmatus</i> var. <i>palmatus</i>	—			1
		<i>Symplocos lucida</i>	<i>Symplocos kuroki</i>	—			1
		<i>Rhus succedanea</i>	<i>Toxicodendron succedaneum</i>	Japanese waxtree			1
		<i>Rhus trichocarpa</i>	<i>Toxicodendron trichocarpum</i>	—			1
JPS106	Yamato	<i>Acanthopanax sciadophylloides</i>	<i>Chengiopanax sciadophylloides</i>	—			1
		<i>Clerodendrum trichotomum</i>	<i>Clerodendrum trichotomum</i> var. <i>trichotomum</i>	Glorytree	1		
		<i>Reynoutria japonica</i>	<i>Fallopia japonica</i>	Japanese knotweed			1
		<i>Ilex crenata</i>	<i>Ilex crenata</i> var. <i>crenata</i>	—			1

Description of Understory Vegetation		Reported name	Correct scientific name	English name	Type of correction		
Site code	Site name				A	B	C
JPS106	Yamato	<i>Parabenzoin trilobum</i>	<i>Lindera triloba</i>	—			1
		<i>Rubus palmatus</i>	<i>Rubus palmatus</i> var. <i>palmatus</i>	—			1
		<i>Symplocos chinensis</i> var. <i>leucocarpa</i>	<i>Symplocos sawafutagi</i>	—			1
		<i>Stegnogramma pozoi</i> ssp. <i>mollissima</i>	<i>Thelypteris pozoi</i> ssp. <i>mollissima</i>	—			1
		<i>Rhus trichocarpa</i>	<i>Toxicodendron trichocarpum</i>	—			1
JPS108	Iwami "rinku" Factory Park	<i>Castanopsis cuspidata</i> var. <i>sieboldii</i>	<i>Castanopsis sieboldii</i>	—			1
		<i>Cinnamomum japonicum</i>	<i>Cinnamomum yabunikkei</i>	—			1
		<i>Gleichenia japonica</i>	<i>Diplopterygium glaucum</i>	—			1
JPS108	Iwami "rinku" Factory Park	<i>Eurya japonica</i>	<i>Eurya japonica</i> var. <i>japonica</i>	—			1
		<i>Symplocos lucida</i>	<i>Symplocos kuroki</i>	—			1
KRS003	Mt. Naejang	<i>Sorbus alnifolia</i>	<i>Aria alnifolia</i>	—			1
		<i>Arisaema amurense</i> var. <i>serratum</i>	<i>Arisaema amurense</i>	—			1
		<i>Paederia scandens</i>	<i>Paederia foetida</i>	Skunkvine			1
		<i>Quercus variabilis</i> Bl.	<i>Quercus variabilis</i>	Chinese cork oak		1	
		<i>Symplocos chinensis</i> for. <i>pilosa</i>	<i>Symplocos sawafutagi</i>	—			1
		<i>Symplocos chinensis</i> var. <i>leucocarpa</i> for. <i>pilosa</i>	<i>Symplocos sawafutagi</i>	—			1
		<i>Thalictrum actaeifolium</i>	<i>Thalictrum acutifolium</i>	—	1		
		<i>Rhus trichocarpa</i>	<i>Toxicodendron trichocarpum</i>	—			1
		<i>Zanthoxylum schinifolium</i> var. <i>inermis</i>	<i>Zanthoxylum schinifolium</i>	—			1
PHS001	La Mesa Watershed	<i>Calamus</i> spp	<i>Calamus</i> sp.	—	1		
PHS002	Mt. Makiling	<i>Alangium chinense</i> (Lour.) Harms & Rehd.	<i>Alangium chinense</i>	—			1
		<i>Alangium javanicum</i> var. <i>jaheri</i>	<i>Alangium javanicum</i>	—			1
		<i>Anaxagorea luzoniensis</i> A. Gray	<i>Anaxagorea luzonensis</i>	—	1	1	
		<i>Buchanania arborescens</i> (Blume) Blume	<i>Buchanania arborescens</i>	—			1
		<i>Calophyllum blancoi</i>	<i>Calophyllum blancoi</i>	—	1		
		<i>Calophyllum blancoi</i> Pl. & Tr.	<i>Calophyllum blancoi</i>	—			1
		<i>Celtis luzonica</i> Warb.	<i>Celtis luzonica</i>	—			1
		<i>Chisocheton pentandrus</i> (Blanco) Merr. ssp. <i>pentandrus</i>	<i>Chisocheton pentandrus</i> ssp. <i>pentandrus</i>	—			1
		<i>Chisocheton pentandrus</i> spp. <i>pentandrus</i>	<i>Chisocheton pentandrus</i> ssp. <i>pentandrus</i>	—	1		
		<i>Coffea</i> spp.	<i>Coffea</i> sp.	—	1		
		<i>Coffea</i> <i>Coffea</i> spp.	<i>Coffea</i> sp.	—	1		
		<i>Diospyros diepenhorstii</i>	<i>Diospyros diepenhorstii</i>	—	1		
		<i>Diospyros pyrrhocarpa</i>	<i>Diospyros pyrrhocarpa</i>	—	1		
		<i>Diplodiscus paniculatus</i> Turcz.	<i>Diplodiscus paniculatus</i>	—			1
		<i>Dysoxylum arborescens</i> (Blume) Miq.	<i>Dysoxylum arborescens</i>	—			1
		<i>Garcinia binucao</i> (Blanco) Choisy	<i>Garcinia binucao</i>	—			1
		<i>Homalanthus populneus</i> (Geisel.) Pax	<i>Homalanthus populneus</i>	—			1
		<i>Knema glomerata</i> (Blanco) Merr.	<i>Knema glomerata</i>	—			1

Description of Understory Vegetation					Type of correction		
Site code	Site name	Reported name	Correct scientific name	English name	A	B	C
PHS002	Mt. Makiling	<i>Lagerstroemia speciosa</i> (L.) Pers.	<i>Lagerstroemia speciosa</i>	Pride of India		1	
		<i>Leea philippinensis</i> Merr.	<i>Leea philippinensis</i>	—		1	
		<i>Myristica philippinensis</i> Lam.	<i>Myristica philippinensis</i>	Nutmeg-tree		1	
		<i>Neotrewia cumingii</i> (Muell.-Arg.) Pax & K. Hoffm.	<i>Neotrewia cumingii</i>	—		1	
		<i>Nephelium lappaceum</i> var. <i>pallens</i>	<i>Nephelium lappaceum</i>	Pulasan		1	
		<i>Nephelium ramboutan-ake</i> (Labill.) Leenh.	<i>Nephelium ramboutan-ake</i>	—		1	
		<i>Palaquium foxworthyi</i> Merr.	<i>Palaquium foxworthyi</i>	—		1	
		<i>Palaquium foxworthyii</i>	<i>Palaquium foxworthyi</i>	—	1		
PHS002	Mt. Makiling	<i>Planchonia spectabilis</i> Merr.	<i>Planchonia spectabilis</i>	—		1	
		<i>Pterocymbium tinctorium</i> (Blanco) Merr.	<i>Pterocymbium tinctorium</i>	—		1	
		<i>Shorea contorta</i> Vid.	<i>Shorea contorta</i>	White lauan		1	
		<i>Strombosia philippinensis</i> (Baill.) Rolfe	<i>Strombosia philippinensis</i>	—		1	
		<i>Trophis philippinensis</i> (Bur.) Corner	<i>Trophis philippinensis</i>	—		1	
		<i>Turpinia ovalifolia</i> Elmer	<i>Turpinia ovalifolia</i>	—		1	
PHS003	Boneco LTER Site	<i>Cassia</i> spp.	<i>Cassia</i> sp.	—	1		
		<i>Centrosema</i>	<i>Centrosema</i> sp.	—	1		
PHS102	UP Quezon, Land Grant	<i>Cratoxylon formosum</i>	<i>Cratoxylum formosum</i>	—	1		
		<i>Cryptocaria glauca</i>	<i>Cryptocarya glauca</i>	—	1		
		<i>Dimocarpus longan malesianus</i> var. <i>echinatus</i>	<i>Dimocarpus longan</i> ssp. <i>malesianus</i>	—	1		
		<i>Dimocarpus longan</i> ssp. <i>malesianus</i> var. <i>echinatus</i>	<i>Dimocarpus longan</i> ssp. <i>malesianus</i>	—	1		
		<i>Diospyrus phylosanthera</i> var. <i>philosanthera</i>	<i>Diospyros pilosanthera</i>	—	1		
		<i>Lithocarpus budii</i>	<i>Lithocarpus buddii</i>	—	1		
		<i>Microsorium longissimum</i>	<i>Microsorium longifolium</i>	—	1		
		<i>Nauclea undulate</i>	<i>Nauclea undulata</i>	—	1		
		<i>Neonauclea puberula</i>	<i>Neonauclea puberula</i>	—	1		
RUS002	Bolshie Koty	<i>Pandanus</i> spp.	<i>Pandanus</i> sp.	—	1		
		<i>Aconitum barbatum</i> Pers.	<i>Aconitum barbatum</i>	—		1	
		<i>Aster alpinus</i> L.	<i>Aster alpinus</i>	Alpine aster		1	
		<i>Bupleurum scorzonerifolium</i> Willd.	<i>Bupleurum scorzonerifolium</i>	—		1	
		<i>Calamagrostis arundinacea</i> (L.) Roth	<i>Calamagrostis arundinacea</i>	—		1	
		<i>Calamagrostis obtusata</i> Trin.	<i>Calamagrostis obtusata</i>	—		1	
		<i>Campanula glomerata</i> L.	<i>Campanula glomerata</i>	Dane's blood		1	
		<i>Carex macroura</i> Meinsh.	<i>Carex macroura</i>	—		1	
		<i>Cimicifuga foetida</i> L.	<i>Cimicifuga foetida</i>	—		1	
		<i>Cotoneaster melanocarpus</i> Fisch. ex Blytt.	<i>Cotoneaster melanocarpus</i>	—		1	
		<i>Dicranum polisetum</i> Sw.	<i>Dicranum polisetum</i>	—		1	
		<i>Geranium eriostemon</i> Fisch.	<i>Geranium eriostemon</i>	—		1	
		<i>Maianthemum bifolium</i> (L.) S. W. Schmidt	<i>Maianthemum bifolium</i>	May-lily		1	

Description of Understory Vegetation					Type of correction		
Site code	Site name	Reported name	Correct scientific name	English name	A	B	C
RUS002	Bolshie Koty	<i>Pleurospermum uralense</i> Hoffm.	<i>Pleurospermum uralense</i>	—		1	
		<i>Polygonatum odoratum</i> (Miller) Druce	<i>Polygonatum odoratum</i>	Solomon's-seal		1	
		<i>Rhododendron dahuricum</i> L.	<i>Rhododendron dahuricum</i>	—		1	
		<i>Rhytidium rugosum</i> (Hedev.) Kindb.	<i>Rhytidium rugosum</i>	Wrinkle-leaved Feather-moss		1	
		<i>Rosa acicularis</i> Lindl.	<i>Rosa acicularis</i>	Prickly rose		1	
		<i>Rubus saxatilis</i> L.	<i>Rubus saxatilis</i>	Stone Bramble		1	
		<i>Sanguisorba officinalis</i> L.	<i>Sanguisorba officinalis</i>	Burnet bloodwort		1	
		<i>Spiraea media</i> Franz Schmidt	<i>Spiraea media</i>	Russian Spiraea		1	
		<i>Trommsdorffia maculata</i> (L.) Bernh.	<i>Trommsdorffia maculata</i>	—		1	
		<i>Vaccinium vitis-idaea</i> L.	<i>Vaccinium vitis-idaea</i>	Alpine cranberry		1	
		<i>Vicia baicalensis</i> (Turcz.) B. Fedtsch.	<i>Vicia baicalensis</i>	—		1	
		<i>Vicia unijuga</i> A. Br.	<i>Vicia unijuga</i>	Two-leaf vetch		1	
RUS003	Irkutsk	<i>Salix carpea</i>	<i>Salix caprea</i>	Goat willow	1		
RUS004	Primorskaya	<i>Acer mono</i>	<i>Acer pictum</i> ssp. <i>mono</i>	The Painted Maple			1
		<i>Chloranthus japonicus</i>	<i>Chloranthus japonicus</i>	—	1		
		<i>Eleutherococcus senticonis</i>	<i>Eleutherococcus senticosus</i>	Siberian ginseng	1		
		<i>Euonymus sacrosancta</i>	<i>Euonymus sacrosanctus</i>	—	1		
		<i>Philadelphus temifolius</i>	<i>Philadelphus tenuifolius</i>	—	1		
		<i>Smilacina hitra</i>	<i>Smilacina hirta</i>	—	1		
RUS102	Pereemnaya river catchment	<i>Fhegopteris connectilis</i>	<i>Fhegopteris connectilis</i>	Beech fern	1		
		<i>Ptilium cristacastrensis</i>	<i>Ptilium crista-castrensis</i>	Ostrich-plume Feather-moss	1		
RUS201	Solar Observatory	<i>Arctous alpina</i> subsp. <i>Erythrocarpa</i>	<i>Arctous alpina</i> ssp. <i>erythrocarpa</i>	—	1		
		<i>Betula nana</i> subsp. <i>Exilis</i>	<i>Betula nana</i> ssp. <i>exilis</i>	Dwarf birch	1		
		<i>Bistorta viripara</i>	<i>Bistorta vivipara</i>	Alpine bistort	1		
		<i>Dryas oxydonta</i>	<i>Dryas oxydonta</i>	—	1		
		<i>Eriophorum polystachyon</i>	<i>Eriophorum polystachion</i>	—	1		
		<i>Parnasia palustris</i>	<i>Parnasia palustris</i>	Bog star	1		
		<i>Rhododendron lapponicum</i> subsp. <i>parvifolium</i>	<i>Rhododendron lapponicum</i> ssp. <i>parvifolium</i>	—	1		
		<i>Salix Lanata</i>	<i>Salix lanata</i>	Woolly willow	1		
		<i>Saussurea denticulate</i>	<i>Saussurea denticulata</i>	—	1		
THS004	Vajiralongkorn Dam	<i>Aglaonema simplex</i> Blume	<i>Aglaonema simplex</i>	Malayan-sword	1	1	
		<i>Amorphallus campanulatus</i>	<i>Amorphophallus campanulatus</i>	Elephant-yam	1		
		<i>Ampelocissus martinii</i>	<i>Ampelocissus martinii</i>	—	1		
		<i>Eupatorium stoechadosum</i>	<i>Eupatorium stoechadosmum</i>	—	1		
		<i>Millettia brandisiana</i>	<i>Millettia brandisiana</i>	—	1		
		<i>Smithatris supraneanae</i>	<i>Smithatris supraneanae</i>	Siamese platinum	1		
		<i>Tetrastigma</i> spp	<i>Tetrastigma</i> sp.	—	1		
THS104	Vajiralongkorn Puye	<i>Cantharellus cidarius</i>	<i>Cantharellus cibarius</i>	Chanterelle	1		

Description of Understory Vegetation					Type of correction		
Site code	Site name	Reported name	Correct scientific name	English name	A	B	C
THS104	Vajiralongkorn Puye	<i>Erythring subumbrans</i>	<i>Erythrina subumbrans</i>	December-tree	1		
		<i>Grewia paniculata</i>	<i>Microcos tomentosa</i>	—			1
		<i>Stephonia pierrei</i>	<i>Stephania pierrei</i>	—	1		
		<i>Sterculia hypochra</i>	<i>Sterculia hypochroa</i>	—	1		
		<i>Tetrastigma quadrangulatum</i>	<i>Tetrastigma quadrangulum</i>	—	1		
		<i>Thunbergia laurifoila</i>	<i>Thunbergia laurifolia</i>	Babbler's-vine	1		

Appendix 4

Corrigenda of Dry Deposition Monitoring Data in 2019

Appendix 4 Corrigenda of Data Report 2019

The FP sampling periods of 2019 at Metro Manila site were readjusted after the submission of FP 2020 results. The page and table number correspond to those of Data Report 2019.

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Table 4.3 SO₂ (continued)

Unit : ppb			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.2	0.6	0.5	0.3	0.2	0.3	0.3	0.7	0.7	0.4	0.4
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	0.3	0.7	0.5	0.3	0.2	0.5	0.4	1.4	1.2	0.6	1.4
		Min-w	***	***	<0.1	0.5	0.5	0.3	0.2	0.2	0.2	<0.1	0.3	0.2	<0.1

(Correction)

Table 4.3 SO₂ (continued)

Unit : ppb			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.2	0.6	0.5	0.3	0.2	0.3	0.3	0.7	0.7	0.3	0.4
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	0.3	0.7	0.5	0.3	0.2	0.5	0.4	1.4	1.2	0.5	1.4
		Min-w	***	***	<0.1	0.5	0.5	0.3	0.2	0.2	0.2	<0.1	0.3	0.2	<0.1

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Table 4.4 HNO₃ (continued)

Unit : ppb			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.1	0.2	0.2	<0.1	<0.1	<0.1	0.2	0.3	0.2	<0.1	0.1
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	0.3	0.4	0.2	<0.1	0.2	<0.1	0.3	0.6	0.4	<0.1	0.6
		Min-w	***	***	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

(Correction)

Table 4.4 HNO₃ (continued)

Unit : ppb			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.1	0.2	0.2	<0.1	<0.1	<0.1	0.2	0.3	0.2	<0.1	0.1
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	0.3	0.4	0.2	<0.1	0.2	<0.1	0.3	0.6	0.4	<0.1	0.6
		Min-w	***	***	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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Table 4.5 HCl (continued)

Unit : ppb			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.5	1.1	0.5	1.1	0.8	0.2	0.6	0.6	0.6	0.5	0.6
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	0.8	1.7	0.5	1.1	0.9	0.3	0.9	1.0	0.9	1.0	1.7
		Min-w	***	***	0.1	0.5	0.5	1.1	0.6	<0.1	0.3	0.2	0.4	<0.1	<0.1

(Correction)

Table 4.5 HCl (continued)

Unit : ppb			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.5	1.1	0.5	1.1	0.8	0.2	0.6	0.6	0.6	0.5	0.6
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	0.8	1.7	0.5	1.1	0.9	0.3	0.9	1.0	0.9	1.0	1.7
		Min-w	***	***	0.1	0.5	0.5	1.1	0.6	<0.1	0.3	0.2	0.4	<0.1	<0.1

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Table 4.6 NH₃ (continued)

Unit : ppb			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	10.4	25.1	10.1	11.2	5.2	0.4	10.3	11.4	15.8	25.2	13.2
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	13.3	68.0	10.1	11.2	5.8	0.5	18.7	18.9	19.5	55.4	68.0
		Min-w	***	***	6.0	<0.1	10.1	11.2	4.1	0.2	5.7	4.5	9.9	8.3	<0.1

(Correction)

Table 4.6 NH₃ (continued)

Unit : ppb			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	10.4	25.1	10.1	11.2	5.2	0.4	10.3	11.4	15.8	25.2	13.1
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	13.3	68.0	10.1	11.2	5.8	0.5	18.7	18.9	19.5	55.4	68.0
		Min-w	***	***	6.0	<0.1	10.1	11.2	4.1	0.2	5.7	4.5	9.9	8.3	<0.1

Table 4.13 SO₄²⁻ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	2.41	3.18	2.78	1.76	1.26	1.55	2.95	2.03	2.42	2.42	2.35
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	4.38	4.49	2.78	1.76	1.74	2.72	4.31	5.19	3.32	4.49	5.19
		Min-w	***	***	0.78	2.25	2.78	1.76	0.73	0.16	1.28	0.03	1.55	0.84	0.03

(Correction)

Table 4.13 SO₄²⁻ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	2.41	3.18	2.78	1.76	1.26	1.55	2.95	2.03	2.42	2.17	2.33
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	4.38	4.49	2.78	1.76	1.74	2.72	4.31	5.19	3.32	4.49	5.19
		Min-w	***	***	0.78	2.25	2.78	1.76	0.73	0.16	1.28	0.03	1.55	0.84	0.03

Table 4.14 NO₃⁻ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	1.18	1.40	1.37	0.91	0.81	0.74	1.60	1.06	2.16	1.55	1.37
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	1.61	2.44	1.37	0.91	1.01	1.26	2.41	2.21	2.66	1.96	2.66
		Min-w	***	***	0.31	0.71	1.37	0.91	0.47	0.06	0.59	<0.01	1.53	0.91	<0.01

(Correction)

Table 4.14 NO₃⁻ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	1.18	1.40	1.37	0.91	0.81	0.74	1.60	1.06	2.16	1.46	1.35
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	1.61	2.44	1.37	0.91	1.01	1.26	2.41	2.21	2.66	1.96	2.66
		Min-w	***	***	0.31	0.71	1.37	0.91	0.47	0.06	0.59	<0.01	1.53	0.91	<0.01

Table 4.15 Cl⁻ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.66	0.39	0.21	0.59	0.18	0.55	0.66	0.53	1.29	1.65	0.75
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	1.16	0.77	0.21	0.59	0.31	0.94	1.14	1.04	3.40	2.91	3.40
		Min-w	***	***	0.10	0.07	0.21	0.59	0.10	0.20	0.17	0.01	0.48	0.42	0.01

(Correction)

Table 4.15 Cl⁻ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.66	0.39	0.21	0.59	0.18	0.55	0.66	0.53	1.29	1.22	0.69
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	1.16	0.77	0.21	0.59	0.31	0.94	1.14	1.04	3.40	1.86	3.40
		Min-w	***	***	0.10	0.07	0.21	0.59	0.10	0.20	0.17	0.01	0.48	0.42	0.01

Table 4.16 NH₄⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.23	3.17	0.65	0.22	0.25	0.24	0.48	0.08	0.13	0.06	0.57
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	0.50	10.67	0.65	0.22	0.33	0.52	0.79	0.22	0.26	0.23	10.67
		Min-w	***	***	0.02	0.35	0.65	0.22	0.14	<0.01	0.16	<0.01	0.04	<0.01	<0.01

(Correction)

Table 4.16 NH₄⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.23	3.17	0.65	0.22	0.25	0.24	0.48	0.08	0.13	0.08	0.59
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	0.50	10.67	0.65	0.22	0.33	0.52	0.79	0.22	0.26	0.23	10.67
		Min-w	***	***	0.02	0.35	0.65	0.22	0.14	<0.01	0.16	<0.01	0.04	<0.01	<0.01

Table 4.17 Na⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.64	0.77	0.37	0.66	0.26	0.51	0.40	0.64	1.11	1.05	0.69
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	0.96	0.97	0.37	0.66	0.40	0.93	0.81	1.26	2.06	1.47	2.06
		Min-w	***	***	0.25	0.45	0.37	0.66	0.15	0.09	<0.01	<0.01	0.53	0.56	<0.01

(Correction)

Table 4.17 Na⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.64	0.77	0.37	0.66	0.26	0.51	0.40	0.64	1.11	0.91	0.66
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	0.96	0.97	0.37	0.66	0.40	0.93	0.81	1.26	2.06	1.25	2.06
		Min-w	***	***	0.25	0.45	0.37	0.66	0.15	0.09	<0.01	<0.01	0.53	0.56	<0.01

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Table 4.18 K⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	3.47	0.29	0.08	0.12	0.10	0.06	0.33	0.17	0.38	0.52	0.65
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	4.67	0.36	0.08	0.12	0.22	0.10	0.86	0.31	0.76	1.31	4.67
		Min-w	***	***	2.84	0.14	0.08	0.12	0.04	<0.01	0.12	0.02	0.25	0.19	<0.01

(Correction)

Table 4.18 K⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	3.47	0.29	0.08	0.12	0.10	0.06	0.33	0.17	0.38	0.26	0.63
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	4.67	0.36	0.08	0.12	0.22	0.10	0.86	0.31	0.76	0.35	4.67
		Min-w	***	***	2.84	0.14	0.08	0.12	0.04	<0.01	0.12	0.02	0.25	0.19	<0.01

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Table 4.19 Mg²⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.02	0.07	0.09	0.07	0.05	0.08	0.17	0.11	0.16	0.11	0.10
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	0.03	0.22	0.09	0.07	0.06	0.14	0.23	0.20	0.21	0.18	0.23
		Min-w	***	***	<0.01	<0.01	0.09	0.07	0.05	<0.01	0.11	0.02	0.08	<0.01	<0.01

(Correction)

Table 4.19 Mg²⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.02	0.07	0.09	0.07	0.05	0.08	0.17	0.11	0.16	0.09	0.10
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	0.03	0.22	0.09	0.07	0.06	0.14	0.23	0.20	0.21	0.16	0.23
		Min-w	***	***	<0.01	<0.01	0.09	0.07	0.05	<0.01	0.11	0.02	0.08	<0.01	<0.01

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Table 4.19 Ca²⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.13	0.30	0.53	0.45	0.31	0.30	0.74	1.15	1.46	0.93	0.70
		%	***	***	100	100	20	16	93	78	100	100	100	100	69
		Max-w	***	***	0.30	0.64	0.53	0.45	0.42	0.53	1.49	1.73	1.82	1.97	1.97
		Min-w	***	***	<0.01	<0.01	0.53	0.45	0.12	<0.01	0.15	0.51	1.02	0.37	<0.01

(Correction)

Table 4.19 Ca²⁺ (continued)

Unit : µg/m ³			2019												Annual
Country	Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Philippines	Metro Manila FP	Mean	***	***	0.13	0.30	0.53	0.45	0.31	0.30	0.74	1.15	1.46	1.11	0.71
		%	***	***	100	100	20	16	93	78	100	100	100	96	68
		Max-w	***	***	0.30	0.64	0.53	0.45	0.42	0.53	1.49	1.73	1.82	1.97	1.97
		Min-w	***	***	<0.01	<0.01	0.53	0.45	0.12	<0.01	0.15	0.51	1.02	0.46	<0.01

