Data Report on the Acid Deposition in the East Asian Region

2000

November 2001
Network Center for EANET

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1. Introduction

1.1 EANET and its preparatory phase activities

The East Asian region, as a result of rapid industrialization, faces increasing risks of problems related to excess deposition of acidic substances. Exert meetings were held to discuss issues relating to an acid deposition monitoring network in East Asia, attended by experts from East Asian countries and related international organizations.

Based on the progress made by the expert meetings, the First Session of the Intergovernmental Meeting on the Acid Deposition Monitoring Network in East Asia was held in March 1998 in Yokohama, Japan. After extensive discussion on the fundamental characteristics of the network, the meeting developed a tentative design of the Acid Deposition Monitoring Network in East Asia (EANET) and agreed to start its preparatory phase activities in April 1998 on an interim basis. The participating countries during the preparatory phase were China, Indonesia, Japan, Malaysia, Mongolia, Philippines, Republic of Korea, Russia, Thailand and Viet Nam. In order to support the preparatory phase activities, the Environment Agency of Japanese Government and the Acid Deposition and Oxidant Research Center (ADORC) in Japan were designated as the Interim Secretariat and the Interim Network Center (INC) respectively.

1.2 Start of Regular Phase Activities

At the Second Session of the Intergovernmental Meeting (IG2) held in October 2000 in Niigata, Japan, it was concluded that the preparatory phase activities of EANET had been successful and decided to start its activities on a regular basis in January 2001 with the same ten participating countries as during the preparatory phase. ADORC was designated as the Network Center (NC) during the regular phase.

1.3 Monitoring Data in 2000

According to the “Work Program and Budget for EANET in 2001” adopted at IG2, the participating countries were requested to submit the data and related information obtained through the monitoring activities of EANET in 2000 to NC by 30 June 2001. Although some countries missed the deadline, NC had prepared a draft Data Report on the Acid Deposition in the East Asian Region 2000 that contained data from all of the participating countries by the First Session of the Scientific Advisory Committee (SAC1) held in November 2001 in Chiang Mai, Thailand.

At SAC1, the draft report was considered by the experts from the participating countries and NC was provided with some comments and guidance.

Following the comments and guidance at SAC1, and supplementing the additional data submitted by some countries after SAC1, NC has elaborated and finalized the report.

2. Network Description

Ten countries are participating in the preparatory-phase activities of EANET, namely China, Japan, Mongolia, Republic of Korea, and Russian Federation from the North-East Asian region, and Indonesia, Malaysia, Philippines, Thailand, and Vietnam from the South-East Asian region. The status of the EANET monitoring sites in 2000 is shown in Table 2.1 and Table 2.2 and Fig.2.1. Forty monitoring sites, including 16 "remote", 9 "rural", and 15 "urban" sites were located in a vast area of East Asia between 52°N to 6°S across ten participating countries. As described in Table 2.3, all of these sites are operated as wet deposition monitoring sites, and 10 of the 40 sites were equipped with filter packs for measurement of pollutant concentrations. Seventeen sites were equipped with automatic or manual gas monitor for NO_x and SO_2, and 10 sites were equipped with ozone monitor for concentration measurement. Sixteen sites measure concentration of particulate matter as PM_{10} or TSP by automatic or manual instruments. Meteorological conditions such as wind speed, wind direction, air temperature, relative humidity, and solar radiation were measured by equipments that were installed in the sites or nearby meteorological observatories.

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	- Assess the state of acid deposition in urban areas - Urbanized and industrial areas, and the areas immediately outside the area - Data can be used for evaluation of acid deposition on buildings and historical monuments
	Rural Site	- Assess the state of acid deposition in rural areas and/or hinterlands - Data can be used for the evaluation of acid deposition on agricultural crops and forests and etc. - More than 20km apart from large pollution sources like cities, power plants and highways
	Remote Site	- Assess the state of acid deposition in background areas - Data can be used for evaluation of long-range transport and deposition models - More than 50km apart from large pollution sources like cities, power plants and highways - More than 500m apart from main roads (more than 500 vehicles per day)
Ecological Survey Site for soil and vegetation monitoring and Inland aquatic monitoring	Basic survey site	- Accumulate basic data on soil, forest, and inland aquatic environment and trends in properties - Vicinity of the acid deposition monitoring site
	Ecosystem analysis site	- Assess acid deposition impacts on whole ecosystem through application of terrestrial ecosystem analysis and/or catchment analysis - Sensitive area to changes in atmospheric acidity and ecologically conserved area

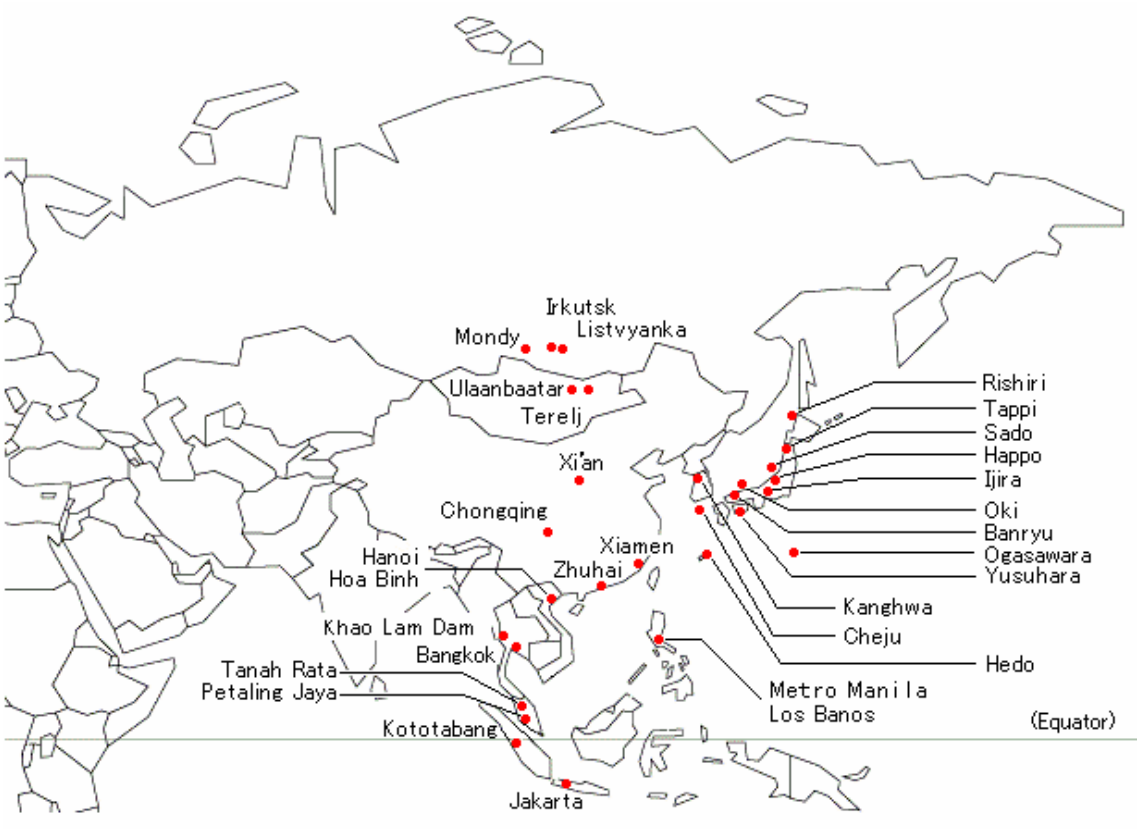


Fig. 2.1 Locations of EANET Sites in 2000

(Note: “Xi’an” includes 3 sites, and “Chongqing”, “Xiamen”, “Zhuhai” includes 2 sites, respectively. “Jakarta” includes also nearby “Serpong” and “Bandung” sites, and “Bangkok” includes also nearby “Samutprakarn” and “Patumthani” sites. “Metro Manila”/“Los Banos” and “Hanoi”/“Hoa Binh” are described as one point, respectively.)

Table 2.2 Profile of Wet and Dry Deposition (Air Concentration) Monitoring Sites

Country	Name of sites	Characteristics of sites	Latitude	Longitude	Height above sea
China	Chongqing				
	-Guanyinqiao	Urban	29° 34'N	106° 31'E	262m
	-Nanshan	Rural	29° 33'N	106° 38'E	570m
	Xi'an				
	-Shizhan(Jiancezhan)	Urban	34° 14'N	108° 57'E	400m
	-Weishuiyuan	Rural	34° 22'N	108° 51'E	366m
	-Dabagou	Remote	33° 54'N	108° 51'E	1,200m
	Xiamen				
	-Hongwen	Urban	24° 28' N	118° 08' E	50m
	-Xiaoping	Remote	24° 51' N	118° 02' E	686m
	Zhuhai				
	-Xiang Zhou(Jiancezhan)	Urban	22° 16'N	113° 34' E	40m
	-Zhuxian Cavern	Urban	22° 12'N	113° 31' E	45m
Indonesia	Jakarta(BMG)	Urban	6° 11' S	106° 50' E	7m
	Serpong(EMC)	Rural	6° 15' S	106° 34' E	46m
	Kototabang	Remote	0° 12' S	100° 19' E	864m
	Bandung(LAPAN)	Urban	6° 54' S	107° 35' E	743m
Japan	Rishiri	Remote	45° 07' N	141° 14' E	40m
	Tappi	Remote	41° 16' N	141° 21' E	105m
	Ogasawara	Remote	27° 05' N	142° 13' E	230m
	Sado-seki	Remote	38° 15' N	138° 24' E	134m
	Happo	Remote	36° 41' N	137° 48' E	1,850m
	Oki	Remote	36° 17' N	133° 11' E	90m
	Yusuhara	Remote	33° 23' N	132° 56' E	790m
	Hedo	Remote	26° 51' N	128° 15' E	60m
	Ijira	Rural	35° 34' N	136° 42' E	140m
	Banryu	Urban	34° 41' N	131° 48' E	53m
Malaysia	Petaling Jaya	Urban	03° 06' N	101° 39' E	87m
	Tanah Rata	Remote	04° 28' N	101° 23' E	1,470m
Mongolia	Ulaanbaatar	Urban	47° 54' N	106° 49' E	1,282m
	Terelj	Remote	47° 59' N	107° 29' E	1,540m
Philippines	Metro Manila	Urban	14° 38' N	121° 04' E	54m
	Los Banos	Rural	14° 11' N	121° 15' E	35m
Republic of Korea	Kanghwa	Rural	37° 37' N	126° 22' E	150m
	Cheju(Kosan)	Remote	33° 17' N	126° 10' E	72m
Russia	Mondy	Remote	51° 40' N	101° 0' E	2,000m
	Listvyanka	Rural	51° 51' N	104° 54' E	700m
	Irkutsk	Urban	52° 14' N	104° 15' E	500m
Thailand	Bangkok(OEPP)	Urban	13° 46' N	100° 32' E	2m
	Samutprakarn(MD)	Urban	13° 44' N	100° 34' E	2m
	Patumthani(ERTC)	Rural	14° 02' N	100° 46' E	2m
	Khao Lam	Remote	14° 46' N	98° 35' E	170m
Vietnam	Hanoi	Urban	21° 01' N	105° 51' E	5m
	Hoa Binh	Rural	20° 49' N	105° 20' E	23m

Table 2.3 Outline of Wet and Dry Deposition (Air Concentration) Monitoring

Country	Name of sites	Characteristics of sites	Wet Dep.	Dry Dep.			
				Automatic			Filter Pack
				SO_2NO_x	O_3	PM	
China	Chongqing						
	-Guanyinqiao	Urban	o	o	None	o	None
	-Nanshan	Rural	o	None	None	None	None
	Xi'an						
	-Shizhan(Jiancezhan)	Urban	o	None	None	None	None
	-Weishuiyuan	Rural	o	o a)	None	None	None
	-Dabagou	Remote	o	None	None	None	None
	Xiamen						
	-Hongwen	Urban	o	o	None	None	None
	-Xiaoping	Remote	o	None	None	None	None
	Zhuhai						
	-Xiang Zhou(Jiancezhan)	Urban	o	None	None	None	None
	-Zhuxian Cavern	Urban	o	None	None	None	None
Indonesia	Jakarta(BMG)	Urban	o	None	None	None	None
	Serpong(EMC)	Rural	None	o	None	o	None
	Kototabang	Remote	o	None	None	None	None
	Bandung(LAPAN)	Urban	o	None	None	None	None
Japan	Rishiri	Remote	o	o	o	o	None
	Tappi	Remote	o	o	o	o	None
	Ogasawara	Remote	o	o	o	o	None
	Sado-seki	Remote	o	o	o	o	None
	Happo	Remote	o	o	o	o	None
	Oki	Remote	o	o	o	o	None
	Yusuhara	Remote	o	o	o	o	None
	Hedo	Remote	o	o	o	o	None
	Ijira	Rural	o	o	o	o	None
	Banryu	Urban	o	o	o	o	None
Malaysia	Petaling Jaya	Urban	o	None	None	o a)	None
	Tanah Rata	Remote	o	None	None	None	o
Mongolia	Ulaanbaatar	Urban	o	None	None	None	o
	Terelj	Remote	o	None	None	None	o
Philippines	Metro Manila	Urban	o	None	None	None	o
	Los Banos	Rural	o	None	None	None	o
Republic of Korea	Kanghwa	Rural	o	None	None	None	None
	Cheju(Kosan)	Remote	o	None	None	None	None
Russia	Mondy	Remote	o	None	None	None	o
	Listvyanka	Rural	o	None	None	None	o
	Irkutsk	Urban	o	None	None	None	o
Thailand	Bangkok(OEPP)	Urban	o	o	None	o a)	None
	Samutprakarn(MD)	Urban	o	o	None	o a)	None
	Patumthani(ERTC)	Rural	o	None	None	None	None
	Khao Lam	Remote	o	o	None	o a)	None
Vietnam	Hanoi	Urban	o	None	None	None	o
	Hoa Binh	Rural	o	None	None	None	o

Note) a): Manual Sampling

3. Wet Deposition Monitoring

3.1 Method

To obtain the equivalent quality of monitoring data, each participating country carries out acid deposition monitoring fundamentally by common methodologies specified in the "Technical Documents for Wet deposition Monitoring in East Asia" adopted at The Second Interim Scientific Advisory group Meeting in March 2000. An example of the flow chart that was carried out by participating countries is described in Fig.3.1.

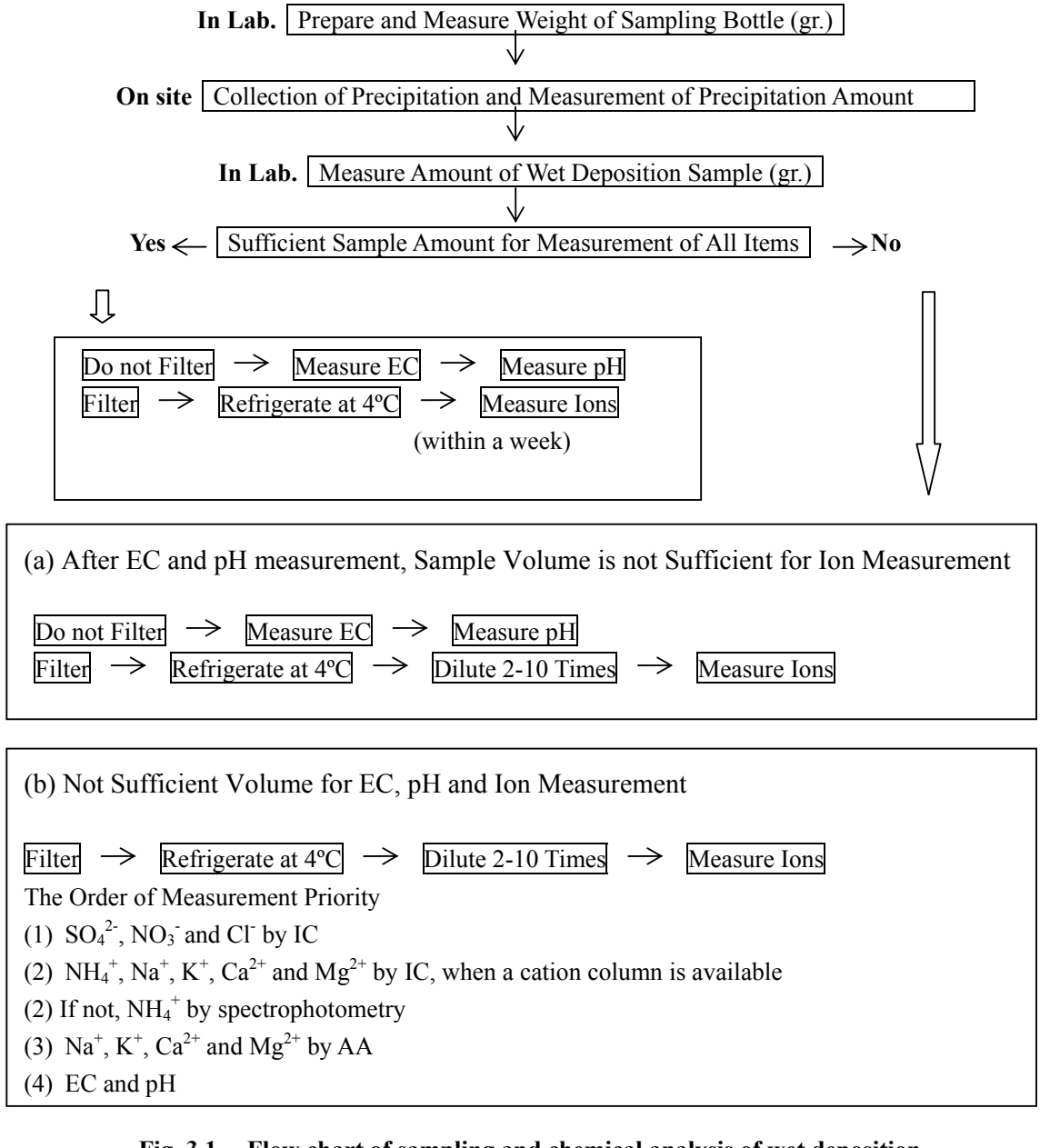


Fig. 3.1 Flow chart of sampling and chemical analysis of wet deposition

1) Field Operation

Most of the participating countries use the wet-only sampler which is designed to collect precipitation samples only during the precipitation period by installing the precipitation sensor and motor-driven tightfitting lid to cover a collecting bucket or funnel. The wet-only sampler is a recommended method of precipitation sampling. However, some sites install a manual sampler which collects rain by manual operation. At present, 21 sites out of 40 collect precipitation samples on a daily basis, while 10 sites collect weekly (including daily collection and weekly-composite analysis), and other 9 sites at every precipitation events, as shown in Table 3.1. For wet deposition samples collected in a tropical region, preservation of samples from microbial decomposition should be considered. Biocides such as Thymol are added for that purpose when a refrigerator is not available during sampling, shipping and storage periods. On the other hand, collection of wet deposition samples in the higher latitude region such as Mongolia and Russia during winter seasons faces difficulties because of low air temperature sometimes reaching below minus 10 to 20 ˚C. Collected samples without biocides were shipped to laboratories in charge of chemical analysis by cooling box to keep the sample temperature low enough to preserve the sample chemistry.

2) Laboratory Operation

Procedures suggested for rainwater major constituent analysis by the manual are shown in Table 3.2. Ion Chromatography is a major analytical method adopted by the participating countries for chemical analysis of both anions and cations contained in precipitation samples (Table 3.3). Atomic Absorption Spectrometry for Na^+, K^+, Ca^{2+}, and Mg^{2+}, and Spectrophotometry for NH_4^+ are also useful tools for the determination of these cations. However, some countries have to solve a problem of poor detection limit because of using traditional methods, such as titration method, which have not enough analytical sensitivity.

3) Data Management

Analytical data of precipitation samples were submitted from the participating laboratories to the National Centers. Then each National Center submitted the data to the Network Center. All the data were checked using ion balance and conductivity agreement by calculating 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 were attached to the data . Details of data management are described in the “Quality Assurance/Quality Control (QA/QC) Program for Wet Deposition Monitoring in East Asia” adopted at the Second Interim Scientific Advisory group Meeting in March 2000.

Table 3.1 Sampling Method for Wet Deposition Monitoring

Country	Name of sites	Characteristics of sites	Sampling Interval	Starting Month	Note
China	Chongqing				
	-Guanyinqiao	Urban	event	April '99	
	-Nanshan	Rural	weekly	April '99	
	Xi'an				
	-Shizhan(Jiancezhan)	Urban	event	April '99	
	-Weishuiyuan	Rural	event	April '99	
	-Dabagou	Remote	event	April '99	
	Xiamen				
	-Hongwen	Urban	daily	April '99	
	-Xiaoping	Remote	daily	April '99	
	Zhuhai				
	-Xiang Zhou(Jiancezhan)	Urban	daily	April '99	
	-Zhuxian Cavern	Urban	daily	December '99	
Indonesia	Jakarta(BMG)	Urban	weekly	April '98	*
	Serpong(EMC)	Rural	event	April '98	
	Kototabang(BMG)	Remote	daily	April '98	*
	Bandung(LAPAN)	Urban	event	January '99	*
Japan	Rishiri	Remote	daily	April '98	
	Tappi	Remote	daily	April '98	
	Ogasawara	Remote	daily	May '99	
	Sado-seki	Remote	daily	April '99	
	Happo	Remote	daily	April '98	
	Oki	Remote	daily	April '98	
	Yusuhara	Remote	daily	December '99	
	Hedo	Remote	daily	December '99	
	Ijira	Rural.	weekly	June '99	
	Banryu	Urban	weekly	May '99	
Malaysia	Petaling Jaya	Urban	daily**	April '98	*
	Tanah Rata	Remote	daily**	January '99	*
Mongolia	Ulaanbaatar	Urban	daily	August '98	
	Terelj	Remote	daily	September '98	
Philippines	Metro Manila	Urban	weekly	April '99	
	Los Banos	Rural	weekly	April '99	
Republic of Korea	Kanghwa	Rural	daily	March '99	
	Cheju(Kosan)	Remote	daily	April '99	
Russia	Mondy	Remote	event	May '99	
	Listvyanka	Rural	event	January 2000	
	Irkutsk	Urban	event	January 2000	
Thailand	Bangkok(OEPP)	Urban	daily	April '99	
	Samutprakarn(MD)	Urban	daily	April '99	
	Patumthani(ERTC)	Rural	daily	March '99	
	Khao Lam	Remote	daily	April '99	
Vietnam	Hoa Binh	Rural	daily**	August '99	
	Hanoi	Urban	daily**	August '99	

Note) *: Precipitation samples are preserved by addition of biocide, **: Chemical analysis is carried out for weekly-composite samples

Table 3.2 Procedures suggested for rainwater major constituent analysis

Analysis	Instrumental Method
Electric Conductivity (EC)	Conductivity Cell
pH	Glass electrode (preferably with the Electrode of non-leak inner cell)
Cl^-, NO_3^-, SO_4^{2-}, NO_2^-, F^-, PO_4^{3-}	Ion Chromatography (preferably with suppressor) Spectrophotometry
$NH4^+$	Ion Chromatography Spectrophotometry (Indophenol blue)*
Na^+, K^+, Ca^{2+}, Mg^{2+}	Ion Chromatography Atomic Absorption/ Emission Spectrometry
Heavy Metals, Al Hg	Atomic Absorption Spectrometry with Graphite Furnace, ICP Emission Spectrometry, ICP/MS, Mercury Analyzer With a Gold Trap
Organic Acids	Ion Chromatography

* Not recommended if the biocide, thymol, is used in sample collection.

Table 3.3 Analytical Method for Wet Deposition Monitoring

Country	Name of sites	Characteristics of sites	Anion Analysis	Cation Analysis	
				NH_4^+	Other Cations
China	Chongqing				
	-Guanyinqiao	Urban	IC	IC	IC
	-Nanshan	Rural	IC	IC	IC
	Xi'an				
	-Shizhan(Jiancezhan)	Urban	IC	IC	AAS
	-Weishuiyuan	Rural	IC	IC	AAS
	-Dabagou	Remote	IC	IC	AAS
	Xiamen				
	-Hongwen	Urban	IC	SP	AAS
	-Xiaoping	Remote	IC	SP	AAS
	Zhuhai				
	-Xiang Zhou(Jiancezhan)	Urban	IC	IC	IC
	-Zhuxian Cavern	Urban	IC	IC	IC
Indonesia	Jakarta(BMG)	Urban	IC	IC	IC
	Serpong(EMC)	Rural	IC	SP	AAS
	Kototabang(BMG)	Remote	IC	IC	IC
	Bandung(LAPAN)	Urban	SP	SP	SP
Japan	Rishiri	Remote	IC	IC	IC
	Tappi	Remote	IC	IC	IC
	Ogasawara	Remote	IC	IC	IC
	Sado-seki	Remote	IC	IC	IC
	Happo	Remote	IC	IC	IC
	Oki	Remote	IC	IC	IC
	Yusuhara	Remote	IC	IC	IC
	Hedo	Remote	IC	IC	IC
	Ijira	Rural	IC	IC	IC
	Banryu	Urban	IC	IC	IC
Malaysia	Petaling Jaya	Urban	IC	SP	ICP/MS
	Tanah Rata	Remote	IC	SP	ICP/MS
Mongolia	Ulaanbaatar	Urban	IC	IC	IC
	Terelj	Remote	IC	IC	IC
Philippines	Metro Manila	Urban	IC	SP	AAS
	Los Banos	Rural	IC	SP	AAS
Republic of Korea	Kanghwa	Urban	IC	IC(SP)	IC(AAS)
	Cheju(Kosan)	Remote	IC	IC(SP)	IC(AAS)
Russia	Mondy	Remote	HPLC	SP	AAS
	Listvyanka	Rural	HPLC	SP	AAS
	Irkutsk	Urban	HPLC	SP	AAS
Thailand	Bangkok(OEPP)	Urban	IC	IC	IC
	Samutprakarn(MD)	Urban	IC	IC	IC
	Patumthani(ERTC)	Rural	IC	IC	IC
	Khao Lam	Remote	IC	IC	IC
Vietnam	Hoa Binh	Rural	SP, TI	SP	FP,CA,TI
	Hanoi	Urban	SP, TI	SP	FP,CA,TI

(Note) AAS: Atomic Absorption Spectrometry, CA: Calculation(for Mg), FP: Frame Photometry, HPLC: High Performance Liquid Chromatography, IC: Ion Chromatography, ICP/MS: Inductively Coupled Plasma/ Mass Spectrometry, SP: Spectrophotometry, TI: Titration

3.2 Results of Monitoring

The summaries of wet deposition monitoring in 2000 are shown in from Table 3.6 through Table 3.48, and Fig.3.2 through Fig 3.79. The summaries contain the precipitation weighted arithmetic mean value, the maximum and minimum data reported over the year, data completeness (%PCL, %TP), the wet deposition amount, and the results of ion balance and conductivity agreement check.

1) Overview of the statistics and definition

An Overview of the statistics and definition is given below.

Weighted average : the precipitation weighted arithmetic mean concentration (μmol/L) over the summary periods. Calculated as:

$$\overline{C} = \Sigma_i C_i P_i / \Sigma_i P_i$$

where $\overline{C}$: precipitation weighted arithmetic mean concentration
C_i : valid concentration for sample i
P_i : precipitation amount for the same sample i with valid concentration

Maximum : The maximum value reported over the summary period.

Minimum : The minimum value reported over the summary period.

Deposition amount : the wet deposition amount ($mmol/m^2$) for the summary period. Calculated as:

Deposition amount = $\overline{C}$ x (total precipitation amount for the summary period)

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 sulphate and non-sea-salt calcium (μmol/L) : Equal to the measured sulphate (calcium) in the sample minus the sulphate(calcium) contributed by sea salt. Sea salt sulphate(calcium) is estimated from the concentration of sodium.

$[nss\text{-}SO_4^{2-}] = [SO_4^{2-}] - 0.06028 \times [Na^+]$

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

(Na^+ : 468.3 mmol/L, SO_4^{2-} : 28.23 mmol/L, Ca^{2+} : 10.12 mmol/L; "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 = [(Number of days in the summary period) - (Number of days with missing or unknown precipitation)] / (Number of days in the summary period) x 100

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

%TP = (Sum of precipitation amounts for samples with valid sample component measurements) / (Sum of precipitation amounts for all samples) x 100

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

%PCL $\geq$ 80%, and %TP $\geq$ 80%

Ion balance (R_1) : Calculated as:

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

where C : total cation equivalent concentration (μeq/L)

A : total anion equivalent concentration (μeq/L)

$C = 10^{(6-pH)} / 1.008 + \Sigma Cci \cdot V_i$

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

V_i : the valence of the given ion

$A = \Sigma C_{Ai} \cdot V_i$

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

If pH is greater than 6, bicarbonate (HCO_3^-) concentration is included for the computation of R_1 and R_2. The bicarbonate concentration is calculated from the dissociation constant, Ka and pH. (If the bicarbonate concentration is measured, the measured data is considered in the evaluation of R_1 and R_2). Calculated as:

$$[HCO_3^-] = P_{CO_2} H_{CO_2} K_{a1} / [H^+] = (360 \times 10^{-6})(3.4 \times 10^{-2})\ 10^{pH-6.35+6} = 1.24 \times 10^{pH-5.35}$$

Air concentration of CO_2 in equilibrium with precipitation samples is assumed to be 360ppm. Dissociation constant in terms of pKa for carbonic acid is 6.35.

Required criteria for R_1 : The required ion balances of precipitation analyses are given Table 3.4.

Table3.4 Required criteria for R_1

(C+A) (μeq/L)	R_1 (%)
<50	±30
50 – 100	±15
>100	±8

Conductivity agreement : Calculated as:

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

where Λ_{calc} : the calculated conductivity (mS/m)
Λ_{meas} : the measured conductivity (mS/m)

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

where C_i : the ionic concentration of i-th ion (μmol/L)
Λ_i^{0} : the molar conductivity at infinite dilution and 25 °C (Scm^2/mol)

$$\Lambda_{calc} = \{349.7 \times 10^{(6-pH)} + 80.0\ X2c(SO_4^{2-}) + 71.5c(NO_3^-) + 76.3c(Cl^-) + 73.5c(NH_4^+) + 50.1c(Na^+) + 73.5c(K^+) + 59.8\ X2c(Ca^{2+}) + 53.3\ X2c(Mg^{2+})\}/10000$$

where c( ) : the ionic concentrations (μmol/L)
The constants are the molar conductivity of the individual ion at infinite dilution and 25 °C (Scm^2/mol).

Required criteria for R_2 : The required conductivity comparison criteria are given Table 3.5.

Table3.5 Required criteria for R_2

Λ_{meas} (mS/m)	R_2 (%)
<0.5	± 20
0.5 – 3	± 13
>3	± 9

2) Terms and abbreviations

Terms and abbreviations indicate the followings:

In Table 3.6-Table 3.48,

- Data in hatched column ( ) : Rejected monthly (annual) value by the criteria [percent precipitation coverage length (%PCL) < 80%, and/or percent total precipitation (%TP) < 80%]
- [--] : no data or not measured
- Blank column : no information on the precipitation amount
  In that case, data completeness of precipitation amount (%PCL) is treated as 0%.

In Table 3.11-Table 3.35 Monthly weighted averages of each constituent,

- Max: Maximum data in a year, and "M" for the month that has the maximum data
- Min : Minimum data in a year, and "M" for the month that has the minimum data
- Daily or Event : daily sampling or event sampling
- Weekly : weekly sampling or weekly-composite analysis of daily samples

In Table 3.31 Monthly weighted averages of H^+ concentrations,

[<0.1] : <0.1μmol/L

In Table 3.6-Table 3.29 Monthly (Annual) weighted averages of each constituent,

[<0.2], [<0.4], [<1.0] : the values is lower than each detection limit given by the technical manual for wet deposition

SO_4^{2-}, nss-SO_4^{2-}, NO_3^-, Cl^-, NH_4^+, Na^+, K^+ : <1.0μmol/L

Ca^{2+}, nss-Ca^{2+} : <0.2μmol/L

Mg^{2+} : <0.4μmol/L

In Table 3.37-Table 3.47 Monthly deposition amount of each constituent,

[0.00] : Deposition amount is zero (no precipitation)

[<0.01] : <0.01mmol/m^2

In Table 3.48 Results of ion balance and conductivity agreement check,

- Sample(N) : Number of samples
- R1(N) : Number of samples measured and calculated ion balance (R1)
- R1(AA) : Number of samples within allowable ranges for R1
- R2(N) : Number of samples measured and caluculated conductivity agreement (R2)
- R2(AA) : Number of samples within allowable ranges for R2
- R1&R2(N) : Number of samples measured and calculated both R1 and R2
- R1&R2(AA) : Number of samples within allowable ranges for both R1and R2

- Ulaanbaatar and Terelj : R_1 and R_2, calculated including measured F^- concentrations
- Mondy : R_1 and R_2, calculated including measured HCO_3^- concentrations, NO_2^- concentrations, and Br^- concentrations
- Listvjanka : R_1 and R_2, calculated including measured HCO_3^- concentrations, NO_2^- concentrations, and F^- concentrations
- Irkutsk : R_1 and R_2, calculated including measured HCO_3^- concentrations, NO_2^- concentrations, F^- concentrations and Br^- concentrations

In Fig.3.2 - 3.79, descriptions are as follows.

(1) Ion Balance (R1)

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

(2) Conductivity Agreement (R2)

- (Λmeans) is logarithm scale
- Horizontal bar : The allowable range of R_2 in each conductivity range

- Ulaanbaatar and Terelj : R_1 and R_2, calculated including measured F^- concentrations
- Mondy : R_1 and R_2, calculated including measured HCO_3^- concentrations, NO_2^-

concentrations, and Br^- concentrations

- Listvjanka : R_1 and R_2, calculated including measured HCO_3^- concentrations, NO_2^- concentrations, and F^- concentrations
- Irkutsk : R_1 and R_2, calculated including measured HCO_3^- concentrations, NO_2^- concentrations, F^- concentrations and Br^- concentrations

Table 3.6 Annual precipitation amounts and weighted averages in 2000

Country	Name of sites	Precip. mm	SO_4^{2-} µmol/L	nss-SO_4^{2-} µmol/L	NO_3^- µmol/L	Cl^- µmol/L	NH_4^+ µmol/L	Na^+ µmol/L	K^+ µmol/L	Ca^{2+} µmol/L	nss-Ca^{2+} µmol/L	Mg^{2+} µmol/L	H^+ µmol/L	pH	EC mS/m
China	Chongqing														
	-Guanyinqiao	1081.1	152	151	42.1	24.0	161	11.8	14.2	63.0	62.8	8.5	46.7	4.33	5.61
	-Nanshan	1259.4	130	130	41.6	15.6	105	7.7	16.3	55.2	55.0	7.0	60.5	4.22	5.20
	Xi'an														
	-Shizhan	559.1	356	353	87.0	49.0	421	44.1	26.5	229	228	23.6	2.1	5.68	11.4
	-Weishuiyuan	447.4	538	534	95.8	91.6	426	68.9	34.7	305	303	31.7	0.4	6.42	15.1
	-Dabagou	829.3	141	140	29.1	32.3	199	23.8	17.9	124	123	14.6	3.8	5.42	7.71
	Xiamen														
	-Hongwen	1517.2	20.2	18.8	18.7	32.0	31.6	23.8	5.0	6.7	6.3	4.2	19.1	4.72	1.66
	-Xiaoping	1566.4	14.6	14.1	14.6	20.7	19.8	8.7	2.8	0.8	0.6	1.3	12.2	4.91	0.88
	Zhuhai														
	-Xiang Zhou	2030.5	22.4	19.9	15.6	49.8	20.5	42.1	6.6	21.2	20.3	6.9	7.0	5.15	2.05
	-Zhuxian Cavern	1778.8	48.0	46.3	33.5	39.4	51.0	31.2	6.2	25.0	24.3	7.9	23.0	4.64	3.04
Indonesia	Jakarta	1577.4	58.7	55.6	17.6	21.5	77.3	52.4	--	87.6	86.4	219.3	6.6	5.18	5.1
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	2339.8	3.7	--	6.2	6.8	1.1	--	--	4.0	--	--	31.2	4.51	1.00
	Bandung	893.3	67.4	--	34.4	104.8	32.8	--	--	--	--	--	--	--	3.37
Japan	Rishiri	769.9	39.0	19.4	18.1	372	34.0	325	9.9	13.7	6.7	36.3	15.7	4.80	6.37
	Tappi	1048.8	21.9	12.9	12.9	178	9.6	149	3.6	6.4	3.2	17.5	19.0	4.72	3.69
	Sado-seki	1067.7	34.4	18.9	18.3	274	16.9	258	6.4	11.7	6.2	29.0	26.9	4.57	4.76
	Happo	2187.9	13.3	12.9	11.1	10.7	14.2	7.8	<1.0	3.9	3.7	1.7	18.6	4.73	1.22
	Oki	1209.1	40.5	16.9	18.6	449	19.4	396	10.5	16.0	7.5	45.0	22.8	4.64	7.28
	Yusuhara	2800.7	11.1	10.1	7.0	18.7	5.1	15.2	<1.0	2.7	2.4	2.2	19.5	4.71	1.17
	Ogasawara	1984.9	11.4	3.1	2.4	164	2.3	139	3.6	5.1	2.1	19.2	5.9	5.23	2.59
	Hedo	2906.8	32.2	5.9	5.7	515	7.2	454	9.1	10.1	0.8	50.0	7.4	5.13	7.21
	Ijira	2685.2	19.9	18.7	24.1	23.0	23.8	19.9	2.9	6.8	6.3	2.9	30.1	4.52	2.11
	Banryu	1565.2	15.6	13.9	13.9	31.0	11.6	28.9	1.4	4.2	3.7	3.3	22.9	4.64	1.82
Malaysia	Petaling Jaya	3417.4	23.5	23.2	27.2	8.5	43.7	5.0	1.8	6.8	6.7	1.4	44.9	4.35	2.08
	Tanah Rata	3127.4	4.1	4.0	3.3	6.8	41.1	1.9	1.1	2.3	2.2	0.4	16.1	4.79	0.73
Mongolia	Ulaanbaatar	196.5	24.3	23.9	19.9	9.0	52.0	7.9	3.9	37.7	37.6	4.1	0.5	6.26	1.79
	Terelj	207.6	16.4	16.0	17.6	9.0	44.3	6.5	4.5	15.2	15.1	3.2	3.0	5.52	1.28
Philippines	Metro Manila	4035.6	23.4	21.6	12.1	25.6	35.6	30.6	15.5	14.5	13.9	6.3	3.3	5.48	2.20
	Los Banos	2635.2	10.5	8.5	5.4	33.0	13.6	34.8	1.7	7.0	6.2	3.7	3.6	5.44	1.13
Republic	Kanghwa	1117.6	31.6	28.2	42.4	54.9	37.6	56.3	5.6	26.5	25.3	9.3	10.0	5.00	2.50
of Korea	Cheju	1058.4	23.2	14.0	15.3	210	20.2	152	6.3	13.8	10.5	18.6	14.1	4.85	3.37
Russia	Mondy	304.7	7.2	7.1	10.0	2.6	11.4	1.8	1.2	5.8	5.7	1.1	5.5	5.26	0.58
	Listvyanka	441.6	15.4	15.1	18.7	5.0	16.5	4.6	4.7	12.8	12.7	2.9	8.6	5.07	1.04
	Irkutsk	534.4	30.1	29.6	21.0	11.6	32.1	8.8	4.4	28.0	27.8	5.0	7.8	5.11	1.71
Thailand	Bangkok	1147.9	21.6	21.2	21.6	12.6	41.3	6.9	3.2	11.4	11.2	2.0	11.1	4.95	1.64
	Samutprakarn	977.7	25.5	24.9	15.4	12.9	31.8	10.1	5.3	11.1	10.8	2.4	14.8	4.83	1.52
	Patumthani	955.6	19.6	18.9	18.6	10.4	38.3	10.9	2.3	13.2	12.9	2.4	5.7	5.25	1.48
	Khao Lam	881.3	3.6	3.1	5.7	17.6	6.8	9.7	8.9	4.8	4.6	1.7	2.7	5.56	0.52
Vietnam	Hanoi	1256.3	30.1	29.0	16.1	24.3	27.5	18.1	4.1	20.9	20.5	5.0	3.6	5.45	1.55
	Hoa Binh	1893.6	16.3	15.5	9.7	20.3	8.0	12.7	3.6	13.1	12.8	4.7	7.8	5.11	1.15

Table 3.7 Data completeness for annual summaries in 2000 (%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 %
China	Chongqing														
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	98	98	98
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an														
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen														
	-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
	Zhuhai														
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	100	9	9	9	9	9	9	0	9	9	9	9	9	9
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	100	8	0	8	8	8	0	0	8	0	0	8	8	8
	Bandung	84	100	0	100	100	100	0	0	0	0	0	0	0	97
Japan	Rishiri	100	60	60	60	60	60	60	60	60	60	60	60	60	60
	Tappi	100	76	76	76	76	76	76	76	76	76	76	75	75	75
	Sado-seki	83	75	75	75	75	75	75	75	75	75	75	73	73	73
	Happo	100	86	86	86	86	86	86	86	86	86	86	86	86	86
	Oki	100	100	100	100	100	100	100	100	100	100	100	99	99	99
	Yusuhara	100	97	97	97	97	97	97	97	97	97	97	97	97	97
	Ogasawara	100	99	99	99	99	99	99	99	99	99	99	99	99	99
	Hedo	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	100	76	76	76	76	76	76	76	76	76	76	76	76	76
Malaysia	Petaling Jaya	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mongolia	Ulaanbaatar	58	100	100	100	100	100	100	100	100	100	100	100	100	100
	Terelj	58	100	100	100	100	100	100	100	100	100	100	100	100	100
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	100	76	76	76	76	76	76	76	76	76	76	76	76	76
of Korea	Cheju	100	75	75	75	75	75	75	75	75	75	75	75	75	75
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	97	97	97
	Irkutsk	100	97	97	97	97	97	97	97	97	97	97	97	97	97
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 3.8 Annual deposition amounts in 2000

Country	Name of sites	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
China	Chongqing											
	-Guanyinqiao	164	163	45.5	25.9	174	12.8	15.3	68.1	67.9	9.23	50.5
	-Nanshan	164	164	52.4	19.7	132	9.73	20.5	69.5	69.3	8.87	76.2
	Xi'an											
	-Shizhan	199	198	48.6	27.4	235	24.7	14.8	128	128	13.2	1.17
	-Weishuiyuan	241	239	42.9	41.0	190	30.8	15.5	136	136	14.2	0.17
	-Dabagou	117	116	24.1	26.8	165	19.8	14.8	103	102	12.1	3.14
	Xiamen											
	-Hongwen	30.7	28.5	28.4	48.6	47.9	36.1	7.56	10.2	9.59	6.40	29.0
	-Xiaoping	22.8	22.0	22.8	32.4	31.0	13.6	4.40	1.21	0.94	2.07	19.1
	Zhuhai											
	-Xiang Zhou	45.5	40.3	31.8	101	41.7	85.4	13.4	43.1	41.3	14.1	14.2
	-Zhuxian Cavern	85.4	82.4	59.6	70.2	90.7	55.5	11.0	44.4	43.2	14.1	40.8
Indonesia	Jakarta	92.7	87.7	27.8	33.9	122	82.6	--	138	136	346	10.4
	Serpong	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	8.65	--	14.4	15.8	2.66	--	--	9.28	--	--	73.0
	Bandung	60.2	--	30.7	93.7	29.3	--	--	--	--	--	--
Japan	Rishiri	30.0	14.9	13.9	286	26.2	250	7.66	10.6	5.14	28.0	12.1
	Tappi	22.9	13.5	13.5	187	10.1	156	3.82	6.68	3.36	18.3	19.9
	Sado-seki	36.8	20.2	19.5	292	18.1	275	6.80	12.5	6.60	30.9	28.7
	Happo	29.2	28.1	24.3	23.4	31.0	17.2	1.76	8.49	8.12	3.66	40.6
	Oki	49.0	20.4	22.4	543	23.5	479	12.7	19.4	9.07	54.4	27.6
	Yusuhara	31.0	28.4	19.7	52.4	14.2	42.6	2.15	7.55	6.80	6.09	54.7
	Ogasawara	22.6	6.22	4.73	325	4.62	277	7.10	10.1	4.24	38.2	11.7
	Hedo	93.6	17.1	16.7	1497	21.0	1318	26.3	29.3	2.35	145	21.5
	Ijira	53.3	50.1	64.8	61.8	63.8	53.5	7.91	18.2	17.0	7.75	80.7
	Banryu	24.4	21.7	21.7	48.5	18.2	45.2	2.12	6.64	5.74	5.22	35.9
Malaysia	Petaling Jaya	80.4	79.3	92.9	29.1	149	17.0	6.06	23.4	23.0	4.74	153
	Tanah Rata	12.9	12.5	10.4	21.3	129	5.94	3.41	7.06	6.93	1.30	50.4
Mongolia	Ulaanbaatar	4.78	4.69	3.91	1.76	10.2	1.55	0.77	7.41	7.38	0.81	0.11
	Terelj	3.41	3.33	3.65	1.86	9.20	1.34	0.93	3.16	3.13	0.66	0.63
Philippines	Metro Manila	94.4	87.0	48.9	103	143	123	62.6	58.6	56.0	25.5	13.2
	Los Banos	27.7	22.4	14.3	87.1	35.9	91.7	4.58	18.3	16.3	9.78	9.58
Republic of Korea	Kanghwa	35.3	31.6	47.4	61.4	42.0	62.9	6.27	29.6	28.2	10.4	11.2
	Cheju	24.5	14.8	16.2	222	21.3	161	6.69	14.6	11.1	19.7	15.0
Russia	Mondy	2.19	2.16	3.04	0.79	3.47	0.56	0.36	1.76	1.75	0.33	1.68
	Listvyanka	6.79	6.67	8.25	2.22	7.29	2.02	2.06	5.66	5.61	1.30	3.78
	Irkutsk	16.1	15.8	11.2	6.19	17.2	4.73	2.34	14.9	14.8	2.66	4.15
Thailand	Bangkok	24.8	24.4	24.8	14.4	47.4	7.95	3.70	13.0	12.9	2.30	12.8
	Samutprakarn	25.0	24.4	15.1	12.6	31.1	9.91	5.17	10.8	10.6	2.33	14.5
	Patumthani	18.7	18.1	17.8	9.96	36.6	10.4	2.16	12.6	12.3	2.30	5.41
	Khao Lam	3.21	2.72	5.06	15.5	6.03	8.55	7.82	4.19	4.02	1.47	2.41
Vietnam	Hanoi	37.9	36.5	20.2	30.5	34.5	22.8	5.14	26.2	25.7	6.27	4.48
	Hoa Binh	30.8	29.4	18.3	38.4	15.2	24.1	6.74	24.8	24.2	8.84	14.7

Table 3.9 Monthly precipitation amounts unit: mm

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	10.9	4.8	30.2	130.3	86.4	100.5	259.4	184.8	113.9	88.6	53.3	18.0
	-Nanshan	22.0	7.3	84.4	127.3	138.1	69.0	325.2	124.8	172.5	94.6	66.8	27.4
	Xi'an												
	-Shizhan	7.0	2.5	16.1	0.0	38.3	127.0	60.5	127.6	61.7	83.5	25.3	9.6
	-Weishuiyuan	0.0	3.3	3.4	8.5	29.5	128.4	49.2	78.5	78.5	54.1	11.5	2.5
	-Dabagou	0.0	7.6	0.0	21.7	36.8	156.6	53.3	208.8	107.2	145.5	12.8	79.0
	Xiamen												
	-Hongwen	17.0	160.8	24.9	168.9	0.2	517.8	246.0	189.2	63.3	0.0	51.3	77.8
	-Xiaoping	8.0	173.2	53.8	176.4	4.3	632.4	241.8	203.3	0.0	0.0	0.0	73.2
	Zhuhai												
	-Xiang Zhou	87.9	27.3	62.9	826.0	74.2	414.6	218.4	100.3	3.4	108.0	24.2	83.3
	-Zhuxian Cavern	46.0	21.2	44.9	522.6	78.9	328.6	229.1	137.8	8.0	232.1	44.4	85.2
Indonesia	Jakarta	201.4	163.5	78.1	149.9	254.7	72.0	73.9	82.8	83.9	88.7	203.8	124.7
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	179.2	124.9	137.4	179.2	75.5	80.8	162.7	271.5	167.5	215.6	526.4	219.1
	Bandung	--	--	104.9	212.2	152.3	42.6	86.9	19.7	37.8	42.9	139.1	55.0
Japan	Rishiri	69.0	22.5	24.5	34.5	61.5	77.7	101.0	68.5	112.0	88.0	72.5	38.2
	Tappi	122.5	28.2	45.6	60.5	80.0	66.5	153.5	21.0	247.5	40.5	99.0	84.0
	Sado-seki	84.5	105.0	116.0	56.0	40.5	119.5	65.2	19.2	158.7	103.5	122.5	77.1
	Happo	107.9	139.0	197.0	63.5	72.5	259.9	192.0	251.1	230.1	302.1	202.7	170.1
	Oki	88.0	71.4	113.3	94.3	53.7	121.9	110.4	24.0	206.6	91.7	176.1	57.7
	Yusuhara	111.4	54.8	196.0	123.0	162.5	372.0	351.0	231.5	785.0	108.0	251.0	54.5
	Ogasawara	140.7	95.5	96.0	88.8	187.1	32.1	360.0	232.0	203.5	137.5	183.7	228.0
	Hedo	90.5	98.5	128.5	201.5	89.0	225.0	799.5	203.3	406.0	107.0	387.0	171.0
	Ijira	98.5	106.0	248.5	263.0	246.0	458.0	361.2	108.0	413.3	181.2	121.5	80.0
	Banryu	157.0	49.5	138.0	82.2	77.0	215.5	49.0	192.5	304.5	116.5	155.0	28.5
Malaysia	Petaling Jaya	381.5	292.8	316.7	287.8	74.0	176.4	208.9	151.5	434.3	141.8	517.4	434.3
	Tanah Rata	166.8	189.0	479.4	477.2	217.7	245.1	110.0	176.6	250.7	173.4	304.8	336.7
Mongolia	Ulaanbaatar	--	--	--	2.4	6.0	14.2	52.5	107.5	7.5	6.4	--	--
	Terelj	--	--	--	2.2	6.0	35.6	48.7	83.5	20.2	11.4	--	--
Philippines	Metro Manila	23.9	31.5	103.5	140.8	505.3	154.9	1266.0	248.2	569.8	758.4	138.0	95.3
	Los Banos	8.3	178.1	83.5	56.3	149.4	406.0	233.4	96.1	199.8	868.9	163.9	191.5
Republic	Kanghwa	39.8	2.1	2.9	42.0	73.0	55.5	82.4	423.5	305.5	32.0	21.0	37.9
of Korea	Cheju	62.2	7.4	37.2	28.5	42.5	211.8	71.9	225.3	188.1	105.0	68.0	10.5
Russia	Mondy	0.8	1.4	4.9	11.1	8.0	31.2	132.0	72.5	30.0	9.7	0.0	3.1
	Listvyanka	5.7	10.0	7.8	18.5	10.4	46.4	127.8	134.9	24.7	28.9	2.3	24.2
	Irkutsk	12.8	20.4	14.5	20.2	5.8	54.1	136.4	177.5	40.4	31.8	4.3	16.2
Thailand	Bangkok	0.0	0.0	4.3	103.5	183.1	192.8	83.4	201.5	133.1	246.2	0.0	0.0
	Samutprakarn	0.0	0.0	0.0	3.0	137.7	105.7	111.1	165.9	254.9	199.4	0.0	0.0
	Patumthani	0.0	11.3	8.9	82.9	171.9	162.0	93.6	114.9	212.6	97.5	0.0	0.0
	Khao Lam	0.0	0.0	0.0	0.0	37.2	115.8	206.1	180.1	137.8	204.3	0.0	0.0
Vietnam	Hanoi	2.0	17.7	44.5	153.9	103.1	198.9	252.3	195.1	48.3	238.1	2.4	0.0
	Hoa Binh	2.5	22.8	18.7	20.7	331.0	303.6	323.3	143.2	345.0	193.5	3.4	0.0

Table 3.10 Data completeness of precipitation amounts (%PCL) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	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
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	100	100	100	100	100	100	100	100	100	100	100	100
	Bandung	0	0	100	100	100	100	100	100	100	100	100	100
Japan	Rishiri	100	100	100	100	100	100	100	100	100	100	100	100
	Tappi	100	100	100	100	100	97	100	100	100	100	100	100
	Sado-seki	97	0	0	93	100	100	100	100	100	100	100	100
	Happo	100	100	100	100	100	100	100	100	100	100	97	100
	Oki	100	100	100	100	100	100	100	100	100	100	100	100
	Yusuhara	100	100	100	100	100	100	100	100	100	100	100	100
	Ogasawara	100	100	100	100	100	100	100	100	100	100	100	100
	Hedo	100	100	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	100	100	100	100	100	100	100	100	100	100	100	100
Malaysia	Petaling Jaya	100	100	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	100	100	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	100	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	100	100	100	100	100	100	100	100	100	100	100	100
of Korea	Cheju	100	100	100	100	100	100	100	100	100	100	100	100
Russia	Mondy	100	100	100	100	100	100	100	100	100	100	100	100
	Listvyanka	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
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	100	100	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	100	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	100	100	100	100	100

Table 3.11 Monthly weighted averages of SO_4^{2-} concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	467	584	342	161	126	171	97.4	109	137	165	256	404	952	12	20.8	7				
	-Nanshan	377	369	187	169	79.9	156	73.8	123	102	147	206	345					808	3	56.1	7
	Xi'an																				
	-Shizhan	845	541	378	--	388	185	350	173	443	214	1310	2680	3690	12	73.3	8				
	-Weishuiyuan	--	606	2080	899	519	331	1020	334	410	390	1750	6550	6550	12	131	5				
	-Dabagou	--	118	--	205	245	144	122	42.4	163	97.0	172	394	546	5	17.6	8				
	Xiamen																				
	-Hongwen	35.9	25.8	68.2	28.8	175	15.3	18.9	16.8	31.6	--	7.6	14.9	210	3	2.6	12				
	-Xiaoping	8.9	4.5	13.6	21.3	16.3	9.5	18.4	13.4	--	--	--	58.5	87.5	4	<1.0	2				
	Zhuhai																				
	-Xiang Zhou	92.0	218	51.1	9.6	44.0	4.7	20.2	35.9	131	14.0	63.1	43.5	499	5	<1.0	6				
	-Zhuxian Cavern	70.4	182	129	81.3	44.5	16.5	19.7	35.8	116	20.0	69.6	34.6	392	2	<1.0	7				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	59.6	57.3					68.1	11	28.5	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	4.0	4.2	2.8	--	--	--	--	--	--	--	6.0	4	2.0	5				
	Bandung	--	--	72.6	81.6	67.7	52.5	83.7	106	144	41.6	40.8	7.9	225	9	6.0	12				
Japan	Rishiri	51.4	73.2	108	25.0	13.6	17.2	22.5	5.5	--	--	101	53.0	270	3	1.8	7				
	Tappi	18.5	23.9	30.9	12.7	--	--	18.6	27.4	24.8	21.7	22.5	23.8	107	9	1.0	4				
	Sado-seki	64.8	--	--	45.1	45.9	11.7	14.5	11.9	25.7	32.4	26.6	94.6	1530	9	2.1	6				
	Happo	13.6	18.1	14.8	29.3	13.7	4.1	12.3	27.7	9.4	6.5	7.5	16.6	234	4	<1.0	7				
	Oki	104	174	49.2	19.4	28.6	12.4	8.1	15.3	14.5	23.8	29.7	90.3	779	2	2.0	9				
	Yusuhara	15.6	21.6	22.8	13.7	15.7	7.7	6.5	7.2	10.8	18.7	4.2	21.4	232	3	<1.0	6				
	Ogasawara	7.3	15.1	9.0	13.7	20.5	6.0	4.4	11.8	22.8	6.2	5.1	14.2	228	5	1.6	8				
	Hedo	29.0	31.3	30.3	7.6	6.8	6.3	17.9	250	17.4	13.2	8.9	20.5	598	8	1.4	7				
	Ijira	13.4	17.3	20.5	19.8	22.0	19.5	20.9	23.4	11.2	32.0	24.1	26.1					94.0	8	4.4	9
	Banryu	--	--	--	24.8	20.8	8.8	11.7	10.4	12.1	24.0	15.5	82.0					244	12	3.9	9
Malaysia	Petaling Jaya	20.7	20.7	26.2	23.7	9.7	19.9	21.6	24.0	19.5	12.2	27.8	33.0					71.7	3	2.6	5
	Tanah Rata	<1.0	5.1	5.7	3.3	3.2	6.2	6.6	4.7	5.9	3.4	2.9	2.4					41.5	5	<1.0	1
Mongolia	Ulaanbaatar	--	--	--	103	34.4	52.6	27.4	16.3	39.1	14.8	--	--	244	4	5.2	7				
	Terelj	--	--	--	36.5	22.3	19.3	21.6	11.5	20.1	7.8	--	--	148	6	1.1	7				
Philippines	Metro Manila	47.8	105	15.6	20.8	12.7	25.8	14.1	23.4	27.8	32.3	23.1	81.9					105	2	3.8	6
	Los Banos	--	10.8	2.4	4.0	4.3	8.2	19.9	17.5	8.7	10.1	15.0	10.7					40.3	2	1.5	4
Republic	Kanghwa	65.0	--	--	106	83.9	98.8	69.7	10.5	1.5	46.1	26.7	162	162	12	1.4	9				
of Korea	Cheju	53.7	161	32.3	247	19.6	13.3	5.1	14.3	13.3	18.2	41.8	--	247	4	5.1	7				
Russia	Mondy	13.6	15.7	28.4	35.7	22.4	15.2	4.7	2.9	1.0	8.2	--	10.2	47.5	3	<1.0	7				
	Listvyanka	17.8	13.9	33.9	18.4	33.0	22.4	9.5	11.2	16.3	35.1	10.8	16.0	71.8	8	0.0	7				
	Irkutsk	66.9	45.8	76.5	97.7	127	25.7	30.5	14.5	20.2	31.2	63.5	32.5	827	5	7.9	7				
Thailand	Bangkok	--	--	38.1	33.9	34.0	12.8	20.6	11.7	26.0	19.9	--	--	96.0	5	0.0	5				
	Samutprakarn	--	--	--	26.5	27.5	26.3	33.7	16.4	30.2	20.8	--	--	158	7	4.3	8				
	Patumthani	--	78.4	66.8	19.1	19.1	23.2	16.7	18.9	11.4	25.3	--	--	88.5	5	5.1	9				
	Khao Lam	--	--	--	--	3.3	1.8	6.6	1.0	3.8	4.0	--	--	25.9	7	0.0	8				
Vietnam	Hanoi	586	149	170	34.0	56.8	14.8	13.0	30.9	32.2	6.1	72.1	--					586	1	2.1	10
	Hoa Binh	144	56.0	66.1	10.7	11.5	10.4	8.3	29.7	23.8	11.4	123	--					144	1	5.3	7

Table 3.12 Data completeness of SO_4^{2-} (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	22	56	85	0	0	0	0	0	0	0
	Bandung	0	0	100	100	100	100	100	100	100	100	100	100
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	100	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	100	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	99	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.13 Monthly weighted averages of nss-SO_4^{2-} concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	463	574	340	160	126	171	96.9	108	137	164	255	403	950	12	20.5	7				
	-Nanshan	376	368	186	169	79.6	155	73.4	123	102	147	205	344					805	3	55.8	7
	Xi'an																				
	-Shizhan	799	530	377	--	385	184	345	172	441	213	1300	2670	3680	12	72.2	8				
	-Weishuiyuan	--	582	2060	889	513	329	1020	332	408	386	1720	6540	6540	12	130	5				
	-Dabagou	--	107	--	203	244	141	121	41.4	162	96.8	171	391	546	5	16.4	8				
	Xiamen																				
	-Hongwen	21.1	25.4	66.3	28.2	172	14.4	15.9	15.0	31.1	--	6.2	14.4	210	3	1.7	12				
	-Xiaoping	7.7	4.2	13.4	21.1	14.9	9.2	16.4	13.2	--	--	--	58.4	87.2	4	<1.0	2				
	Zhuhai																				
	-Xiang Zhou	70.6	212	48.4	8.3	41.7	4.3	15.0	35.0	126	12.0	62.3	42.6	498	5	<1.0	6				
	-Zhuxian Cavern	69.4	179	126	79.0	43.7	15.7	17.2	34.9	109	18.5	68.8	34.1	382	2	<1.0	7				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	56.0	54.9					63.1	11	27.8	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
Japan	Rishiri	29.7	40.7	46.6	14.0	12.6	12.1	21.0	3.5	--	--	26.1	25.2	149	7	<1.0	11				
	Tappi	11.7	17.3	24.1	6.4	--	--	15.4	13.3	10.4	17.0	14.9	6.9	82.3	3	<1.0	10				
	Sado-seki	19.8	--	--	23.6	39.5	10.8	12.2	10.7	16.1	27.1	13.6	29.6	329	9	<1.0	12				
	Happo	12.8	16.8	13.8	28.1	13.5	4.0	12.3	27.6	9.3	6.4	7.3	15.2	228	4	<1.0	7				
	Oki	25.1	30.7	26.9	16.3	26.7	11.2	6.5	11.2	8.2	18.6	14.4	29.3	251	5	<1.0	2				
	Yusuhara	14.9	17.8	21.6	13.1	14.7	7.5	4.7	6.4	10.1	17.8	3.5	20.2	218	2	<1.0	6				
	Ogasawara	3.6	7.7	4.7	8.6	4.5	2.8	1.0	1.8	1.2	2.4	2.6	4.4	60.2	11	<1.0	5				
	Hedo	9.5	16.7	19.4	4.7	4.0	3.2	8.2	1.7	<1.0	8.4	2.7	6.5	436	3	<1.0	1				
	Ijira	11.5	12.8	17.7	18.5	21.3	19.0	20.3	21.7	10.7	31.4	23.3	22.2					91.3	8	4.0	9
	Banryu	--	--	--	22.8	20.1	8.4	10.7	10.0	11.2	21.1	12.5	60.3					94.5	5	3.6	9
Malaysia	Petaling Jaya	20.3	20.5	26.0	23.5	9.4	19.6	20.5	23.7	19.3	11.9	27.7	32.7					70.2	3	2.4	5
	Tanah Rata	<1.0	5.0	5.6	3.2	3.1	6.0	6.3	4.6	5.8	3.2	2.8	2.3					41.1	5	<1.0	1
Mongolia	Ulaanbaatar	--	--	--	99.3	33.0	52.0	27.0	15.9	38.4	14.4	--	--	228	4	4.9	7				
	Terelj	--	--	--	34.0	21.9	19.1	21.3	11.1	19.4	7.4	--	--	144	6	<1.0	7				
Philippines	Metro Manila	47.7	104	11.5	20.2	11.4	25.5	11.2	20.5	26.1	31.5	22.1	80.7					104	2	2.8	5
	Los Banos	--	7.9	1.2	3.5	3.1	6.5	18.4	16.6	6.5	7.8	11.9	8.7					35.6	2	0.0	2
Republic	Kanghwa	61.4	--	--	100	79.6	95.6	59.4	8.4	<1.0	45.2	24.0	147	153	4	<1.0	9				
of Korea	Cheju	25.8	112	26.6	125	15.2	11.7	2.7	11.8	2.5	13.7	21.6	--	125	4	2.5	9				
Russia	Mondy	13.3	15.3	27.6	35.5	22.1	15.1	4.6	2.8	<1.0	8.0	--	9.9	46.6	4	<1.0	7				
	Listvyanka	17.5	13.3	33.5	18.1	32.7	21.9	9.4	11.0	16.1	34.5	10.7	15.7	70.8	8	0.0	7				
	Irkutsk	65.9	44.8	74.4	96.1	125	25.5	30.3	14.3	20.0	30.2	60.9	30.5	809	5	7.7	7				
Thailand	Bangkok	--	--	37.7	33.7	33.5	12.3	19.6	11.4	25.5	19.7	--	--	95.1	5	0.0	5				
	Samutprakarn	--	--	--	25.6	26.4	25.6	32.8	16.0	29.7	20.5	--	--	156	7	4.0	8				
	Patumthani	--	77.3	65.4	18.9	18.5	22.0	15.8	18.4	11.0	24.8	--	--	88.5	5	4.9	9				
	Khao Lam	--	--	--	--	2.7	1.3	5.3	0.7	3.2	3.9	--	--	21.5	7	0.0	8				
Vietnam	Hanoi	574	147	168	33.6	56.0	13.6	11.7	29.2	30.2	5.8	70.7	--					574	1	1.8	10
	Hoa Binh	143	55.7	65.6	9.4	11.2	9.4	8.1	28.2	22.3	10.6	115	--					143	1	5.0	10

Table 3.14 Data completeness of nss-SO_4^{2-} (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	0	0	0	0	0	0	0	0	0	0
	Bandung	0	0	0	0	0	0	0	0	0	0	0	0
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	99	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	99	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	98	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.15 Monthly weighted averages of NO_3^- concentration unit: μ mol/L

Country	Name of sites	2000												Daily or Event				Weekly			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	145	192	96.8	38.2	27.5	41.1	31.2	28.0	36.6	47.8	71.0	176	319	12	9.7	7				
	-Nanshan	132	80.3	68.8	47.6	18.6	55.7	23.3	49.2	31.0	37.4	66.8	133					240	12	15.0	5
	Xi'an																				
	-Shizhan	239	154	91.1	--	127	50.0	85.7	66.5	126	47.1	220	309	430	12	6.5	7				
	-Weishuiyuan	--	342	251	93.4	74.4	56.8	169	73.5	104	76.6	329	183	512	7	13.5	9				
	-Dabagou	--	138	--	107	45.5	41.3	30.6	13.4	33.3	18.3	69.1	13.8	138	2	5.3	8				
	Xiamen																				
	-Hongwen	18.9	10.3	46.8	29.1	39.2	17.0	18.4	16.1	49.0	--	9.9	4.9	198	3	1.6	12				
	-Xiaoping	14.9	7.6	20.0	26.2	20.3	14.4	14.9	10.4	--	--	--	10.7	71.9	4	4.0	3				
	Zhuhai																				
	-Xiang Zhou	29.9	97.1	31.0	10.1	52.0	5.0	16.5	22.1	138	10.7	41.0	21.6	218	7	<1.0	7				
	-Zhuxian Cavern	33.8	55.8	48.1	62.4	47.2	10.7	20.5	21.5	98.4	13.4	29.8	22.6	194	7	<1.0	7				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	12.1	27.1					41.1	11	0.5	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	6.1	6.0	6.4	--	--	--	--	--	--	--	7.4	4	4.6	4				
	Bandung	--	--	19.7	30.6	30.9	44.5	34.3	98.8	95.2	32.8	26.4	35.8	182	9	10.5	11				
Japan	Rishiri	9.5	20.5	35.2	15.3	15.8	16.0	20.1	5.4	--	--	21.8	26.1	181	7	1.0	11				
	Tappi	13.4	12.7	32.4	13.9	--	--	16.5	21.0	5.9	15.0	15.1	5.5	164	3	<1.0	11				
	Sado-seki	17.0	--	--	34.4	52.0	17.0	17.6	25.8	7.8	16.3	12.0	27.7	143	6	<1.0	9				
	Happo	9.2	12.5	11.4	34.4	15.9	6.4	14.1	21.8	6.2	4.9	4.6	10.0	346	4	1.1	10				
	Oki	25.1	45.9	32.1	21.0	29.8	15.9	7.2	19.7	4.5	19.0	9.5	37.6	443	2	1.1	9				
	Yusuhara	14.7	26.7	16.1	11.6	13.0	5.7	4.5	4.2	3.2	11.0	3.7	15.8	221	2	<1.0	6				
	Ogasawara	3.3	6.5	3.6	10.9	3.1	2.6	<1.0	1.1	1.3	1.2	1.9	2.2	68.3	4	<1.0	7				
	Hedo	10.4	17.7	19.2	5.8	6.4	3.9	5.8	9.9	<1.0	4.1	2.0	5.1	281	3	<1.0	1				
	Ijira	29.0	20.9	23.3	23.5	32.9	33.0	28.2	41.9	6.8	18.1	16.8	22.0					133	7	3.2	9
	Banryu	--	--	--	21.6	15.5	12.4	11.2	12.0	6.7	23.0	12.4	71.2					113	5	2.1	9
Malaysia	Petaling Jaya	21.5	20.6	37.5	32.0	46.5	18.2	20.0	31.3	18.7	9.0	34.8	33.6					82.8	6	<1.0	8
	Tanah Rata	<1.0	5.1	5.3	3.1	4.8	2.3	5.6	<1.0	5.6	2.3	3.0	<1.0					46.6	5	<1.0	1
Mongolia	Ulaanbaatar	--	--	--	44.1	31.8	39.9	23.0	14.7	26.2	10.1	--	--	171	6	2.6	7				
	Terelj	--	--	--	25.8	28.9	22.6	22.3	12.2	20.0	9.1	--	--	155	9	<1.0	7				
Philippines	Metro Manila	7.7	6.1	11.7	9.0	4.2	18.0	6.9	14.9	17.3	15.3	9.7	61.6					61.6	12	1.9	6
	Los Banos	--	5.6	0.5	2.6	1.4	3.8	10.6	4.2	4.8	4.9	4.8	13.0					31.0	12	0.5	2
Republic	Kanghwa	43.9	--	--	92.9	93.5	186	93.4	26.3	<1.0	47.3	48.1	213	302	7	<1.0	9				
of Korea	Cheju	23.8	84.3	24.8	72.8	19.2	17.3	4.5	13.4	3.3	20.1	10.9	--	84.3	2	3.2	9				
Russia	Mondy	15.5	12.9	15.2	15.4	9.0	2.9	10.2	14.3	6.1	3.3	--	<1.0	50.0	3	<1.0	8				
	Listvyanka	61.8	39.4	51.4	14.4	25.4	30.1	17.8	11.2	8.1	12.5	30.6	31.2	115	2	0.0	7				
	Irkutsk	66.2	37.0	46.6	29.4	78.7	37.2	22.4	9.0	6.8	8.8	39.7	30.7	354	5	<1.0	9				
Thailand	Bangkok	--	--	39.8	29.7	33.4	15.0	19.8	5.0	25.1	26.4	--	--	213	4	0.4	8				
	Samutprakarn	--	--	--	17.3	22.0	14.1	11.7	3.9	17.0	21.2	--	--	104	5	0.0	8				
	Patumthani	--	112	98.5	20.6	13.3	23.9	12.0	14.6	10.2	28.7	--	--	112	2	2.9	9				
	Khao Lam	--	--	--	--	11.9	10.8	4.8	2.8	4.5	6.2	--	--	21.4	7	0.0	7				
Vietnam	Hanoi	217	78.4	56.2	25.6	48.5	8.6	10.6	8.3	8.7	2.1	13.2	--					255	3	1.6	10
	Hoa Binh	51.5	40.9	32.3	6.8	10.6	6.6	9.7	9.1	8.4	1.8	14.0	--					66.5	3	<1.0	10

Table 3.16 Data completeness of NO_3^- (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	22	56	85	0	0	0	0	0	0	0
	Bandung	0	0	100	100	100	100	100	100	100	100	100	100
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	100	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	100	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	99	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.17 Monthly weighted averages of Cl^- concentration unit: μ mol/L

Country	Name of sites	2000												Daily or Event				Weekly			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	98.0	225	62.3	21.7	13.4	22.7	11.4	14.7	22.0	46.9	50.3	34.2	265	2	3.9	9				
	-Nanshan	46.0	46.0	17.3	17.2	6.4	17.3	7.1	14.4	15.6	24.6	32.0	49.7					108	3	3.7	3
	Xi'an																				
	-Shizhan	216	131	55.4	--	109	30.6	26.3	27.1	58.8	41.5	115	159	269	5	1.4	6				
	-Weishuiyuan	--	576	194	174	123	77.9	129	52.8	56.8	52.7	373	480	656	11	13.8	9				
	-Dabagou	--	96.5	--	128	60.7	35.5	12.7	23.5	35.7	13.0	16.0	50.7	164	4	6.9	10				
	Xiamen																				
	-Hongwen	34.9	17.1	26.1	18.9	75.8	24.9	60.5	35.0	91.0	--	4.8	12.6	117	2	<1.0	11				
	-Xiaoping	25.4	16.9	27.1	15.6	18.4	17.6	40.8	12.1	--	--	--	20.5	197	6	5.6	1				
	Zhuhai																				
	-Xiang Zhou	406	135	63.3	27.2	28.4	13.0	80.5	35.2	144	27.6	24.4	30.7	674	1	8.5	6				
	-Zhuxian Cavern	19.9	78.1	34.3	49.2	18.1	25.4	63.2	21.8	146	38.8	24.6	21.4	201	2	6.3	6				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	14.9	32.7					32.7	12	9.3	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	8.3	5.9	7.4	--	--	--	--	--	--	--	9.2	3	4.3	4				
	Bandung	--	--	95.9	86.6	69.7	32.7	44.8	53.5	83.6	177	190	202	1080	10	0.0	9				
Japan	Rishiri	389	534	1120	197	15.3	100	28.2	35.7	--	--	1470	500	2450	11	2.0	6				
	Tappi	125	126	127	123	--	--	61.6	274	298	92.1	144	317	1980	9	3.4	9				
	Sado-seki	806	--	--	373	115	13.9	40.4	19.7	173	92.5	233	1130	23700	9	5.1	6				
	Happo	15.3	27.1	19.4	19.8	4.9	1.4	3.0	6.2	3.5	4.7	6.0	30.6	276	4	<1.0	7				
	Oki	1460	2830	404	57.0	33.6	21.0	32.1	66.8	118	95.8	282	1180	17500	2	7.6	6				
	Yusuhara	19.2	70.5	24.8	16.6	23.7	8.7	32.5	12.0	15.2	17.7	13.0	23.6	629	2	<1.0	6				
	Ogasawara	78.8	144	86.2	98.9	334	67.9	68.8	198	427	69.6	49.8	187	4160	5	9.4	10				
	Hedo	304	272	205	50.5	53.4	58.3	180	5000	325	85.2	112	249	12200	8	3.7	5				
	Ijira	29.9	87.8	50.9	23.3	13.0	9.5	12.4	41.2	10.1	16.8	21.1	56.3					272	2	3.4	7
	Banryu	--	--	--	36.0	11.9	8.7	16.8	7.7	17.4	41.3	51.9	413					3020	12	2.3	5
Malaysia	Petaling Jaya	5.3	12.5	11.6	6.0	8.2	9.0	14.9	8.7	9.1	6.8	5.9	7.8					34.7	3	2.8	11
	Tanah Rata	4.8	9.9	5.6	4.2	10.0	11.2	6.6	8.6	7.8	6.3	6.5	5.2					19.8	6	1.1	8
Mongolia	Ulaanbaatar	--	--	--	43.0	17.3	13.2	9.3	6.6	15.0	8.5	--	--	150	4	3.7	8				
	Terelj	--	--	--	28.5	7.2	6.3	7.2	8.4	16.8	12.0	--	--	90.8	9	1.7	7				
Philippines	Metro Manila	29.9	62.1	17.1	14.1	11.1	5.8	23.4	29.3	35.5	31.4	35.8	48.8					62.1	2	3.0	6
	Los Banos	--	37.0	18.1	2.7	6.7	27.3	36.2	44.4	32.7	34.4	62.1	37.3					104	2	2.7	4
Republic	Kanghwa	73.8	--	--	83.4	61.9	56.9	180	28.0	24.9	16.5	27.7	359	679	7	8.3	10				
of Korea	Cheju	808	1390	119	2480	77.8	20.7	37.0	37.6	246	97.5	521	--	2480	4	5.2	6				
Russia	Mondy	14.9	7.5	15.1	7.5	<1.0	6.8	1.9	1.2	<1.0	4.9	--	4.2	19.7	3	<1.0	5				
	Listvyanka	8.8	4.5	9.2	4.9	12.5	7.0	3.2	4.9	6.7	6.7	3.4	3.2	40.9	6	0.0	2				
	Irkutsk	48.5	24.5	35.8	35.1	40.1	8.4	8.5	4.4	2.8	18.0	33.5	25.8	570	10	<1.0	8				
Thailand	Bangkok	--	--	18.0	13.0	26.0	9.1	17.1	9.9	12.2	5.9	--	--	104	5	0.8	8				
	Samutprakarn	--	--	--	15.7	13.4	12.8	15.5	12.6	10.6	14.5	--	--	97.3	8	1.9	8				
	Patumthani	--	66.6	36.1	4.6	12.0	14.3	14.9	7.7	5.5	6.9	--	--	69.0	9	1.0	8				
	Khao Lam	--	--	--	--	11.3	9.0	24.2	8.1	41.5	9.3	--	--	178	10	1.6	8				
Vietnam	Hanoi	280	39.2	83.4	14.7	10.6	31.1	27.5	19.5	24.8	15.8	120	--					280	1	4.8	5
	Hoa Binh	23.7	31.7	22.9	24.0	7.1	22.1	15.0	24.4	26.4	39.3	360	--					360	11	2.4	10

Table 3.18 Data completeness of CΓ (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	22	56	85	0	0	0	0	0	0	0
	Bandung	0	0	100	100	100	100	100	100	100	100	100	100
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	100	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	100	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	99	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.19 Monthly weighted averages of NH_4^+ concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	393	454	384	151	131	188	77.9	113	134	193	394	625	1030	12	<1.0	4				
	-Nanshan	313	498	181	120	70.7	177	41.8	107	49.7	110	202	358					687	12	14.4	9
	Xi'an																				
	-Shizhan	1160	755	600	--	228	481	494	370	511	211	486	759	1760	3	104	10				
	-Weishuiyuan	--	897	1170	483	305	606	479	306	363	199	268	1090	1170	3	61.9	10				
	-Dabagou	--	30.9	--	111	171	243	203	210	159	145	125	304	745	8	10.5	7				
	Xiamen																				
	-Hongwen	79.9	43.1	113	52.4	303	17.8	21.4	21.5	78.2	--	36.4	32.8	344	3	4.4	6				
	-Xiaoping	8.7	15.4	29.1	48.3	25.6	10.7	16.1	32.6	--	--	--	10.8	208	6	<1.0	6				
	Zhuhai																				
	-Xiang Zhou	4.5	147	30.6	15.8	55.7	14.2	6.3	42.0	<1.0	17.3	52.4	42.1	298	5	<1.0	1				
	-Zhuxian Cavern	35.3	111	73.5	106	50.9	13.2	17.0	38.9	135	22.0	42.9	26.0	273	2	<1.0	7				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	97.2	43.2					141	11	43.2	12
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	1.2	1.0	1.3	--	--	--	--	--	--	--	2.0	3	0.7	4				
	Bandung	--	--	15.5	18.7	4.9	40.8	27.9	90.0	237	70.5	32.1	11.8	346	9	0.0	5				
Japan	Rishiri	18.4	19.9	53.1	16.8	16.4	29.9	38.3	9.9	--	--	76.2	26.4	280	7	<1.0	12				
	Tappi	6.9	10.1	32.0	2.5	--	--	20.7	14.2	2.3	17.4	9.3	1.4	129	3	<1.0	1				
	Sado-seki	16.9	--	--	31.4	57.7	17.4	21.0	13.1	5.8	15.8	8.2	22.3	2070	9	<1.0	1				
	Happo	9.0	16.6	16.1	39.2	21.0	6.7	23.9	32.6	6.5	3.0	3.6	10.1	405	4	<1.0	11				
	Oki	30.0	64.2	39.5	18.0	28.6	14.5	6.0	14.4	1.1	16.6	12.1	32.0	492	2	<1.0	1				
	Yusuhara	6.9	15.5	15.7	13.5	10.2	5.3	4.2	1.9	1.8	5.2	<1.0	9.2	280	2	<1.0	6				
	Ogasawara	1.3	5.6	4.2	8.3	3.0	1.8	<1.0	1.6	2.5	2.6	1.2	1.8	205	7	<1.0	1				
	Hedo	8.5	13.2	18.5	6.9	5.3	2.9	16.8	1.6	<1.0	<1.0	<1.0	<1.0	435	3	<1.0	1				
	Ijira	11.9	17.7	22.0	23.7	34.0	34.2	37.4	38.6	6.9	9.4	12.9	15.3					161	7	5.0	9
	Banryu	--	--	--	26.4	18.0	9.6	14.8	9.6	6.2	14.8	6.4	63.7					137	12	1.7	9
Malaysia	Petaling Jaya	24.4	20.0	27.0	20.2	55.4	24.3	29.3	115	78.8	32.1	63.0	37.8					198	8	3.6	1
	Tanah Rata	21.0	95.3	42.9	20.0	56.7	32.1	56.1	27.9	65.7	46.0	44.7	22.7					223	5	4.3	12
Mongolia	Ulaanbaatar	--	--	--	53.4	54.7	85.8	69.1	39.8	62.9	24.5	--	--	229	6	4.4	7				
	Terelj	--	--	--	10.0	55.2	54.1	58.4	36.5	41.3	17.2	--	--	360	7	1.1	7				
Philippines	Metro Manila	216	19.7	246	2.5	51.2	35.6	17.8	19.0	17.4	28.9	100	78.7					246	3	2.5	4
	Los Banos	--	3.7	2.9	14.4	17.4	7.0	15.8	9.4	10.4	22.3	7.3	7.1					24.7	5	0.1	4
Republic	Kanghwa	52.4	--	--	62.1	70.8	90.9	105	14.2	1.3	54.2	50.4	360	360	12	1.2	8				
of Korea	Cheju	14.0	125	17.7	54.2	8.7	30.8	8.3	17.8	10.4	26.8	23.6	--	125	2	7.3	5				
Russia	Mondy	17.8	14.3	29.0	58.5	38.3	16.7	5.7	9.9	8.3	8.4	--	2.3	78.8	4	<1.0	10				
	Listvyanka	9.8	4.0	35.9	20.3	40.9	47.0	15.2	9.6	11.3	8.9	8.9	5.8	87.2	5	1.7	2				
	Irkutsk	59.3	33.7	58.1	79.6	110	52.2	34.4	15.7	25.9	20.6	52.6	36.2	400	5	4.4	10				
Thailand	Bangkok	--	--	51.6	64.5	68.0	29.5	45.0	24.3	42.0	32.7	--	--	192	4	0.0	4				
	Samutprakarn	--	--	--	26.6	35.9	36.0	38.9	26.0	32.1	27.5	--	--	230	7	5.7	7				
	Patumthani	--	0.0	114	35.9	52.9	39.4	35.9	38.2	26.8	37.9	--	--	255	5	0.0	2				
	Khao Lam	--	--	--	--	6.0	6.9	7.1	3.3	9.5	8.1	--	--	24.1	7	0.0	8				
Vietnam	Hanoi	386	164	222	63.9	65.2	4.7	2.9	10.9	6.6	0.8	45.5	--					555	4	0.5	10
	Hoa Binh	80.9	16.7	30.2	6.9	10.5	3.1	<1.0	8.4	8.5	3.2	25.9	--					125	4	<1.0	7

Table 3.20 Data completeness of NH_4^+ (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	22	56	85	0	0	0	0	0	0	0
	Bandung	0	0	100	100	100	100	100	100	100	100	100	100
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	99	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	99	100	100	100	100	100	100	100	100	100
	Tanah Rata	98	100	100	100	100	100	100	99	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	98	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.21 Monthly weighted averages of Na^+ concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	53.2	162	28.2	14.4	8.5	13.6	8.7	11.8	6.6	4.8	11.6	19.0	171	2	<1.0	4				
	-Nanshan	16.3	16.5	8.4	10.7	5.0	6.9	6.9	12.5	3.3	<1.0	15.3	21.0					113	4	<1.0	9
	Xi'an																				
	-Shizhan	763	179	30.9	--	47.1	17.5	80.0	16.0	22.0	23.5	108	148	1150	1	<1.0	6				
	-Weishuiyuan	--	390	219	165	112	34.2	107	32.8	24.8	62.1	514	273	870	11	2.8	10				
	-Dabagou	--	176	--	34.9	26.4	41.8	14.0	16.6	13.6	2.3	15.6	50.1	176	2	<1.0	7				
	Xiamen																				
	-Hongwen	245	7.2	31.8	9.3	58.3	15.5	50.2	30.0	8.7	--	23.3	8.7	544	1	<1.0	7				
	-Xiaoping	20.9	4.9	3.1	3.8	23.3	4.4	33.3	3.1	--	--	--	2.3	266	6	<1.0	3				
	Zhuhai																				
	-Xiang Zhou	356	96.6	44.9	21.6	37.9	6.4	85.0	14.8	85.4	32.2	13.0	15.1	602	1	<1.0	11				
	-Zhuxian Cavern	16.8	55.7	57.1	38.8	14.4	13.4	64.7	16.0	121	25.3	12.4	8.6	160	2	<1.0	12				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	59.3	40.5					82.2	11	10.9	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
Japan	Rishiri	360	540	1020	183	16.9	84.6	25.2	33.0	--	--	1240	460	2250	3	1.2	7				
	Tappi	113	110	112	104	--	--	52.9	235	239	77.6	127	281	1560	9	1.9	9				
	Sado-seki	747	--	--	356	105	13.8	38.2	20.1	159	89.0	216	1080	20500	9	4.2	6				
	Happo	13.5	21.9	15.7	19.6	3.6	<1.0	<1.0	1.8	2.2	1.5	3.4	23.8	257	4	<1.0	6				
	Oki	1320	2440	370	50.9	30.5	19.5	27.3	68.1	105	84.9	254	1010	14100	2	5.7	6				
	Yusuhara	12.3	51.6	21.0	9.4	17.1	3.5	31.5	13.0	12.2	15.5	10.5	20.0	383	12	<1.0	6				
	Ogasawara	62.9	117	71.4	84.7	262	53.5	56.0	166	387	63.2	42.4	164	3290	5	7.4	3				
	Hedo	323	241	179	47.5	47.4	50.8	160	4320	301	79.7	102	231	10500	8	3.2	5				
	Ijira	31.5	74.4	46.2	21.2	11.7	9.4	9.0	27.1	8.4	10.2	13.6	64.1					228	2	3.5	7
	Banryu	--	--	--	34.0	12.1	7.6	15.7	6.9	15.0	47.2	49.6	360					2580	12	2.6	8
Malaysia	Petaling Jaya	6.0	3.4	4.2	3.2	5.1	4.9	17.4	3.9	3.9	5.1	3.0	4.7					25.2	3	<1.0	9
	Tanah Rata	1.1	1.8	1.9	<1.0	1.4	3.6	4.2	1.5	1.8	3.7	1.6	1.7					12.6	1	<1.0	9
Mongolia	Ulaanbaatar	--	--	--	70.2	22.7	10.3	5.9	6.1	11.4	7.4	--	--	251	4	1.3	8				
	Terelj	--	--	--	42.2	6.1	3.6	5.8	5.7	11.6	8.2	--	--	162	10	<1.0	7				
Philippines	Metro Manila	<1.0	21.1	67.9	9.2	21.0	6.1	47.7	48.3	28.0	13.3	17.3	20.6					71.3	7	<1.0	10
	Los Banos	--	64.2	20.5	8.6	19.7	29.0	25.4	14.1	36.3	38.9	50.9	33.4					77.4	2	1.9	8
Republic	Kanghwa	61.1	--	--	98.1	71.4	53.8	171	35.5	24.2	14.8	44.5	260	595	7	10.0	10				
of Korea	Cheju	463	813	94.6	2030	73.0	25.7	40.1	42.6	180	75.1	335	--	2030	4	11.1	6				
Russia	Mondy	4.3	7.0	14.3	3.4	4.8	<1.0	1.5	1.3	1.3	2.1	--	5.7	17.4	3	<1.0	6				
	Listvyanka	5.0	10.1	6.6	3.4	5.1	9.3	2.3	3.6	3.4	10.3	2.2	5.0	84.8	6	0.4	12				
	Irkutsk	15.9	16.7	36.0	26.8	39.1	4.2	3.4	4.2	4.4	17.4	43.3	34.0	590	10	<1.0	8				
Thailand	Bangkok	--	--	7.0	3.1	9.5	8.2	16.4	5.5	8.2	2.9	--	--	37.2	7	0.0	4				
	Samutprakarn	--	--	--	13.9	18.5	12.1	15.1	7.0	9.4	4.1	--	--	73.7	5	1.1	8				
	Patumthani	--	17.8	23.3	3.4	9.8	20.8	15.1	8.9	6.6	8.4	--	--	82.9	6	0.0	5				
	Khao Lam	--	--	--	--	9.3	8.7	21.4	5.7	9.6	2.1	--	--	99.3	7	0.9	10				
Vietnam	Hanoi	190	23.1	44.0	6.9	12.0	19.5	21.7	28.8	34.0	4.5	22.6	--					190	1	1.7	3
	Hoa Binh	14.8	4.6	8.3	21.7	5.7	16.2	3.0	25.5	24.7	14.6	122	--					131	10	1.3	4

Table 3.22 Data completeness of Na^+ (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	0	0	0	0	0	0	0	0	0	0
	Bandung	0	0	0	0	0	0	0	0	0	0	0	0
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	99	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	100	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	98	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.23 Monthly weighted averages of K^+ concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	88.1	70.9	30.1	12.4	8.7	15.3	8.8	7.3	11.8	16.3	37.6	44.8	281	1	<1.0	4				
	-Nanshan	43.9	63.7	22.5	15.5	7.0	18.4	7.8	10.5	11.4	23.6	50.1	57.4					110	3	4.3	8
	Xi'an																				
	-Shizhan	118	188	15.5	--	21.3	11.7	43.4	20.9	45.0	16.4	33.9	71.6	188	2	<1.0	3				
	-Weishuiyuan	--	583	155	67.1	31.7	24.6	34.5	22.2	31.9	34.0	31.6	97.2	583	2	9.3	10				
	-Dabagou	--	24.9	--	13.4	18.5	19.1	15.3	20.7	21.2	6.9	12.1	26.6	42.5	8	6.1	10				
	Xiamen																				
	-Hongwen	8.8	9.0	15.9	3.3	17.9	1.4	2.8	2.2	40.8	--	7.6	2.6	109	2	<1.0	3				
	-Xiaoping	3.7	12.3	2.3	3.0	4.8	1.3	2.2	<1.0	--	--	--	1.3	109	2	<1.0	3				
	Zhuhai																				
	-Xiang Zhou	29.8	40.5	13.2	4.2	2.2	4.6	4.9	7.6	3.4	3.9	10.2	9.3	76.0	2	<1.0	1				
	-Zhuxian Cavern	9.9	31.5	30.1	6.5	7.0	2.6	5.0	7.1	3.5	2.9	9.4	5.3	78.9	2	<1.0	4				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	--	--					--		--	
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
Japan	Rishiri	8.6	13.4	25.8	4.2	1.1	3.4	2.2	1.1	--	--	36.0	16.0	58.8	3	<1.0	7				
	Tappi	2.7	2.5	3.8	2.2	--	--	1.7	5.5	5.6	2.1	3.0	6.0	39.4	9	<1.0	4				
	Sado-seki	16.6	--	--	9.4	6.4	1.1	1.7	<1.0	3.3	2.4	5.0	25.6	434	9	<1.0	11				
	Happo	<1.0	1.4	1.3	3.5	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	30.7	4	<1.0	7				
	Oki	31.9	56.9	11.9	2.3	4.3	1.5	1.2	2.8	2.7	3.8	6.8	25.9	326	2	<1.0	9				
	Yusuhara	<1.0	2.5	1.9	1.2	1.3	<1.0	1.1	<1.0	<1.0	1.2	<1.0	1.0	31.7	2	<1.0	1				
	Ogasawara	1.5	3.1	2.0	2.8	5.7	1.5	1.1	3.9	9.3	2.2	1.0	5.9	113	5	<1.0	8				
	Hedo	5.9	5.4	4.2	1.5	1.1	1.5	3.6	83.5	5.9	1.5	2.1	4.6	201	8	<1.0	1				
	Ijira	5.6	3.8	3.4	4.3	3.1	2.5	2.3	4.4	1.9	2.2	2.1	4.5					11.5	1	<1.0	4
	Banryu	--	--	--	1.9	1.6	<1.0	1.1	<1.0	<1.0	2.2	1.6	12.2					63.4	12	<1.0	8
Malaysia	Petaling Jaya	2.5	1.3	1.5	1.0	3.3	1.4	2.9	1.9	1.5	1.6	1.7	1.7					7.7	3	<1.0	4
	Tanah Rata	<1.0	1.0	1.1	<1.0	1.2	2.1	1.8	<1.0	1.2	1.3	1.1	1.0					7.4	5	<1.0	1
Mongolia	Ulaanbaatar	--	--	--	12.9	9.2	6.6	5.3	2.4	4.9	3.1	--	--	45.5	6	0.8	8				
	Terelj	--	--	--	9.0	2.8	3.3	4.4	5.4	3.3	4.4	--	--	84.9	10	<1.0	7				
Philippines	Metro Manila	30.2	89.8	102	12.1	6.3	<1.0	24.9	2.7	6.5	1.6	23.4	33.5					102	3	<1.0	6
	Los Banos	--	1.0	3.4	2.7	1.2	0.1	3.0	0.5	3.1	1.1	6.2	2.0					6.2	7	0.1	6
Republic	Kanghwa	4.4	--	--	8.9	10.5	20.0	14.5	3.2	<1.0	5.8	8.5	35.6	38.1	7	<1.0	9				
of Korea	Cheju	11.1	33.4	7.2	41.7	8.6	6.0	1.7	2.4	4.5	6.2	12.5	--	41.7	4	1.7	7				
Russia	Mondy	1.5	5.0	9.9	1.5	5.1	1.8	<1.0	<1.0	<1.0	<1.0	--	5.4	13.3	3	<1.0	7				
	Listvyanka	2.1	5.0	3.6	1.4	12.9	10.5	1.3	2.4	4.3	17.7	2.6	8.6	30.9	5	0.3	1				
	Irkutsk	5.8	4.1	7.8	13.5	30.0	2.9	2.4	3.9	1.9	5.0	12.4	10.8	139	5	<1.0	2				
Thailand	Bangkok	--	--	0.0	0.3	1.2	1.4	5.6	5.2	6.3	3.4	--	--	47.7	9	0.0	3				
	Samutprakarn	--	--	--	3.0	3.6	3.0	2.6	3.8	3.6	12.6	--	--	37.8	10	0.0	4				
	Patumthani	--	19.4	12.1	1.0	3.0	2.6	1.8	1.3	1.7	1.3	--	--	22.1	5	0.4	5				
	Khao Lam	--	--	--	--	2.0	2.3	0.8	4.5	34.5	8.6	--	--	178	10	0.0	7				
Vietnam	Hanoi	18.9	16.8	17.5	0.4	1.2	2.2	0.5	6.2	9.9	6.3	27.0	--					74.7	3	0.0	10
	Hoa Binh	4.9	1.4	2.4	<1.0	2.0	1.7	<1.0	6.8	5.8	8.9	33.3	--					33.3	11	<1.0	5

Table 3.24 Data completeness of K^+ (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	0	0
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	0	0	0	0	0	0	0	0	0	0
	Bandung	0	0	0	0	0	0	0	0	0	0	0	0
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	99	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	100	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	98	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.25 Monthly weighted averages of Ca^{2+} concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	233	413	57.8	77.9	56.6	89.2	28.5	43.1	61.8	78.3	92.6	201	417	2	<0.2	4				
	-Nanshan	182	234	32.5	107	50.4	84.3	17.2	38.9	40.3	76.0	73.5	189					359	4	15.2	7
	Xi'an																				
	-Shizhan	296	751	271	--	427	97.7	221	91.6	331	155	612	1780	1810	12	28.0	1				
	-Weishuiyuan	--	1440	1200	623	573	250	525	202	163	186	472	1350	1560	7	62.3	10				
	-Dabagou	--	168	--	322	347	105	52.0	38.6	159	17.1	32.8	436	446	12	9.1	10				
	Xiamen																				
	-Hongwen	26.6	3.1	42.2	5.9	68.5	4.6	4.9	5.7	28.3	--	11.3	2.6	99.5	7	0.3	4				
	-Xiaoping	3.5	1.4	1.8	0.8	3.0	0.6	1.0	0.3	--	--	--	0.3	30.3	6	<0.2	3				
	Zhuhai																				
	-Xiang Zhou	199	137	39.0	10.1	14.0	9.9	8.5	16.2	6.6	7.1	27.8	12.0	324	1	3.6	4				
	-Zhuxian Cavern	82.0	121	121	32.2	17.8	13.0	13.1	14.0	58.0	9.5	30.6	13.4	279	2	4.3	8				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	63.0	129.7					130	12	26.2	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	3.2	4.6	3.4	--	--	--	--	--	--	--	6.3	4	2.0	5				
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
Japan	Rishiri	12.0	17.7	52.2	10.7	3.3	4.5	2.2	1.0	--	--	48.0	17.7	99.5	3	0.4	5				
	Tappi	6.8	3.0	22.4	10.6	--	--	2.1	5.9	5.9	3.8	5.0	7.1	125	4	0.2	7				
	Sado-seki	20.2	--	--	44.5	39.7	1.7	3.0	1.6	4.2	4.6	6.5	31.1	447	9	0.4	6				
	Happo	3.6	3.0	8.9	44.0	6.3	1.2	1.2	1.4	0.4	1.1	1.2	4.0	253	4	<0.2	7				
	Oki	34.8	65.0	44.9	10.3	14.6	1.4	1.5	2.8	3.3	5.4	7.8	32.3	336	3	<0.2	6				
	Yusuhara	2.2	9.5	13.2	3.6	9.9	2.3	0.7	1.0	0.5	1.2	0.2	3.8	243	3	<0.2	1				
	Ogasawara	2.8	4.9	3.7	8.5	10.0	1.5	2.1	5.6	10.5	2.8	1.3	6.4	116	5	<0.2	7				
	Hedo	6.7	9.6	6.8	3.5	2.7	1.3	3.8	88.4	6.6	1.9	1.9	5.4	213	8	<0.2	5				
	Ijira	6.1	5.2	13.7	13.2	12.6	4.6	4.7	8.7	2.1	2.9	2.2	7.8					38.9	5	1.7	9
	Banryu	--	--	--	7.1	29.1	1.2	1.3	0.3	0.4	3.0	1.6	46.7					163	5	<0.2	6
Malaysia	Petaling Jaya	3.9	3.7	5.6	7.2	12.5	4.9	20.1	9.7	6.0	8.5	5.8	6.1					97.5	7	1.0	5
	Tanah Rata	2.0	2.4	1.4	1.4	3.5	2.9	4.4	1.9	1.5	4.3	2.7	2.1					23.3	1	0.2	1
Mongolia	Ulaanbaatar	--	--	--	185	123	92.5	33.5	20.7	91.9	38.7	--	--	372	4	6.0	8				
	Terelj	--	--	--	107	38.9	13.4	12.6	8.3	37.3	13.6	--	--	297	6	0.5	7				
Philippines	Metro Manila	102	18.8	48.4	15.0	4.3	19.7	19.6	10.1	6.1	10.9	14.3	23.9					102	1	1.2	5
	Los Banos	--	5.4	3.4	4.6	3.3	6.5	7.7	6.7	10.9	8.1	3.7	7.1					23.2	9	0.6	4
Republic	Kanghwa	27.4	--	--	113	100	96.6	40.6	12.1	1.2	10.4	11.6	74.9	187	4	1.0	9				
of Korea	Cheju	19.5	43.1	13.9	286	27.3	8.4	4.9	4.2	6.4	6.7	17.9	--	286	4	3.6	10				
Russia	Mondy	21.5	25.0	27.1	20.3	17.7	7.7	4.8	1.8	1.7	6.4	--	32.2	67.4	3	0.5	8				
	Listvyanka	34.3	23.5	26.5	12.1	23.3	24.6	4.4	8.7	15.2	28.6	12.0	18.1	102	1	2.5	7				
	Irkutsk	94.3	76.3	88.5	75.1	132	23.3	17.8	8.0	23.4	41.0	105	56.4	1030	2	3.0	7				
Thailand	Bangkok	--	--	12.4	10.9	14.5	9.3	19.4	3.4	16.4	11.8	--	--	130	7	0.0	4				
	Samutprakarn	--	--	--	5.1	16.2	7.6	17.6	4.2	12.2	9.9	--	--	94.5	5	0.0	8				
	Patumthani	--	99.3	85.6	5.5	10.9	13.7	20.9	12.4	7.6	11.6	--	--	99.3	2	2.0	4				
	Khao Lam	--	--	--	--	4.8	4.8	9.9	1.7	3.3	3.2	--	--	55.8	7	0.0	7				
Vietnam	Hanoi	522	94.0	68.3	21.0	42.1	19.4	15.5	14.3	18.8	5.4	75.2	--					522	1	2.8	10
	Hoa Binh	126	43.1	48.8	6.6	11.3	9.8	5.5	15.7	16.1	15.1	160	--					160	11	3.6	7

Table 3.26 Data completeness of Ca^{2+} (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	22	56	85	0	0	0	0	0	0	0
	Bandung	0	0	0	0	0	0	0	0	0	0	0	0
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	99	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	100	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	98	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.27 Monthly weighted averages of nss-Ca^{2+} concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	231	409	57.2	77.6	56.5	88.9	28.3	42.9	61.6	78.2	92.3	201	414	2	<0.2	4				
	-Nanshan	181	233	32.3	107	50.3	84.2	17.0	38.6	40.2	75.9	73.1	189					357	4	14.9	7
	Xi'an																				
	-Shizhan	279	747	270	--	425	97.4	219	91.3	331	155	610	1770	1810	12	3.1	1				
	-Weishuiyuan	--	1430	1190	620	570	250	522	201	162	184	461	1340	1550	7	62.2	10				
	-Dabagou	--	164	--	321	346	104	51.7	38.3	158	17.0	32.5	435	445	12	9.1	10				
	Xiamen																				
	-Hongwen	21.3	3.0	41.5	5.7	67.2	4.3	4.2	5.1	28.1	--	10.8	2.4	98.7	7	<0.2	7				
	-Xiaoping	3.1	1.3	1.7	0.8	2.5	0.5	0.4	0.2	--	--	--	0.2	24.6	6	<0.2	3				
	Zhuhai																				
	-Xiang Zhou	191	135	38.0	9.6	13.1	9.8	6.7	15.9	4.8	6.4	27.5	11.7	311	1	3.3	10				
	-Zhuxian Cavern	81.6	120	120	31.4	17.5	12.7	11.7	13.7	55.4	9.0	30.3	13.2	276	2	4.2	8				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	61.7	128.8					129	12	26.0	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
Japan	Rishiri	4.2	6.0	30.3	6.8	2.9	2.6	1.7	0.3	--	--	21.3	7.8	65.1	11	<0.2	5				
	Tappi	4.4	0.6	19.9	8.3	--	--	0.9	0.8	0.9	2.2	2.4	1.1	113	4	<0.2	1				
	Sado-seki	4.1	--	--	36.8	37.4	1.5	2.2	1.2	0.8	2.7	1.9	7.7	256	4	<0.2	9				
	Happo	3.3	2.6	8.6	43.5	6.2	1.2	1.2	1.3	0.3	1.1	1.2	3.4	251	4	<0.2	7				
	Oki	6.3	12.3	36.9	9.2	13.9	1.0	0.9	1.3	1.1	3.6	2.4	10.4	293	3	<0.2	6				
	Yusuhara	2.0	8.3	12.8	3.4	9.6	2.2	0.2	0.8	0.3	0.9	<0.2	3.4	234	3	<0.2	1				
	Ogasawara	1.5	2.4	2.1	6.6	4.3	0.6	0.9	2.0	2.3	1.5	0.5	2.8	77.5	4	<0.2	6				
	Hedo	0.7	4.4	3.1	2.5	1.7	0.4	0.4	0.3	0.4	0.2	<0.2	0.5	105	3	<0.2	1				
	Ijira	5.4	3.6	12.7	12.7	12.4	4.4	4.5	8.1	1.9	2.7	1.9	6.4					38.6	5	1.6	9
	Banryu	--	--	--	6.3	28.8	1.0	1.0	0.2	<0.2	2.0	0.7	39.0					162	5	<0.2	6
Malaysia	Petaling Jaya	3.8	3.7	5.6	7.1	12.4	4.8	19.7	9.6	6.0	8.4	5.7	6.0					97.3	7	1.0	5
	Tanah Rata	1.9	2.3	1.4	1.4	3.4	2.8	4.3	1.9	1.5	4.2	2.7	2.1					23.0	1	0.2	3
Mongolia	Ulaanbaatar	--	--	--	184	122	92.3	33.4	20.5	91.6	38.5	--	--	367	4	6.0	8				
	Terelj	--	--	--	106	38.7	13.4	12.5	8.2	37.1	13.4	--	--	296	6	0.4	7				
Philippines	Metro Manila	102	18.3	46.9	14.8	3.8	19.6	18.5	9.1	5.5	10.6	14.0	23.5					102	1	0.7	5
	Los Banos	--	4.0	3.0	4.5	2.9	5.9	7.1	6.4	10.1	7.3	2.6	6.4					21.9	9	0.3	4
Republic	Kanghwa	26.1	--	--	111	98.9	95.4	37.0	11.3	0.6	10.1	10.7	69.3	185	4	0.5	9				
of Korea	Cheju	9.5	25.5	11.9	242	25.7	7.9	4.0	3.3	2.5	5.1	10.7	--	242	4	1.6	9				
Russia	Mondy	21.4	24.8	26.8	20.2	17.6	7.7	4.7	1.8	1.7	6.4	--	32.1	67.0	3	0.5	8				
	Listvyanka	34.2	23.3	26.3	12.1	23.2	24.4	4.4	8.6	15.1	28.4	12.0	18.0	102	1	2.5	7				
	Irkutsk	93.9	75.9	87.7	74.6	132	23.2	17.7	7.9	23.3	40.6	104	55.7	1030	2	3.0	7				
Thailand	Bangkok	--	--	12.3	10.8	14.3	9.2	19.0	3.3	16.2	11.8	--	--	129	7	0.0	4				
	Samutprakarn	--	--	--	4.8	15.8	7.4	17.2	4.1	12.0	9.9	--	--	93.5	5	0.0	8				
	Patumthani	--	98.9	85.1	5.4	10.7	13.3	20.6	12.2	7.5	11.5	--	--	98.9	2	2.0	4				
	Khao Lam	--	--	--	--	4.6	4.6	9.5	1.6	3.1	3.1	--	--	54.9	7	0.0	7				
Vietnam	Hanoi	518	93.5	67.3	20.9	41.8	19.0	15.0	13.7	18.1	5.3	74.7	--					518	1	2.7	10
	Hoa Binh	125	43.0	48.6	6.1	11.2	9.5	5.4	15.1	15.6	14.8	157	--					157	11	3.6	7

Table 3.28 Data completeness of nss-Ca^{2+} (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	0	0	0	0	0	0	0	0	0	0
	Bandung	0	0	0	0	0	0	0	0	0	0	0	0
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	99	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	100	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	98	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.29 Monthly weighted averages of Mg^{2+} concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	36.1	117	22.4	10.5	5.2	7.0	4.5	4.8	6.9	10.3	16.2	25.4	135	2	<0.4	4				
	-Nanshan	19.2	28.0	9.9	14.3	5.3	7.9	2.4	4.9	4.5	8.8	11.5	20.1					62.9	3	2.0	7
	Xi'an																				
	-Shizhan	1.9	64.8	27.7	--	39.7	10.4	31.2	10.8	36.5	16.8	62.6	130	154	12	1.6	1				
	-Weishuiyuan	--	179	125	98.7	52.9	20.7	42.8	16.7	27.3	19.3	107	102	203	11	5.5	6				
	-Dabagou	--	20.1	--	30.1	30.9	10.1	7.9	6.4	31.0	4.3	6.2	35.2	56.4	5	2.6	7				
	Xiamen																				
	-Hongwen	7.0	1.2	8.5	2.0	16.0	2.9	7.1	4.6	15.4	--	2.3	4.5	16.0	5	0.5	2				
	-Xiaoping	2.6	0.7	0.6	1.4	1.6	0.6	4.6	0.4	--	--	--	1.1	9.0	7	<0.4	3				
	Zhuhai																				
	-Xiang Zhou	68.1	21.6	9.0	3.2	2.7	2.0	9.2	3.3	8.3	3.2	4.0	6.0	110	1	1.4	6				
	-Zhuxian Cavern	5.1	13.4	14.6	11.8	8.0	6.1	7.7	3.3	21.5	4.9	4.4	4.4	30.4	2	0.4	8				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	207.3	239.7					245	11	94.6	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
Japan	Rishiri	41.7	62.1	114	20.5	1.7	8.9	3.1	2.9	--	--	136	54.0	254	3	<0.4	5				
	Tappi	13.1	12.2	14.3	12.2	--	--	5.8	26.7	28.6	8.8	14.2	31.5	195	9	0.4	9				
	Sado-seki	83.1	--	--	39.2	15.7	1.8	4.6	2.4	16.4	9.7	25.8	121	2030	9	0.8	6				
	Happo	2.1	3.2	3.3	6.4	1.8	0.4	0.6	0.8	0.4	1.3	1.0	3.6	36.5	4	<0.4	9				
	Oki	150	270	43.7	7.0	5.6	2.0	2.9	7.8	11.8	10.3	29.1	116	1630	2	0.8	5				
	Yusuhara	1.7	6.9	3.4	1.7	2.5	<0.4	3.5	1.4	1.5	2.1	4.4	2.2	53.1	3	<0.4	1				
	Ogasawara	9.1	16.2	10.3	11.9	38.4	7.9	8.4	24.7	49.2	8.4	6.2	21.0	533	5	1.3	10				
	Hedo	30.6	25.2	19.7	5.2	5.2	5.5	18.0	480	32.6	8.5	10.9	25.0	1170	8	<0.4	5				
	Ijira	3.3	9.2	6.6	3.8	2.8	1.4	1.2	4.0	1.1	1.3	1.9	8.5					26.7	2	0.8	5
	Banryu	--	--	--	4.9	3.4	0.8	1.5	0.6	1.4	5.2	5.5	43.5					295	12	<0.4	8
Malaysia	Petaling Jaya	1.0	0.8	1.3	1.4	2.2	1.1	2.8	1.9	1.5	1.3	1.4	1.2					7.6	8	<0.4	9
	Tanah Rata	<0.4	<0.4	0.4	<0.4	0.5	0.8	1.0	<0.4	<0.4	0.8	<0.4	<0.4					2.9	10	<0.4	1
Mongolia	Ulaanbaatar	--	--	--	23.7	9.1	6.4	3.8	3.2	6.7	3.8	--	--	53.9	4	2.1	8				
	Terelj	--	--	--	12.8	5.8	2.4	2.9	2.9	4.9	1.9	--	--	25.9	6	0.4	7				
Philippines	Metro Manila	7.2	14.1	26.4	3.6	23.3	2.3	3.2	5.1	4.2	1.4	2.4	4.1					44.4	5	<0.4	10
	Los Banos	--	2.9	9.7	2.5	2.7	5.5	4.0	2.6	9.8	1.4	3.7	3.4					20.7	9	0.9	5
Republic	Kanghwa	15.7	--	--	17.5	18.1	25.3	22.6	6.2	2.0	5.3	3.7	34.9	89.2	7	1.9	8				
of Korea	Cheju	71.4	141	20.6	154	10.8	3.6	3.8	5.1	20.6	10.1	33.9	--	154	4	2.4	6				
Russia	Mondy	4.1	5.2	4.0	2.7	2.9	1.6	0.8	0.5	0.4	2.5	--	6.2	10.3	3	0.4	7				
	Listvyanka	5.0	4.8	7.2	2.3	6.9	5.5	1.0	1.5	3.8	6.9	4.5	6.8	19.7	8	0.4	8				
	Irkutsk	14.6	10.6	13.4	13.7	29.7	5.5	4.3	1.3	3.8	5.5	16.8	7.7	161	5	0.4	6				
Thailand	Bangkok	--	--	2.5	2.1	2.7	1.9	3.8	0.9	2.6	1.5	--	--	17.0	7	0.0	4				
	Samutprakarn	--	--	--	0.9	3.4	2.3	3.3	1.4	2.8	1.6	--	--	14.7	7	0.0	4				
	Patumthani	--	11.5	13.2	0.4	4.1	2.9	2.8	1.9	1.0	1.4	--	--	14.8	5	0.0	4				
	Khao Lam	--	--	--	--	1.7	1.2	2.9	0.5	2.5	1.2	--	--	13.7	7	0.0	6				
Vietnam	Hanoi	37.9	7.1	9.7	2.8	3.7	4.0	5.7	8.0	8.8	2.4	28.2	--					39.9	3	1.6	6
	Hoa Binh	5.8	9.4	12.2	2.8	1.7	5.1	3.0	7.2	7.0	7.0	75.2	--					75.2	11	0.4	4

Table 3.30 Data completeness of Mg^{2+} (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	100	100	100	100	100	100	100	100	100	100	100
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	0	0	0	0	0	0	0	0	0	0
	Bandung	0	0	0	0	0	0	0	0	0	0	0	0
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	97	0	0	83	100	100	99	94	26
	Sado-seki	79	0	0	84	99	100	100	100	100	100	98	86
	Happo	100	100	96	89	100	100	100	77	100	32	92	99
	Oki	100	100	100	100	98	100	100	100	99	100	100	99
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	100
	Ogasawara	99	99	100	98	99	97	100	100	99	99	99	100
	Hedo	100	99	100	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	100	100	100	100	100	100	100	100	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	100	100	100	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	100	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	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
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	98	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.31 Monthly weighted averages of H^+ concentration unit: μ mol/L

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	12.9	<0.1	32.1	23.2	48.7	12.9	75.1	40.0	44.6	78.5	22.1	34.7	288	10	<0.1	2				
	-Nanshan	91.6	117	59.6	14.0	5.3	36.0	43.7	68.5	125	148	45.6	65.6					209	10	0.3	4
	Xi'an																				
	-Shizhan	35.2	0.3	0.5	--	0.3	1.0	0.4	4.0	2.7	0.8	0.2	1.1	66.1	1	<0.1	5				
	-Weishuiyuan	--	0.2	0.2	0.1	0.2	0.3	0.2	0.6	0.5	0.5	0.1	0.3	1.0	8	<0.1	11				
	-Dabagou	--	<0.1	--	<0.1	<0.1	6.4	8.1	3.0	9.7	0.2	0.3	0.2	39.8	9	<0.1	2				
	Xiamen																				
	-Hongwen	2.6	44.3	43.6	37.8	28.8	12.3	9.8	13.1	14.8	--	33.6	6.2	117	3	0.6	11				
	-Xiaoping	37.4	20.1	12.2	46.9	26.6	5.6	3.3	8.2	--	--	--	5.8	129	4	0.1	6				
	Zhuhai																				
	-Xiang Zhou	0.9	19.5	11.9	2.6	29.6	1.7	9.4	13.0	77.6	6.3	42.5	29.4	112	5	0.1	1				
	-Zhuxian Cavern	5.4	36.0	16.2	37.6	45.9	6.7	17.9	20.4	74.1	3.7	39.6	41.2	186	7	0.2	3				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	8.3	3.5					13.8	11	2.2	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	34.1	35.6	23.0	--	--	--	--	--	--	--	100	4	0.1	5				
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
Japan	Rishiri	19.6	28.9	16.9	13.6	20.0	10.0	21.5	7.6	--	--	9.3	18.3	117	7	0.8	11				
	Tappi	16.9	31.9	6.5	9.6	--	--	19.8	27.1	19.1	23.0	25.2	14.7	56.2	8	0.3	4				
	Sado-seki	29.8	--	--	7.9	14.4	20.5	16.5	37.2	25.5	48.0	23.5	42.2	115	10	<0.1	4				
	Happo	19.1	23.0	10.5	4.7	12.1	7.8	17.2	48.8	17.3	14.8	14.3	22.6	112	8	<0.1	4				
	Oki	44.9	44.5	10.5	12.2	20.2	17.6	10.2	22.2	19.6	27.9	23.0	44.6	240	1	0.3	3				
	Yusuhara	35.3	26.4	17.4	16.7	15.1	9.8	10.7	16.1	25.7	44.3	11.7	45.2	204	10	0.4	3				
	Ogasawara	6.7	11.1	5.7	9.2	3.7	5.4	4.1	3.6	4.2	5.6	6.9	10.0	112	11	0.2	4				
	Hedo	8.6	15.9	10.2	4.0	5.7	8.5	5.3	4.3	4.0	21.7	7.1	16.3	112	3	0.1	4				
	Ijira	29.4	35.3	10.1	13.5	19.1	31.3	30.8	45.8	24.3	74.9	58.5	27.8					126	8	1.9	3
	Banryu	--	--	--	32.9	1.8	15.8	14.1	19.7	23.1	42.1	27.0	50.9					138	12	0.1	5
Malaysia	Petaling Jaya	33.7	29.3	47.4	36.5	75.6	37.7	39.2	72.1	48.0	22.3	48.8	59.6					100	5	0.9	4
	Tanah Rata	4.5	15.3	15.3	12.0	20.8	17.0	50.0	19.9	29.1	19.3	7.0	9.3					107	5	3.5	1
Mongolia	Ulaanbaatar	--	--	--	0.0	0.1	0.2	0.3	0.8	0.1	0.2	--	--	1.6	8	0.0	4				
	Terelj	--	--	--	0.1	0.3	10.9	2.1	1.4	0.3	0.6	--	--	23.4	6	0.1	4				
Philippines	Metro Manila	0.1	<0.1	<0.1	0.1	4.2	4.4	6.9	4.1	0.1	0.6	0.4	0.6					44.7	7	<0.1	2
	Los Banos	--	2.3	1.2	1.3	4.5	1.6	23.5	1.6	3.5	1.1	1.7	0.5					44.7	7	0.3	12
Republic	Kanghwa	21.2	--	--	0.6	0.5	10.5	8.1	12.3	5.0	44.8	17.2	0.6	89.1	10	0.2	4				
of Korea	Cheju	11.8	61.7	5.0	0.2	3.4	12.3	10.5	25.7	3.9	25.8	28.2	--	61.7	2	0.2	4				
Russia	Mondy	0.4	0.6	0.6	1.1	1.1	3.0	5.3	9.6	4.7	2.3	--	0.2	13.8	8	0.2	12				
	Listvyanka	22.8	7.2	10.8	7.5	5.6	1.7	13.8	7.9	3.8	3.8	4.2	5.6	33.1	1	0.2	1				
	Irkutsk	7.8	0.5	0.3	1.1	1.9	3.6	15.8	8.3	2.9	1.7	0.4	0.9	224	1	<0.1	2				
Thailand	Bangkok	--	--	35.0	14.1	15.9	1.0	1.6	4.4	15.7	20.1	--	--	123	9	0.1	6				
	Samutprakarn	--	--	--	25.6	10.3	9.2	6.2	3.9	23.1	24.0	--	--	81.3	10	0.4	9				
	Patumthani	--	9.1	6.1	6.8	0.4	6.6	0.5	1.1	5.6	22.4	--	--	38.0	10	0.0	9				
	Khao Lam	--	--	--	--	2.6	2.1	1.5	1.3	2.7	5.6	--	--	15.1	10	0.2	9				
Vietnam	Hanoi	8.1	4.7	23.6	0.7	4.2	1.5	1.8	4.2	2.6	4.6	0.4	--					74.1	3	0.2	4
	Hoa Binh	63.1	30.5	35.8	11.7	2.2	4.3	23.5	5.5	3.6	4.2	0.2	--					100	2	0.2	3

Table 3.32 Data completeness of H^+ (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	79	100	97	96	95	99	99	98	97	98	94
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	98	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	22	56	85	0	0	0	0	0	0	0
	Bandung	0	0	0	0	0	0	0	0	0	0	0	0
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	96	0	0	83	100	99	98	94	26
	Sado-seki	75	0	0	77	95	99	97	91	98	96	98	75
	Happo	99	98	96	83	100	100	99	77	100	32	91	99
	Oki	100	100	100	99	98	100	99	100	99	100	100	98
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	99
	Ogasawara	99	98	100	97	97	84	100	100	98	98	99	100
	Hedo	95	97	98	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	98	100	100	100	100	100	100	99	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	96	95	99	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	99	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	100	100	100	100	100	100	100	100	100	100	100	100
	Listvyanka	100	100	100	100	100	100	100	99	100	65	100	100
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.33 Monthly weighted averages of pH

pH units

Country	Name of sites	2000												Daily or Event				Weekly			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	4.89	7.64	4.49	4.63	4.31	4.89	4.12	4.40	4.35	4.10	4.66	4.46	7.64	2	3.54	10				
	-Nanshan	4.04	3.93	4.22	4.86	5.27	4.44	4.36	4.16	3.90	3.83	4.34	4.18					6.59	4	3.68	10
	Xi'an																				
	-Shizhan	4.45	6.48	6.30	--	6.60	6.01	6.43	5.40	5.57	6.07	6.70	5.98	7.50	5	4.18	1				
	-Weishuiyuan	--	6.76	6.67	7.06	6.76	6.54	6.70	6.20	6.30	6.33	6.92	6.55	7.40	11	6.01	8				
	-Dabagou	--	7.54	--	7.37	7.41	5.19	5.09	5.53	5.01	6.67	6.59	6.80	7.54	2	4.40	9				
	Xiamen																				
	-Hongwen	5.58	4.35	4.36	4.42	4.54	4.91	5.01	4.88	4.83	--	4.47	5.21	6.22	11	3.93	3				
	-Xiaoping	4.43	4.70	4.91	4.33	4.58	5.25	5.48	5.09	--	--	--	5.24	6.95	6	3.89	4				
	Zhuhai																				
	-Xiang Zhou	6.04	4.71	4.92	5.58	4.53	5.77	5.03	4.89	4.11	5.20	4.37	4.53	7.24	1	3.95	5				
	-Zhuxian Cavern	5.27	4.44	4.79	4.42	4.34	5.18	4.75	4.69	4.13	5.43	4.40	4.39	6.66	3	3.73	7				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	5.08	5.45					5.66	11	4.86	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	4.47	4.45	4.64	--	--	--	--	--	--	--	7.03	5	4.00	4				
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--	--		--					
Japan	Rishiri	4.71	4.54	4.77	4.87	4.70	5.00	4.67	5.12	--	--	5.03	4.74	6.12	11	3.93	7				
	Tappi	4.77	4.50	5.19	5.02	--	--	4.70	4.57	4.72	4.64	4.60	4.83	6.60	4	4.25	8				
	Sado-seki	4.53	--	--	5.10	4.84	4.69	4.78	4.43	4.59	4.32	4.63	4.37	7.35	4	3.94	10				
	Happo	4.72	4.64	4.98	5.32	4.92	5.11	4.77	4.31	4.76	4.83	4.84	4.65	7.42	4	3.95	8				
	Oki	4.35	4.35	4.98	4.91	4.70	4.75	4.99	4.65	4.71	4.55	4.64	4.35	6.58	3	3.62	1				
	Yusuhara	4.45	4.58	4.76	4.78	4.82	5.01	4.97	4.79	4.59	4.35	4.93	4.34	6.38	3	3.69	10				
	Ogasawara	5.17	4.96	5.24	5.03	5.43	5.27	5.39	5.44	5.37	5.25	5.16	5.00	6.73	4	3.95	11				
	Hedo	5.07	4.80	4.99	5.39	5.24	5.07	5.27	5.36	5.40	4.66	5.15	4.79	6.99	4	3.95	3				
	Ijira	4.53	4.45	5.00	4.87	4.72	4.50	4.51	4.34	4.62	4.13	4.23	4.56					5.72	3	3.90	8
	Banryu	--	--	--	4.48	5.75	4.80	4.85	4.71	4.64	4.38	4.57	4.29					6.91	5	3.86	12
Malaysia	Petaling Jaya	4.47	4.53	4.32	4.44	4.12	4.42	4.41	4.14	4.32	4.65	4.31	4.22					6.05	4	4.00	5
	Tanah Rata	5.34	4.81	4.81	4.92	4.68	4.77	4.30	4.70	4.54	4.71	5.15	5.03					5.45	1	3.97	5
Mongolia	Ulaanbaatar	--	--	--	7.51	7.04	6.82	6.52	6.09	7.00	6.68	--	--	7.52	4	5.80	8				
	Terelj	--	--	--	7.26	6.48	4.96	5.68	5.84	6.54	6.23	--	--	7.26	4	4.63	6				
Philippines	Metro Manila	7.18	7.99	7.59	6.92	5.38	5.35	5.16	5.39	7.18	6.21	6.37	6.20					7.99	2	4.35	7
	Los Banos	--	5.63	5.93	5.89	5.34	5.80	4.63	5.80	5.45	5.97	5.78	6.29					6.55	12	4.35	7
Republic	Kanghwa	4.67	--	--	6.22	6.34	4.98	5.09	4.91	5.30	4.35	4.76	6.25	6.64	4	4.05	10				
of Korea	Cheju	4.93	4.21	5.30	6.80	5.47	4.91	4.98	4.59	5.41	4.59	4.55	--	6.80	4	4.21	2				
Russia	Mondy	6.41	6.20	6.25	5.95	5.94	5.52	5.28	5.02	5.33	5.64	--	6.62	6.62	12	4.86	8				
	Listvyanka	4.64	5.14	4.97	5.13	5.25	5.78	4.86	5.11	5.42	5.42	5.38	5.25	6.69	1	4.48	1				
	Irkutsk	5.11	6.29	6.59	5.95	5.72	5.45	4.80	5.08	5.53	5.78	6.35	6.04	7.84	2	3.65	1				
Thailand	Bangkok	--	--	4.46	4.85	4.80	5.99	5.79	5.36	4.80	4.70	--	--	6.99	6	3.91	9				
	Samutprakarn	--	--	--	4.59	4.99	5.04	5.21	5.41	4.64	4.62	--	--	6.42	9	4.09	10				
	Patumthani	--	5.04	5.21	5.17	6.36	5.18	6.29	5.95	5.25	4.65	--	--	7.78	9	4.42	10				
	Khao Lam	--	--	--	--	5.58	5.67	5.83	5.88	5.57	5.25	--	--	6.61	9	4.82	10				
Vietnam	Hanoi	5.09	5.33	4.63	6.14	5.38	5.82	5.75	5.38	5.58	5.34	6.41	--					6.71	4	4.13	3
	Hoa Binh	4.20	4.52	4.45	4.93	5.67	5.36	4.63	5.26	5.45	5.38	6.69	--					6.74	3	4.00	2

Table 3.34 Data completeness of pH (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	79	100	97	96	95	99	99	98	97	98	94
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	98	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	22	56	85	0	0	0	0	0	0	0
	Bandung	0	0	0	0	0	0	0	0	0	0	0	0
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	96	0	0	83	100	99	98	94	26
	Sado-seki	75	0	0	77	95	99	97	91	98	96	98	75
	Happo	99	98	96	83	100	100	99	77	100	32	91	99
	Oki	100	100	100	99	98	100	99	100	99	100	100	98
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	99
	Ogasawara	99	98	100	97	97	84	100	100	98	98	99	100
	Hedo	95	97	98	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	98	100	100	100	100	100	100	99	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	96	95	99	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	99	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	100	100	100	100	100	100	100	100	100	100	100	100
	Listvyanka	100	100	100	100	100	100	100	99	100	65	100	100
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.35 Monthly weighted averages of conductivity unit: mS/m

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Daily or Event Max	M	Min	M	Weekly Max	M	Min	M
China	Chongqing																				
	-Guanyinqiao	16.7	19.5	10.8	5.16	3.57	5.00	4.84	4.52	5.25	7.03	8.44	12.8	29.8	1	2.51	5				
	-Nanshan	13.1	19.9	7.29	5.28	2.43	6.23	3.45	5.17	5.04	6.00	7.87	12.1					24.5	3	1.96	7
	Xi'an																				
	-Shizhan	29.4	27.1	28.4	--	9.52	6.57	10.7	5.98	15.3	7.30	32.2	67.1	117	3	2.50	6				
	-Weishuiyuan	--	54.4	113	15.7	17.5	11.3	16.7	9.09	13.8	12.4	37.9	140	140	12	5.70	9				
	-Dabagou	--	3.90	--	4.64	19.7	4.18	3.68	4.55	6.42	11.6	2.31	16.8	25.1	5	1.68	7				
	Xiamen																				
	-Hongwen	1.84	2.18	3.57	1.90	8.57	1.02	1.42	1.64	4.52	--	2.58	1.44	11.0	3	0.54	6				
	-Xiaoping	1.20	0.94	1.02	1.47	1.26	0.50	1.50	0.80	--	--	--	0.59	6.01	6	0.0	4				
	Zhuhai																				
	-Xiang Zhou	9.47	8.70	3.29	1.19	4.64	0.67	2.65	2.49	9.23	1.33	3.90	2.34	15.8	5	0.50	6				
	-Zhuxian Cavern	3.39	7.61	0.90	5.13	3.81	1.42	2.64	2.25	8.81	0.96	3.77	2.59	15.5	2	0.41	6				
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	4.3	6.4					6.35	12	2.40	11
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--								
	Kototabang	--	--	1.25	1.02	0.84	--	--	--	--	--	--	--	2.22	4	0.19	5				
	Bandung	--	--	3.28	3.19	2.68	4.46	3.14	7.74	6.05	6.07	3.00	2.11	16.9	9	1.50	11				
Japan	Rishiri	6.94	10.4	18.3	3.95	1.53	2.43	2.00	1.01	--	--	20.6	8.40	38.4	3	0.46	7				
	Tappi	2.88	3.45	3.20	2.44	--	--	2.27	5.46	5.11	2.84	3.58	5.36	27.3	9	0.53	4				
	Sado-seki	12.7	--	--	6.10	4.39	1.46	1.74	2.20	3.24	3.70	4.54	12.5	49.6	1	0.49	6				
	Happo	1.35	1.82	1.25	1.79	1.00	0.43	1.10	2.56	0.88	0.70	0.77	1.63	13.2	4	0.17	6				
	Oki	21.1	37.1	7.11	2.14	2.52	1.63	1.20	2.44	2.61	3.05	5.06	18.1	195	2	0.58	5				
	Yusuhara	1.68	2.56	1.67	1.15	1.33	0.59	1.03	0.91	1.20	2.07	0.69	2.48	16.3	2	0.18	6				
	Ogasawara	1.44	2.69	1.60	2.11	4.51	1.14	1.15	2.98	6.18	1.31	1.06	3.21	21.5	7	0.37	3				
	Hedo	4.30	4.66	3.24	1.04	1.05	1.09	3.06	64.1	4.85	2.14	1.89	4.29	155	8	0.23	7				
	Ijira	2.11	2.83	1.77	1.53	1.83	2.12	2.19	2.90	1.28	3.72	3.02	2.78					8.27	7	0.49	9
	Banryu	--	--	--	2.61	1.33	1.09	1.21	1.23	1.43	3.00	2.17	9.64					43.8	12	0.44	9
Malaysia	Petaling Jaya	1.65	1.58	2.30	1.98	3.39	1.54	1.51	2.73	1.75	1.06	2.57	2.81					4.63	6	0.64	10
	Tanah Rata	0.27	0.78	0.78	0.60	0.91	0.86	1.88	0.71	0.85	0.70	0.60	0.47					5.12	5	0.21	1
Mongolia	Ulaanbaatar	--	--	--	6.42	3.98	3.46	2.00	1.17	3.19	1.42	--	--	14.0	4	0.68	8				
	Terelj	--	--	--	3.51	1.82	1.70	1.36	0.93	1.69	0.74	--	--	9.93	6	0.30	8				
Philippines	Metro Manila	6.71	14.6	15.0	3.20	2.07	1.26	1.28	1.80	2.00	1.62	2.64	2.00					15.0	3	1.00	10
	Los Banos	--	1.57	1.80	1.91	1.39	0.71	1.95	1.51	1.75	0.50	1.00	2.01					4.00	12	0.50	10
Republic	Kanghwa	3.94	--	--	5.68	5.09	6.19	5.73	1.34	0.46	3.41	2.32	12.4	14.7	7	0.44	8				
of Korea	Cheju	10.2	19.6	2.65	26.5	1.94	1.18	0.94	1.60	3.19	2.92	8.05	--	26.5	4	0.61	6				
Russia	Mondy	1.01	1.10	1.36	1.36	1.04	0.58	0.44	0.65	0.38	0.52	--	1.01	2.71	3	0.33	10				
	Listvyanka	2.22	1.24	1.76	1.06	1.58	1.55	0.88	0.78	0.91	1.43	0.95	1.28	4.58	6	0.27	7				
	Irkutsk	4.07	2.73	4.01	4.50	6.60	1.49	1.64	0.86	1.22	1.81	4.35	2.62	34.7	5	0.63	6				
Thailand	Bangkok	--	--	3.15	2.88	2.25	1.00	1.65	0.80	1.82	1.71	--	--	6.83	9	0.43	7				
	Samutprakarn	--	--	--	1.90	1.67	1.61	1.55	0.91	1.76	1.51	--	--	5.83	8	0.46	8				
	Patumthani	--	6.79	5.00	1.49	1.41	1.72	1.19	1.24	0.89	2.11	--	--	9.11	5	0.54	9				
	Khao Lam	--	--	--	--	0.56	0.45	0.76	0.33	0.50	0.49	--	--	2.91	7	0.18	8				
Vietnam	Hanoi	24.1	6.32	7.70	1.69	2.67	1.08	0.89	1.33	1.39	0.58	4.17	--					24.1	1	0.46	10
	Hoa Binh	7.52	3.40	3.81	0.89	0.69	0.81	1.28	1.42	1.28	1.12	8.89	--					8.89	11	0.39	10

Table 3.36 Data completeness of conductivity (%TP) unit: %

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	100	79	100	97	96	95	99	99	98	97	98	94
	-Nanshan	100	100	100	100	100	100	100	100	100	100	100	100
	Xi'an												
	-Shizhan	100	100	100	100	100	100	100	100	100	100	100	100
	-Weishuiyuan	100	100	100	100	100	100	100	100	100	100	100	100
	-Dabagou	100	100	100	100	100	100	100	100	100	100	100	100
	Xiamen												
	-Hongwen	100	100	100	100	100	100	100	100	100	100	100	100
	-Xiaoping	100	100	100	100	100	100	100	100	100	100	100	100
	Zhuhai												
	-Xiang Zhou	100	100	100	100	100	100	100	100	100	100	100	100
	-Zhuxian Cavern	100	100	100	100	100	100	100	100	100	100	100	100
Indonesia	Jakarta	0	0	0	0	0	0	0	0	0	0	44	42
	Serpong	0	0	0	0	0	0	0	0	0	0	0	0
	Kototabang	0	0	22	56	85	0	0	0	0	0	0	0
	Bandung	0	0	100	100	100	100	100	100	40	100	100	100
Japan	Rishiri	21	96	37	100	100	100	98	52	0	0	100	100
	Tappi	96	91	91	96	0	0	83	100	99	98	94	26
	Sado-seki	75	0	0	77	95	99	97	91	98	96	98	75
	Happo	99	98	96	83	100	100	99	77	100	32	91	99
	Oki	100	100	100	99	98	100	99	100	99	100	100	98
	Yusuhara	99	99	100	61	100	100	95	100	100	86	100	99
	Ogasawara	99	98	100	97	97	84	100	100	98	98	99	100
	Hedo	95	97	98	100	100	100	100	100	100	100	100	100
	Ijira	100	100	100	100	100	100	100	100	100	100	100	100
	Banryu	0	0	0	64	100	100	100	100	100	100	99	100
Malaysia	Petaling Jaya	100	99	100	100	100	100	100	100	100	100	100	100
	Tanah Rata	98	100	100	100	100	100	100	99	99	100	100	100
Mongolia	Ulaanbaatar	0	0	0	96	95	99	100	100	100	100	0	0
	Terelj	0	0	0	100	100	100	100	100	99	100	0	0
Philippines	Metro Manila	100	100	100	100	100	100	100	100	100	100	100	100
	Los Banos	0	100	100	100	100	100	100	100	100	100	100	100
Republic	Kanghwa	79	0	0	83	97	19	100	86	65	91	83	42
of Korea	Cheju	100	70	87	45	100	79	78	58	88	100	30	0
Russia	Mondy	100	100	100	100	100	100	100	100	100	100	100	100
	Listvyanka	100	100	100	100	100	100	100	99	100	65	100	100
	Irkutsk	100	100	100	79	100	100	95	100	88	100	100	100
Thailand	Bangkok	100	100	100	100	100	100	100	100	100	100	100	100
	Samutprakarn	100	100	100	100	100	100	99	99	100	100	100	100
	Patumthani	100	100	100	100	100	100	100	100	100	100	100	100
	Khao Lam	100	100	100	100	100	100	100	100	100	100	100	100
Vietnam	Hanoi	100	100	100	100	99	100	100	100	100	100	100	100
	Hoa Binh	100	100	100	100	100	100	100	99	100	100	68	100

Table 3.37 Monthly SO_4^{2-} deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	5.09	2.80	10.3	21.0	10.9	17.2	25.3	20.1	15.7	14.6	13.6	7.28
	-Nanshan	8.30	2.70	15.8	21.6	11.0	10.7	24.0	15.4	17.7	13.9	13.8	9.46
	Xi'an												
	-Shizhan	5.91	1.35	6.09	0.00	14.8	23.5	21.2	22.1	27.3	17.9	33.2	25.7
	-Weishuiyuan	0.00	2.00	7.06	7.64	15.3	42.5	50.4	26.2	32.2	21.1	20.1	16.4
	-Dabagou	0.00	0.90	0.00	4.45	9.02	22.5	6.51	8.86	17.5	14.1	2.21	31.1
	Xiamen												
	-Hongwen	0.61	4.15	1.70	4.86	0.04	7.92	4.66	3.19	2.00	0.00	0.39	1.16
	-Xiaoping	0.07	0.78	0.73	3.76	0.07	5.98	4.44	2.72	0.00	0.00	0.00	4.28
	Zhuhai												
	-Xiang Zhou	8.09	5.94	3.21	7.92	3.26	1.94	4.41	3.60	0.45	1.51	1.53	3.62
	-Zhuxian Cavern	3.24	3.87	5.81	42.5	3.51	5.42	4.52	4.94	0.93	4.64	3.09	2.95
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	12.1	7.15
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	0.55	0.75	0.21	--	--	--	--	--	--	--
	Bandung	--	--	7.62	17.3	10.3	2.24	7.27	2.09	5.45	1.79	5.68	0.43
Japan	Rishiri	3.55	1.65	2.64	0.86	0.84	1.34	2.27	0.38	--	--	7.30	2.02
	Tappi	2.26	0.67	1.41	0.77	--	--	2.85	0.58	6.13	0.88	2.23	2.00
	Sado-seki	5.48	--	--	2.53	1.86	1.39	0.94	0.23	4.07	3.36	3.26	7.30
	Happo	1.47	2.51	2.91	1.86	1.00	1.06	2.37	6.96	2.17	1.97	1.52	2.82
	Oki	9.20	12.4	5.58	1.82	1.53	1.51	0.90	0.37	3.00	2.18	5.22	5.21
	Yusuhara	1.74	1.18	4.48	1.69	2.56	2.88	2.30	1.66	8.47	2.02	1.05	1.17
	Ogasawara	1.03	1.45	0.86	1.22	3.84	0.19	1.59	2.74	4.65	0.85	0.94	3.25
	Hedo	2.62	3.08	3.89	1.52	0.61	1.41	14.3	50.8	7.08	1.41	3.43	3.50
	Ijira	1.32	1.83	5.10	5.21	5.41	8.95	7.54	2.52	4.65	5.80	2.93	2.09
	Banryu	--	--	--	2.04	1.60	1.90	0.57	2.00	3.67	2.79	2.41	2.34
Malaysia	Petaling Jaya	7.90	6.06	8.31	6.82	0.72	3.50	4.51	3.63	8.47	1.73	14.4	14.3
	Tanah Rata	0.12	0.96	2.73	1.55	0.70	1.53	0.72	0.82	1.47	0.60	0.89	0.81
Mongolia	Ulaanbaatar	--	--	--	0.25	0.21	0.75	1.44	1.75	0.29	0.09	--	--
	Terelj	--	--	--	0.08	0.13	0.69	1.05	0.96	0.41	0.09	--	--
Philippines	Metro Manila	1.14	3.31	1.61	2.93	6.40	4.00	17.9	5.81	15.8	24.5	3.19	7.81
	Los Banos	--	1.92	0.20	0.23	0.64	3.33	4.64	1.68	1.74	8.78	2.46	2.05
Republic	Kanghwa	2.59	--	--	4.45	6.12	5.48	5.74	4.46	0.47	1.48	0.56	6.15
of Korea	Cheju	3.34	1.19	1.20	7.04	0.83	2.81	0.37	3.23	2.51	1.91	2.84	--
Russia	Mondy	0.01	0.02	0.14	0.40	0.18	0.47	0.62	0.21	0.03	0.08	0.00	0.03
	Listvyanka	0.10	0.14	0.26	0.34	0.34	1.04	1.22	1.51	0.40	1.01	0.02	0.39
	Irkutsk	0.86	0.93	1.11	1.97	0.74	1.39	4.16	2.58	0.82	0.99	0.27	0.53
Thailand	Bangkok	0.00	0.00	0.16	3.50	6.22	2.48	1.72	2.36	3.46	4.89	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.08	3.79	2.79	3.74	2.72	7.70	4.14	0.00	0.00
	Patumthani	0.00	0.89	0.59	1.59	3.28	3.76	1.56	2.17	2.42	2.47	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.12	0.21	1.36	0.17	0.52	0.82	0.00	0.00
Vietnam	Hanoi	1.17	2.63	7.57	5.24	5.85	2.94	3.29	6.03	1.56	1.45	0.17	0.00
	Hoa Binh	0.36	1.28	1.24	0.22	3.81	3.16	2.69	4.25	8.21	2.21	0.42	0.00

Table 3.38 Monthly nss-SO_4^{2-} deposition amounts unit: mmol/m^2

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	5.05	2.76	10.3	20.9	10.9	17.1	25.1	19.9	15.6	14.6	13.6	7.26
	-Nanshan	8.28	2.69	15.7	21.5	11.0	10.7	23.9	15.3	17.6	13.9	13.7	9.42
	Xi'an												
	-Shizhan	5.59	1.32	6.06	0.00	14.7	23.3	20.9	21.9	27.2	17.8	33.0	25.6
	-Weishuiyuan	0.00	1.92	7.02	7.56	15.1	42.2	50.1	26.1	32.0	20.9	19.7	16.3
	-Dabagou	0.00	0.82	0.00	4.40	8.96	22.1	6.46	8.65	17.4	14.1	2.19	30.9
	Xiamen												
	-Hongwen	0.36	4.08	1.65	4.77	0.03	7.44	3.92	2.84	1.97	0.00	0.32	1.12
	-Xiaoping	0.06	0.73	0.72	3.72	0.06	5.81	3.96	2.68	0.00	0.00	0.00	4.27
	Zhuhai												
	-Xiang Zhou	6.20	5.78	3.04	6.85	3.10	1.78	3.29	3.52	0.43	1.30	1.51	3.55
	-Zhuxian Cavern	3.19	3.80	5.65	41.3	3.44	5.16	3.94	4.81	0.87	4.29	3.06	2.90
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	11.4	6.84
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--
Japan	Rishiri	2.05	0.92	1.14	0.48	0.77	0.94	2.12	0.24	--	--	1.90	0.96
	Tappi	1.43	0.49	1.10	0.39	--	--	2.36	0.28	2.58	0.69	1.47	0.58
	Sado-seki	1.67	--	--	1.32	1.60	1.30	0.79	0.21	2.55	2.80	1.66	2.28
	Happo	1.38	2.33	2.73	1.78	0.98	1.05	2.36	6.93	2.14	1.95	1.48	2.58
	Oki	2.21	2.19	3.05	1.54	1.43	1.37	0.71	0.27	1.69	1.71	2.53	1.69
	Yusuhara	1.66	0.98	4.23	1.62	2.39	2.77	1.63	1.48	7.89	1.92	0.89	1.10
	Ogasawara	0.50	0.73	0.45	0.76	0.85	0.09	0.37	0.41	0.25	0.33	0.48	1.00
	Hedo	0.86	1.65	2.50	0.95	0.35	0.72	6.58	0.36	0.10	0.90	1.04	1.12
	Ijira	1.13	1.36	4.41	4.87	5.24	8.69	7.34	2.35	4.44	5.69	2.83	1.78
	Banryu	--	--	--	1.87	1.55	1.81	0.53	1.92	3.40	2.46	1.94	1.72
Malaysia	Petaling Jaya	7.76	6.00	8.22	6.77	0.70	3.45	4.29	3.60	8.36	1.69	14.3	14.2
	Tanah Rata	0.11	0.94	2.67	1.53	0.68	1.48	0.69	0.81	1.44	0.56	0.86	0.78
Mongolia	Ulaanbaatar	--	--	--	0.24	0.20	0.74	1.42	1.71	0.29	0.09	--	--
	Terelj	--	--	--	0.07	0.13	0.68	1.04	0.93	0.39	0.08	--	--
Philippines	Metro Manila	1.14	3.27	1.19	2.85	5.76	3.95	14.2	5.09	14.9	23.9	3.05	7.69
	Los Banos	--	1.40	0.10	0.20	0.46	2.62	4.28	1.60	1.30	6.74	1.96	1.67
Republic	Kanghwa	2.44	--	--	4.20	5.81	5.30	4.90	3.55	0.04	1.45	0.50	5.56
of Korea	Cheju	1.60	0.83	0.99	3.56	0.65	2.48	0.19	2.65	0.47	1.43	1.47	--
Russia	Mondy	0.01	0.02	0.14	0.39	0.18	0.47	0.61	0.20	0.03	0.08	0.00	0.03
	Listvyanka	0.10	0.13	0.26	0.34	0.34	1.01	1.20	1.48	0.40	1.00	0.02	0.38
	Irkutsk	0.84	0.91	1.08	1.94	0.73	1.38	4.13	2.53	0.81	0.96	0.26	0.49
Thailand	Bangkok	0.00	0.00	0.16	3.49	6.14	2.37	1.64	2.29	3.39	4.85	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.08	3.64	2.71	3.64	2.65	7.56	4.09	0.00	0.00
	Patumthani	0.00	0.87	0.58	1.57	3.18	3.56	1.48	2.11	2.34	2.42	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.10	0.15	1.10	0.13	0.45	0.80	0.00	0.00
Vietnam	Hanoi	1.15	2.61	7.46	5.17	5.78	2.71	2.96	5.69	1.46	1.38	0.17	0.00
	Hoa Binh	0.36	1.27	1.23	0.19	3.70	2.86	2.63	4.03	7.69	2.04	0.39	0.00

Table 3.39 Monthly NO_3^- deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	1.58	0.92	2.92	4.98	2.38	4.13	8.10	5.17	4.16	4.24	3.78	3.17
	-Nanshan	2.90	0.59	5.81	6.06	2.57	3.84	7.56	6.14	5.34	3.53	4.46	3.65
	Xi'an												
	-Shizhan	1.67	0.39	1.47	0.00	4.87	6.35	5.19	8.48	7.77	3.93	5.56	2.96
	-Weishuiyuan	0.00	1.13	0.85	0.79	2.19	7.29	8.30	5.77	8.15	4.14	3.78	0.46
	-Dabagou	0.00	1.05	0.00	2.31	1.67	6.48	1.63	2.79	3.57	2.67	0.88	1.09
	Xiamen												
	-Hongwen	0.32	1.66	1.17	4.91	0.01	8.82	4.52	3.05	3.10	0.00	0.51	0.38
	-Xiaoping	0.12	1.31	1.08	4.62	0.09	9.10	3.61	2.12	0.00	0.00	0.00	0.79
	Zhuhai												
	-Xiang Zhou	2.63	2.65	1.95	8.35	3.86	2.07	3.61	2.21	0.47	1.16	0.99	1.80
	-Zhuxian Cavern	1.55	1.18	2.16	32.6	3.73	3.51	4.69	2.97	0.79	3.12	1.32	1.92
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	2.46	3.38
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	0.84	1.08	0.48	--	--	--	--	--	--	--
	Bandung	--	--	2.07	6.49	4.70	1.89	2.98	1.95	3.59	1.41	3.67	1.97
Japan	Rishiri	0.65	0.46	0.86	0.53	0.97	1.24	2.03	0.37	--	--	1.58	1.00
	Tappi	1.64	0.36	1.48	0.84	--	--	2.54	0.44	1.46	0.61	1.49	0.46
	Sado-seki	1.44	--	--	1.93	2.11	2.03	1.15	0.50	1.24	1.69	1.47	2.14
	Happo	0.99	1.74	2.24	2.18	1.16	1.68	2.70	5.49	1.43	1.49	0.93	1.70
	Oki	2.21	3.28	3.64	1.98	1.60	1.94	0.80	0.47	0.94	1.74	1.67	2.17
	Yusuhara	1.64	1.46	3.16	1.43	2.12	2.12	1.57	0.96	2.48	1.19	0.93	0.86
	Ogasawara	0.47	0.62	0.35	0.97	0.58	0.08	0.14	0.26	0.27	0.17	0.35	0.50
	Hedo	0.94	1.74	2.46	1.16	0.57	0.87	4.61	2.01	0.21	0.44	0.76	0.87
	Ijira	2.86	2.21	5.79	6.18	8.10	15.1	10.2	4.53	2.81	3.28	2.04	1.76
	Banryu	--	--	--	1.77	1.19	2.66	0.55	2.31	2.04	2.68	1.92	2.03
Malaysia	Petaling Jaya	8.20	6.02	11.9	9.21	3.44	3.20	4.18	4.74	8.12	1.27	18.0	14.6
	Tanah Rata	0.09	0.96	2.55	1.50	1.05	0.55	0.62	0.12	1.41	0.40	0.92	0.23
Mongolia	Ulaanbaatar	--	--	--	0.11	0.19	0.57	1.21	1.58	0.20	0.06	--	--
	Terelj	--	--	--	0.06	0.17	0.81	1.09	1.02	0.40	0.10	--	--
Philippines	Metro Manila	0.18	0.19	1.21	1.27	2.11	2.80	8.72	3.70	9.87	11.6	1.34	5.87
	Los Banos	--	0.99	0.04	0.15	0.21	1.54	2.48	0.40	0.95	4.26	0.79	2.48
Republic	Kanghwa	1.75	--	--	3.90	6.83	10.3	7.70	11.2	0.20	1.51	1.01	8.09
of Korea	Cheju	1.48	0.62	0.92	2.07	0.82	3.67	0.32	3.03	0.61	2.11	0.74	--
Russia	Mondy	0.01	0.02	0.07	0.17	0.07	0.09	1.35	1.04	0.18	0.03	0.00	<0.01
	Listvyanka	0.35	0.39	0.40	0.27	0.26	1.39	2.28	1.51	0.20	0.36	0.07	0.76
	Irkutsk	0.85	0.75	0.68	0.59	0.46	2.01	3.05	1.59	0.28	0.28	0.17	0.50
Thailand	Bangkok	0.00	0.00	0.17	3.07	6.12	2.89	1.65	1.01	3.34	6.50	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.05	3.03	1.49	1.30	0.64	4.34	4.22	0.00	0.00
	Patumthani	0.00	1.27	0.88	1.70	2.29	3.87	1.12	1.68	2.16	2.80	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.44	1.25	0.99	0.50	0.63	1.26	0.00	0.00
Vietnam	Hanoi	0.43	1.39	2.50	3.95	5.00	1.71	2.69	1.62	0.42	0.50	0.03	0.00
	Hoa Binh	0.13	0.93	0.60	0.14	3.50	2.00	3.14	1.30	2.91	0.35	0.05	0.00

Table 3.40 Monthly Cl^- deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	1.07	1.08	1.88	2.83	1.16	2.28	2.96	2.71	2.51	4.16	2.68	0.62
	-Nanshan	1.01	0.34	1.46	2.19	0.88	1.19	2.31	1.79	2.69	2.33	2.13	1.36
	Xi'an												
	-Shizhan	1.51	0.33	0.89	0.00	4.16	3.89	1.59	3.46	3.63	3.47	2.92	1.53
	-Weishuiyuan	0.00	1.90	0.66	1.47	3.63	10.0	6.36	4.14	4.46	2.85	4.30	1.20
	-Dabagou	0.00	0.73	0.00	2.78	2.23	5.55	0.68	4.92	3.83	1.89	0.20	4.00
	Xiamen												
	-Hongwen	0.59	2.75	0.65	3.20	0.02	12.9	14.9	6.61	5.76	0.00	0.24	0.98
	-Xiaoping	0.20	2.93	1.46	2.75	0.08	11.1	9.85	2.47	0.00	0.00	0.00	1.50
	Zhuhai												
	-Xiang Zhou	35.7	3.69	3.98	22.5	2.10	5.41	17.6	3.53	0.49	2.98	0.59	2.55
	-Zhuxian Cavern	0.92	1.65	1.54	25.7	1.43	8.36	14.5	3.01	1.17	9.00	1.09	1.82
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	3.04	4.08
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	1.14	1.06	0.56	--	--	--	--	--	--	--
	Bandung	--	--	10.1	18.4	10.6	1.39	3.90	1.06	3.16	7.58	26.4	11.1
Japan	Rishiri	26.9	12.0	27.5	6.79	0.94	7.79	2.85	2.45	--	--	106	19.1
	Tappi	15.3	3.54	5.79	7.44	--	--	9.45	5.76	73.8	3.73	14.3	26.6
	Sado-seki	68.1	--	--	20.9	4.67	1.66	2.64	0.38	27.5	9.57	28.5	87.2
	Happo	1.65	3.76	3.83	1.25	0.35	0.36	0.58	1.55	0.80	1.43	1.21	5.21
	Oki	129	202	45.8	5.38	1.80	2.56	3.54	1.60	24.4	8.78	49.7	67.8
	Yusuhara	2.14	3.86	4.87	2.05	3.86	3.22	11.4	2.77	11.9	1.91	3.25	1.29
	Ogasawara	11.1	13.8	8.27	8.79	62.5	2.18	24.8	45.9	86.9	9.56	9.15	42.5
	Hedo	27.5	26.8	26.4	10.2	4.76	13.1	144	1017	132	9.12	43.4	42.6
	Ijira	2.95	9.30	12.7	6.13	3.21	4.33	4.46	4.45	4.19	3.05	2.56	4.51
	Banryu	--	--	--	2.96	0.91	1.88	0.83	1.48	5.30	4.81	8.04	11.8
Malaysia	Petaling Jaya	2.01	3.66	3.68	1.72	0.61	1.59	3.12	1.32	3.96	0.97	3.04	3.40
	Tanah Rata	0.81	1.88	2.67	1.99	2.18	2.74	0.73	1.52	1.96	1.10	1.97	1.74
Mongolia	Ulaanbaatar	--	--	--	0.10	0.10	0.19	0.49	0.71	0.11	0.05	--	--
	Terelj	--	--	--	0.06	0.04	0.23	0.35	0.70	0.34	0.14	--	--
Philippines	Metro Manila	0.71	1.96	1.77	1.99	5.60	0.90	29.7	7.27	20.2	23.8	4.94	4.65
	Los Banos	--	6.59	1.51	0.15	1.00	11.1	8.44	4.26	6.53	29.9	10.2	7.14
Republic	Kanghwa	2.94	--	--	3.50	4.52	3.16	14.8	11.9	7.60	0.53	0.58	13.6
of Korea	Cheju	50.2	10.3	4.41	70.8	3.30	4.38	2.66	8.48	46.3	10.2	35.4	--
Russia	Mondy	0.01	0.01	0.07	0.08	<0.01	0.21	0.25	0.08	<0.01	0.05	0.00	0.01
	Listvyanka	0.05	0.04	0.07	0.09	0.13	0.33	0.41	0.66	0.16	0.19	0.01	0.08
	Irkutsk	0.62	0.50	0.52	0.71	0.23	0.45	1.16	0.78	0.11	0.57	0.14	0.42
Thailand	Bangkok	0.00	0.00	0.08	1.34	4.76	1.75	1.42	2.00	1.63	1.46	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.05	1.84	1.35	1.72	2.10	2.71	2.88	0.00	0.00
	Patumthani	0.00	0.75	0.32	0.38	2.06	2.31	1.40	0.89	1.17	0.67	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.42	1.04	4.99	1.46	5.71	1.90	0.00	0.00
Vietnam	Hanoi	0.56	0.69	3.71	2.26	1.09	6.19	6.94	3.81	1.20	3.76	0.29	0.00
	Hoa Binh	0.06	0.72	0.43	0.50	2.34	6.71	4.85	3.50	9.10	7.61	1.22	0.00

Table 3.41 Monthly NH_4^+ deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	4.29	2.18	11.6	19.7	11.3	18.9	20.2	20.9	15.3	17.1	21.0	11.3
	-Nanshan	6.88	3.64	15.2	15.3	9.76	12.2	13.6	13.3	8.58	10.4	13.5	9.82
	Xi'an												
	-Shizhan	8.11	1.89	9.66	0.00	8.73	61.1	29.9	47.2	31.5	17.7	12.3	7.29
	-Weishuiyuan	0.00	2.96	3.96	4.10	8.98	77.8	23.6	24.0	28.5	10.8	3.08	2.72
	-Dabagou	0.00	0.24	0.00	2.41	6.31	38.1	10.8	43.8	17.0	21.1	1.60	24.0
	Xiamen												
	-Hongwen	1.36	6.93	2.81	8.85	0.06	9.20	5.27	4.07	4.95	0.00	1.87	2.55
	-Xiaoping	0.07	2.67	1.57	8.51	0.11	6.75	3.89	6.62	0.00	0.00	0.00	0.79
	Zhuhai												
	-Xiang Zhou	0.39	4.02	1.92	13.1	4.13	5.89	1.38	4.21	<0.01	1.87	1.27	3.50
	-Zhuxian Cavern	1.62	2.36	3.30	55.5	4.02	4.33	3.90	5.36	1.08	5.10	1.90	2.22
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	19.8	5.39
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	0.16	0.19	0.10	--	--	--	--	--	--	--
	Bandung	--	--	1.63	3.97	0.75	1.74	2.42	1.78	8.93	3.02	4.46	0.65
Japan	Rishiri	1.27	0.45	1.30	0.58	1.01	2.32	3.87	0.68	--	--	5.52	1.01
	Tappi	0.85	0.28	1.46	0.15	--	--	3.18	0.30	0.56	0.70	0.92	0.12
	Sado-seki	1.43	--	--	1.76	2.34	2.08	1.37	0.25	0.92	1.64	1.00	1.72
	Happo	0.97	2.31	3.16	2.49	1.52	1.73	4.58	8.18	1.51	0.89	0.74	1.71
	Oki	2.64	4.58	4.48	1.70	1.54	1.77	0.66	0.35	0.22	1.53	2.14	1.85
	Yusuhara	0.76	0.85	3.08	1.66	1.66	1.98	1.48	0.44	1.44	0.56	0.15	0.50
	Ogasawara	0.19	0.54	0.40	0.74	0.56	0.06	0.28	0.38	0.50	0.36	0.22	0.42
	Hedo	0.77	1.30	2.38	1.39	0.47	0.65	13.5	0.33	0.01	0.08	0.03	0.10
	Ijira	1.18	1.87	5.48	6.23	8.36	15.7	13.5	4.17	2.85	1.70	1.57	1.23
	Banryu	--	--	--	2.17	1.38	2.07	0.72	1.86	1.89	1.73	0.98	1.82
Malaysia	Petaling Jaya	9.32	5.86	8.55	5.83	4.10	4.29	6.12	17.4	34.2	4.55	32.6	16.4
	Tanah Rata	3.51	18.0	20.6	9.54	12.3	7.87	6.18	4.93	16.5	7.97	13.6	7.64
Mongolia	Ulaanbaatar	--	--	--	0.13	0.33	1.22	3.63	4.28	0.47	0.16	--	--
	Terelj	--	--	--	0.02	0.33	1.92	2.85	3.05	0.83	0.20	--	--
Philippines	Metro Manila	5.17	0.62	25.5	0.35	25.9	5.52	22.5	4.72	9.93	21.9	13.8	7.50
	Los Banos	--	0.65	0.24	0.81	2.60	2.84	3.69	0.91	2.07	19.4	1.20	1.37
Republic	Kanghwa	2.09	--	--	2.61	5.17	5.04	8.66	6.02	0.41	1.74	1.06	13.7
of Korea	Cheju	0.87	0.92	0.66	1.54	0.37	6.53	0.60	4.01	1.96	2.81	1.60	--
Russia	Mondy	0.01	0.02	0.14	0.65	0.31	0.52	0.75	0.72	0.25	0.08	0.00	0.01
	Listvyanka	0.06	0.04	0.28	0.38	0.43	2.18	1.95	1.29	0.28	0.26	0.02	0.14
	Irkutsk	0.76	0.69	0.84	1.61	0.64	2.82	4.69	2.79	1.05	0.66	0.23	0.59
Thailand	Bangkok	0.00	0.00	0.22	6.67	12.4	5.68	3.75	4.90	5.59	8.05	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.08	4.94	3.81	4.33	4.31	8.18	5.48	0.00	0.00
	Patumthani	0.00	<0.01	1.02	2.98	9.09	6.38	3.36	4.39	5.69	3.70	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.22	0.80	1.46	0.59	1.31	1.65	0.00	0.00
Vietnam	Hanoi	0.77	2.91	9.89	9.84	6.73	0.94	0.74	2.12	0.32	0.19	0.11	0.00
	Hoa Binh	0.20	0.38	0.56	0.14	3.47	0.95	0.20	1.20	2.93	0.62	0.09	0.00

Table 3.42 Monthly Na^+ deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	0.58	0.78	0.85	1.88	0.73	1.37	2.27	2.19	0.75	0.42	0.62	0.34
	-Nanshan	0.36	0.12	0.71	1.36	0.69	0.48	2.25	1.56	0.58	0.04	1.02	0.57
	Xi'an												
	-Shizhan	5.34	0.45	0.50	0.00	1.81	2.22	4.84	2.04	1.36	1.96	2.73	1.42
	-Weishuiyuan	0.00	1.29	0.74	1.40	3.29	4.39	5.24	2.57	1.94	3.36	5.91	0.68
	-Dabagou	0.00	1.33	0.00	0.76	0.97	6.55	0.75	3.46	1.46	0.34	0.20	3.95
	Xiamen												
	-Hongwen	4.16	1.16	0.79	1.58	0.01	8.01	12.3	5.67	0.55	0.00	1.20	0.68
	-Xiaoping	0.17	0.85	0.16	0.66	0.10	2.76	8.06	0.63	0.00	0.00	0.00	0.17
	Zhuhai												
	-Xiang Zhou	31.3	2.64	2.82	17.8	2.81	2.67	18.6	1.48	0.29	3.47	0.32	1.25
	-Zhuxian Cavern	0.77	1.18	2.56	20.3	1.14	4.39	14.8	2.20	0.97	5.86	0.55	0.73
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	12.1	5.05
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--
Japan	Rishiri	24.9	12.1	24.9	6.31	1.04	6.58	2.54	2.26	--	--	89.6	17.6
	Tappi	13.8	3.11	5.12	6.31	--	--	8.12	4.93	59.0	3.14	12.5	23.6
	Sado-seki	63.1	--	--	19.9	4.26	1.65	2.49	0.39	25.2	9.21	26.5	83.5
	Happo	1.45	3.04	3.09	1.25	0.26	0.18	0.17	0.45	0.50	0.47	0.70	4.05
	Oki	116	174	42.0	4.80	1.64	2.38	3.02	1.64	21.6	7.78	44.7	58.4
	Yusuhara	1.37	2.83	4.11	1.16	2.77	1.29	11.0	3.00	9.59	1.68	2.64	1.09
	Ogasawara	8.85	11.2	6.85	7.52	49.1	1.72	20.2	38.6	78.8	8.70	7.79	37.5
	Hedo	29.3	23.8	23.1	9.57	4.22	11.4	128	879	122	8.52	39.7	39.5
	Ijira	3.10	7.89	11.5	5.58	2.88	4.31	3.25	2.93	3.47	1.85	1.65	5.13
	Banryu	--	--	--	2.80	0.93	1.63	0.77	1.33	4.57	5.50	7.69	10.3
Malaysia	Petaling Jaya	2.28	0.98	1.34	0.92	0.38	0.86	3.63	0.59	1.70	0.72	1.53	2.05
	Tanah Rata	0.18	0.33	0.93	0.43	0.31	0.88	0.46	0.26	0.45	0.64	0.48	0.58
Mongolia	Ulaanbaatar	--	--	--	0.17	0.14	0.15	0.31	0.65	0.09	0.05	--	--
	Terelj	--	--	--	0.09	0.04	0.13	0.28	0.48	0.23	0.09	--	--
Philippines	Metro Manila	0.02	0.66	7.03	1.30	10.6	0.94	60.3	12.0	16.0	10.1	2.39	1.96
	Los Banos	--	11.4	1.71	0.49	2.95	11.8	5.93	1.36	7.26	33.8	8.34	6.40
Republic	Kanghwa	2.43	--	--	4.12	5.22	2.99	14.0	15.1	7.39	0.47	0.93	9.84
of Korea	Cheju	28.8	6.01	3.52	57.7	3.10	5.45	2.88	9.59	33.8	7.89	22.8	--
Russia	Mondy	<0.01	0.01	0.07	0.04	0.04	0.03	0.20	0.09	0.04	0.02	0.00	0.02
	Listvyanka	0.03	0.10	0.05	0.06	0.05	0.43	0.30	0.48	0.08	0.30	0.01	0.12
	Irkutsk	0.20	0.34	0.52	0.54	0.23	0.22	0.46	0.75	0.18	0.55	0.19	0.55
Thailand	Bangkok	0.00	0.00	0.03	0.32	1.74	1.59	1.37	1.10	1.09	0.71	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.04	2.55	1.28	1.68	1.16	2.39	0.81	0.00	0.00
	Patumthani	0.00	0.20	0.21	0.29	1.69	3.37	1.42	1.03	1.41	0.82	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.35	1.00	4.41	1.03	1.33	0.44	0.00	0.00
Vietnam	Hanoi	0.38	0.41	1.96	1.06	1.24	3.87	5.47	5.62	1.64	1.07	0.05	0.00
	Hoa Binh	0.04	0.11	0.15	0.45	1.88	4.92	0.98	3.65	8.53	2.82	0.42	0.00

Table 3.43 Monthly K^+ deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	0.96	0.34	0.91	1.61	0.75	1.53	2.29	1.36	1.35	1.44	2.01	0.81
	-Nanshan	0.97	0.47	1.90	1.97	0.97	1.27	2.55	1.31	1.97	2.23	3.34	1.57
	Xi'an												
	-Shizhan	0.82	0.47	0.25	0.00	0.81	1.49	2.62	2.66	2.78	1.37	0.86	0.69
	-Weishuiyuan	0.00	1.92	0.53	0.57	0.93	3.16	1.70	1.74	2.51	1.84	0.36	0.24
	-Dabagou	0.00	0.19	0.00	0.29	0.68	2.99	0.81	4.33	2.27	1.01	0.15	2.10
	Xiamen												
	-Hongwen	0.15	1.44	0.40	0.56	<0.01	0.74	0.70	0.41	2.58	0.00	0.39	0.20
	-Xiaoping	0.03	2.12	0.12	0.52	0.02	0.85	0.53	0.10	0.00	0.00	0.00	0.10
	Zhuhai												
	-Xiang Zhou	2.62	1.11	0.83	3.49	0.16	1.90	1.06	0.77	0.01	0.43	0.25	0.77
	-Zhuxian Cavern	0.46	0.67	1.35	3.42	0.55	0.85	1.15	0.97	0.03	0.67	0.42	0.45
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	--	--
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--
Japan	Rishiri	0.59	0.30	0.63	0.14	0.07	0.27	0.23	0.07	--	--	2.61	0.61
	Tappi	0.34	0.07	0.17	0.13	--	--	0.26	0.12	1.39	0.09	0.30	0.51
	Sado-seki	1.41	--	--	0.53	0.26	0.13	0.11	0.02	0.52	0.24	0.61	1.97
	Happo	0.09	0.19	0.26	0.22	0.11	0.11	0.13	0.16	0.06	0.09	0.06	0.18
	Oki	2.81	4.07	1.35	0.22	0.23	0.18	0.13	0.07	0.55	0.35	1.19	1.50
	Yusuhara	0.10	0.14	0.37	0.15	0.21	0.20	0.37	0.10	0.36	0.13	0.01	0.06
	Ogasawara	0.21	0.30	0.19	0.25	1.07	0.05	0.41	0.90	1.89	0.31	0.19	1.34
	Hedo	0.54	0.53	0.54	0.30	0.10	0.33	2.88	17.0	2.38	0.17	0.81	0.78
	Ijira	0.55	0.40	0.85	1.12	0.76	1.15	0.82	0.47	0.77	0.40	0.25	0.36
	Banryu	--	--	--	0.16	0.12	0.15	0.06	0.10	0.22	0.25	0.25	0.35
Malaysia	Petaling Jaya	0.96	0.39	0.48	0.30	0.25	0.25	0.61	0.29	0.64	0.23	0.90	0.76
	Tanah Rata	0.06	0.19	0.54	0.29	0.27	0.51	0.19	0.14	0.31	0.23	0.33	0.34
Mongolia	Ulaanbaatar	--	--	--	0.03	0.06	0.09	0.28	0.26	0.04	0.02	--	--
	Terelj	--	--	--	0.02	0.02	0.12	0.21	0.45	0.07	0.05	--	--
Philippines	Metro Manila	0.72	2.83	10.6	1.70	3.16	0.05	31.5	0.67	3.71	1.24	3.23	3.19
	Los Banos	--	0.17	0.28	0.15	0.18	0.04	0.71	0.04	0.62	0.96	1.02	0.39
Republic	Kanghwa	0.17	--	--	0.37	0.76	1.11	1.20	1.37	0.21	0.19	0.18	1.35
of Korea	Cheju	0.69	0.25	0.27	1.19	0.36	1.27	0.12	0.54	0.85	0.65	0.85	--
Russia	Mondy	<0.01	0.01	0.05	0.02	0.04	0.06	0.12	0.04	0.02	0.01	0.00	0.02
	Listvyanka	0.01	0.05	0.03	0.03	0.13	0.49	0.17	0.32	0.11	0.51	0.01	0.21
	Irkutsk	0.07	0.08	0.11	0.27	0.17	0.16	0.33	0.69	0.08	0.16	0.05	0.17
Thailand	Bangkok	0.00	0.00	<0.01	0.03	0.21	0.26	0.47	1.04	0.84	0.83	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.01	0.49	0.31	0.29	0.63	0.92	2.51	0.00	0.00
	Patumthani	0.00	0.22	0.11	0.08	0.51	0.43	0.17	0.15	0.36	0.13	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.07	0.27	0.16	0.81	4.75	1.76	0.00	0.00
Vietnam	Hanoi	0.04	0.30	0.78	0.06	0.12	0.45	0.14	1.20	0.48	1.51	0.06	0.00
	Hoa Binh	0.01	0.03	0.05	<0.01	0.68	0.52	0.07	0.97	2.00	1.72	0.11	0.00

Table 3.44 Monthly Ca^{2+} deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	2.53	1.98	1.75	10.1	4.89	8.96	7.39	7.97	7.03	6.94	4.93	3.62
	-Nanshan	4.00	1.70	2.74	13.6	6.96	5.82	5.58	4.86	6.95	7.19	4.91	5.19
	Xi'an												
	-Shizhan	2.07	1.88	4.36	0.00	16.3	12.4	13.4	11.7	20.4	13.0	15.5	17.1
	-Weishuiyuan	0.00	4.76	4.06	5.30	16.9	32.2	25.8	15.8	12.8	10.0	5.43	3.38
	-Dabagou	0.00	1.28	0.00	6.98	12.8	16.4	2.77	8.07	17.0	2.48	0.42	34.5
	Xiamen												
	-Hongwen	0.45	0.50	1.05	0.99	0.01	2.37	1.20	1.08	1.79	0.00	0.58	0.20
	-Xiaoping	0.03	0.24	0.09	0.15	0.01	0.36	0.25	0.06	0.00	0.00	0.00	0.02
	Zhuhai												
	-Xiang Zhou	17.5	3.73	2.45	8.32	1.04	4.12	1.86	1.63	0.02	0.76	0.67	1.00
	-Zhuxian Cavern	3.77	2.57	5.42	16.9	1.40	4.28	2.99	1.93	0.46	2.21	1.36	1.14
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	12.8	16.2
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	0.45	0.82	0.26	--	--	--	--	--	--	--
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--
Japan	Rishiri	0.83	0.40	1.28	0.37	0.20	0.35	0.23	0.07	--	--	3.48	0.68
	Tappi	0.83	0.08	1.02	0.64	--	--	0.32	0.12	1.47	0.16	0.50	0.60
	Sado-seki	1.71	--	--	2.49	1.61	0.21	0.20	0.03	0.66	0.47	0.80	2.40
	Happo	0.38	0.42	1.75	2.79	0.46	0.32	0.23	0.35	0.09	0.34	0.25	0.67
	Oki	3.06	4.64	5.09	0.97	0.78	0.17	0.16	0.07	0.68	0.50	1.38	1.86
	Yusuhara	0.25	0.52	2.59	0.44	1.61	0.86	0.26	0.23	0.39	0.13	0.05	0.21
	Ogasawara	0.40	0.47	0.35	0.75	1.87	0.05	0.74	1.29	2.14	0.39	0.23	1.46
	Hedo	0.61	0.95	0.88	0.71	0.24	0.30	3.04	18.0	2.68	0.20	0.74	0.93
	Ijira	0.60	0.55	3.42	3.47	3.11	2.12	1.70	0.94	0.87	0.53	0.26	0.62
	Banryu	--	--	--	0.58	2.24	0.25	0.07	0.06	0.12	0.35	0.25	1.33
Malaysia	Petaling Jaya	1.49	1.10	1.79	2.08	0.93	0.87	4.20	1.47	2.63	1.20	3.00	2.64
	Tanah Rata	0.33	0.45	0.68	0.68	0.76	0.70	0.48	0.34	0.37	0.74	0.82	0.71
Mongolia	Ulaanbaatar	--	--	--	0.44	0.74	1.31	1.76	2.22	0.69	0.25	--	--
	Terelj	--	--	--	0.23	0.23	0.48	0.61	0.69	0.75	0.15	--	--
Philippines	Metro Manila	2.44	0.59	5.01	2.11	2.16	3.05	24.8	2.51	3.49	8.23	1.98	2.28
	Los Banos	--	0.96	0.28	0.26	0.49	2.64	1.79	0.65	2.18	7.04	0.61	1.36
Republic	Kanghwa	1.09	--	--	4.74	7.34	5.36	3.35	5.13	0.36	0.33	0.24	2.84
of Korea	Cheju	1.22	0.32	0.52	8.15	1.16	1.79	0.35	0.95	1.20	0.70	1.22	--
Russia	Mondy	0.02	0.04	0.13	0.23	0.14	0.24	0.63	0.13	0.05	0.06	0.00	0.10
	Listvyanka	0.20	0.23	0.21	0.22	0.24	1.14	0.57	1.18	0.38	0.83	0.03	0.44
	Irkutsk	1.21	1.56	1.28	1.52	0.77	1.26	2.43	1.41	0.94	1.30	0.45	0.91
Thailand	Bangkok	0.00	0.00	0.05	1.12	2.66	1.80	1.62	0.68	2.19	2.91	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.02	2.24	0.81	1.95	0.70	3.12	1.98	0.00	0.00
	Patumthani	0.00	1.12	0.76	0.46	1.87	2.22	1.96	1.42	1.62	1.14	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.18	0.56	2.05	0.30	0.46	0.65	0.00	0.00
Vietnam	Hanoi	1.04	1.66	3.04	3.24	4.34	3.86	3.91	2.79	0.91	1.29	0.18	0.00
	Hoa Binh	0.31	0.98	0.91	0.14	3.73	2.98	1.77	2.24	5.55	2.92	0.54	0.00

Table 3.45 Monthly nss-Ca^{2+} deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	2.52	1.96	1.73	10.1	4.88	8.93	7.34	7.92	7.02	6.93	4.92	3.61
	-Nanshan	3.99	1.70	2.73	13.6	6.94	5.81	5.54	4.82	6.94	7.18	4.89	5.17
	Xi'an												
	-Shizhan	1.95	1.87	4.35	0.00	16.3	12.4	13.3	11.6	20.4	12.9	15.4	17.0
	-Weishuiyuan	0.00	4.73	4.05	5.27	16.8	32.1	25.7	15.8	12.7	9.98	5.30	3.36
	-Dabagou	0.00	1.25	0.00	6.96	12.7	16.3	2.76	7.99	17.0	2.48	0.42	34.4
	Xiamen												
	-Hongwen	0.36	0.48	1.03	0.96	0.01	2.20	1.04	0.97	1.78	0.00	0.56	0.19
	-Xiaoping	0.02	0.22	0.09	0.13	0.01	0.30	0.09	0.05	0.00	0.00	0.00	0.02
	Zhuhai												
	-Xiang Zhou	16.8	3.67	2.39	7.94	0.97	4.06	1.45	1.60	0.02	0.69	0.67	0.98
	-Zhuxian Cavern	3.76	2.54	5.37	16.4	1.38	4.18	2.67	1.89	0.44	2.08	1.35	1.13
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	12.6	16.1
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--
Japan	Rishiri	0.29	0.14	0.74	0.23	0.18	0.21	0.17	0.02	--	--	1.54	0.30
	Tappi	0.54	0.02	0.91	0.50	--	--	0.15	0.02	0.21	0.09	0.24	0.09
	Sado-seki	0.35	--	--	2.06	1.52	0.17	0.14	0.02	0.13	0.28	0.23	0.60
	Happo	0.35	0.36	1.69	2.76	0.45	0.32	0.22	0.34	0.08	0.33	0.24	0.59
	Oki	0.55	0.88	4.19	0.87	0.75	0.12	0.10	0.03	0.23	0.33	0.41	0.60
	Yusuhara	0.22	0.46	2.50	0.41	1.55	0.83	0.08	0.17	0.24	0.10	0.03	0.18
	Ogasawara	0.20	0.23	0.20	0.59	0.81	0.02	0.33	0.47	0.46	0.20	0.09	0.64
	Hedo	0.06	0.44	0.40	0.50	0.15	0.09	0.32	0.06	0.17	0.02	0.04	0.09
	Ijira	0.53	0.38	3.17	3.35	3.05	2.03	1.63	0.88	0.79	0.49	0.23	0.51
	Banryu	--	--	--	0.52	2.22	0.22	0.05	0.04	0.04	0.23	0.11	1.11
Malaysia	Petaling Jaya	1.44	1.07	1.76	2.06	0.92	0.85	4.12	1.46	2.59	1.19	2.97	2.59
	Tanah Rata	0.32	0.44	0.66	0.67	0.75	0.68	0.47	0.33	0.36	0.73	0.81	0.70
Mongolia	Ulaanbaatar	--	--	--	0.44	0.73	1.31	1.75	2.21	0.69	0.25	--	--
	Terelj	--	--	--	0.23	0.23	0.48	0.61	0.68	0.75	0.15	--	--
Philippines	Metro Manila	2.44	0.58	4.86	2.08	1.93	3.03	23.5	2.25	3.14	8.01	1.93	2.24
	Los Banos	--	0.72	0.25	0.25	0.43	2.38	1.66	0.62	2.02	6.31	0.43	1.22
Republic	Kanghwa	1.04	--	--	4.65	7.22	5.30	3.05	4.81	0.20	0.32	0.22	2.63
of Korea	Cheju	0.59	0.19	0.44	6.90	1.09	1.67	0.29	0.74	0.47	0.53	0.72	--
Russia	Mondy	0.02	0.03	0.13	0.22	0.14	0.24	0.62	0.13	0.05	0.06	0.00	0.10
	Listvyanka	0.20	0.23	0.21	0.22	0.24	1.13	0.56	1.17	0.37	0.82	0.03	0.44
	Irkutsk	1.20	1.55	1.27	1.51	0.76	1.25	2.42	1.40	0.94	1.29	0.45	0.90
Thailand	Bangkok	0.00	0.00	0.05	1.12	2.62	1.77	1.59	0.66	2.16	2.90	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.01	2.18	0.78	1.91	0.68	3.06	1.97	0.00	0.00
	Patumthani	0.00	1.12	0.76	0.45	1.83	2.15	1.93	1.40	1.59	1.12	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.17	0.53	1.96	0.29	0.43	0.64	0.00	0.00
Vietnam	Hanoi	1.04	1.66	3.00	3.22	4.31	3.78	3.79	2.67	0.87	1.27	0.18	0.00
	Hoa Binh	0.31	0.98	0.91	0.13	3.69	2.87	1.75	2.16	5.36	2.86	0.53	0.00

Table 3.46 Monthly Mg^{2+} deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	0.39	0.56	0.68	1.37	0.45	0.70	1.17	0.88	0.79	0.91	0.86	0.46
	-Nanshan	0.42	0.20	0.83	1.82	0.73	0.55	0.77	0.61	0.78	0.83	0.77	0.55
	Xi'an												
	-Shizhan	0.01	0.16	0.45	0.00	1.52	1.31	1.88	1.37	2.25	1.40	1.58	1.25
	-Weishuiyuan	0.00	0.59	0.42	0.84	1.56	2.66	2.10	1.31	2.14	1.04	1.23	0.25
	-Dabagou	0.00	0.15	0.00	0.65	1.14	1.58	0.42	1.33	3.32	0.62	0.08	2.78
	Xiamen												
	-Hongwen	0.12	0.20	0.21	0.33	<0.01	1.49	1.74	0.86	0.97	0.00	0.12	0.35
	-Xiaoping	0.02	0.12	0.03	0.25	0.01	0.35	1.12	0.09	0.00	0.00	0.00	0.08
	Zhuhai												
	-Xiang Zhou	5.99	0.59	0.57	2.64	0.20	0.81	2.01	0.33	0.03	0.34	0.10	0.50
	-Zhuxian Cavern	0.23	0.28	0.65	6.16	0.63	2.01	1.75	0.46	0.17	1.14	0.19	0.38
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	42.3	29.9
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	--	--	--	--	--	--	--	--	--	--
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--
Japan	Rishiri	2.87	1.40	2.79	0.71	0.10	0.69	0.31	0.20	--	--	9.89	2.06
	Tappi	1.60	0.34	0.65	0.74	--	--	0.89	0.56	7.08	0.36	1.41	2.65
	Sado-seki	7.02	--	--	2.20	0.63	0.22	0.30	0.05	2.60	1.01	3.17	9.36
	Happo	0.22	0.44	0.65	0.41	0.13	0.11	0.11	0.20	0.09	0.39	0.21	0.60
	Oki	13.2	19.3	4.95	0.66	0.30	0.24	0.32	0.19	2.43	0.95	5.13	6.69
	Yusuhara	0.19	0.38	0.66	0.21	0.40	0.10	1.23	0.33	1.14	0.23	1.11	0.12
	Ogasawara	1.27	1.55	0.99	1.05	7.19	0.25	3.02	5.73	10.0	1.15	1.14	4.79
	Hedo	2.77	2.48	2.53	1.06	0.46	1.23	14.4	97.7	13.2	0.91	4.24	4.28
	Ijira	0.32	0.97	1.64	1.01	0.69	0.64	0.42	0.43	0.47	0.23	0.23	0.68
	Banryu	--	--	--	0.40	0.26	0.16	0.07	0.11	0.41	0.60	0.86	1.24
Malaysia	Petaling Jaya	0.39	0.24	0.40	0.41	0.17	0.19	0.58	0.29	0.64	0.18	0.74	0.52
	Tanah Rata	0.02	0.07	0.19	0.13	0.11	0.19	0.11	0.06	0.08	0.14	0.10	0.11
Mongolia	Ulaanbaatar	--	--	--	0.06	0.05	0.09	0.20	0.34	0.05	0.02	--	--
	Terelj	--	--	--	0.03	0.03	0.09	0.14	0.24	0.10	0.02	--	--
Philippines	Metro Manila	0.17	0.44	2.73	0.51	11.8	0.36	4.10	1.27	2.39	1.03	0.34	0.39
	Los Banos	--	0.52	0.81	0.14	0.41	2.23	0.94	0.25	1.97	1.22	0.61	0.66
Republic	Kanghwa	0.62	--	--	0.73	1.32	1.40	1.87	2.63	0.61	0.17	0.08	1.32
of Korea	Cheju	4.44	1.04	0.76	4.39	0.46	0.76	0.27	1.15	3.88	1.06	2.31	--
Russia	Mondy	<0.01	0.01	0.02	0.03	0.02	0.05	0.11	0.03	0.01	0.02	0.00	0.02
	Listvyanka	0.03	0.05	0.06	0.04	0.07	0.26	0.13	0.20	0.09	0.20	0.01	0.16
	Irkutsk	0.19	0.22	0.19	0.28	0.17	0.30	0.58	0.24	0.15	0.18	0.07	0.13
Thailand	Bangkok	0.00	0.00	0.01	0.22	0.50	0.38	0.31	0.17	0.34	0.37	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	<0.01	0.46	0.24	0.37	0.24	0.71	0.32	0.00	0.00
	Patumthani	0.00	0.13	0.12	0.03	0.71	0.47	0.26	0.22	0.22	0.13	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.07	0.13	0.59	0.10	0.34	0.25	0.00	0.00
Vietnam	Hanoi	0.08	0.13	0.43	0.42	0.38	0.79	1.43	1.56	0.43	0.56	0.07	0.00
	Hoa Binh	0.01	0.22	0.23	0.06	0.55	1.55	0.98	1.03	2.43	1.36	0.26	0.00

Table 3.47 Monthly H^+ deposition amounts unit: $mmol/m^2$

Country	Name of sites	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	0.14	<0.01	0.97	3.02	4.21	1.29	19.5	7.38	5.08	6.96	1.18	0.62
	-Nanshan	2.01	0.86	5.03	1.78	0.74	2.49	14.2	8.54	21.6	14.0	3.05	1.80
	Xi'an												
	-Shizhan	0.25	<0.01	0.01	0.00	0.01	0.12	0.02	0.51	0.17	0.07	0.01	0.01
	-Weishuiyuan	0.00	<0.01	<0.01	<0.01	0.01	0.04	0.01	0.05	0.04	0.03	<0.01	<0.01
	-Dabagou	0.00	<0.01	0.00	<0.01	<0.01	1.00	0.43	0.62	1.04	0.03	<0.01	0.01
	Xiamen												
	-Hongwen	0.04	7.12	1.09	6.38	0.01	6.36	2.42	2.49	0.94	0.00	1.72	0.48
	-Xiaoping	0.30	3.48	0.66	8.28	0.11	3.52	0.80	1.67	0.00	0.00	0.00	0.42
	Zhuhai												
	-Xiang Zhou	0.08	0.53	0.75	2.16	2.20	0.71	2.06	1.31	0.26	0.68	1.03	2.45
	-Zhuxian Cavern	0.25	0.76	0.73	19.7	3.62	2.20	4.09	2.82	0.59	0.85	1.76	3.51
Indonesia	Jakarta	--	--	--	--	--	--	--	--	--	--	1.70	0.44
	Serpong	--	--	--	--	--	--	--	--	--	--	--	--
	Kototabang	--	--	4.69	6.37	1.74	--	--	--	--	--	--	--
	Bandung	--	--	--	--	--	--	--	--	--	--	--	--
Japan	Rishiri	1.35	0.65	0.42	0.47	1.23	0.78	2.17	0.52	--	--	0.67	0.70
	Tappi	2.07	0.90	0.29	0.58	--	--	3.05	0.57	4.73	0.93	2.49	1.24
	Sado-seki	2.52	--	--	0.44	0.58	2.45	1.08	0.71	4.04	4.97	2.87	3.25
	Happo	2.06	3.20	2.08	0.30	0.88	2.04	3.30	12.3	3.99	4.47	2.90	3.85
	Oki	3.95	3.18	1.19	1.15	1.08	2.15	1.13	0.53	4.04	2.56	4.04	2.57
	Yusuhara	3.94	1.45	3.42	2.06	2.45	3.63	3.76	3.72	20.2	4.79	2.93	2.46
	Ogasawara	0.95	1.06	0.55	0.82	0.69	0.17	1.46	0.83	0.86	0.77	1.26	2.28
	Hedo	0.77	1.57	1.31	0.81	0.51	1.91	4.26	0.88	1.61	2.32	2.76	2.79
	Ijira	2.90	3.74	2.50	3.56	4.69	14.3	11.1	4.94	10.0	13.6	7.10	2.23
	Banryu	--	--	--	2.71	0.14	3.41	0.69	3.79	7.03	4.90	4.19	1.45
Malaysia	Petaling Jaya	12.9	8.58	15.0	10.5	5.60	6.64	8.19	10.9	20.9	3.16	25.2	25.9
	Tanah Rata	0.75	2.90	7.35	5.74	4.54	4.17	5.50	3.51	7.30	3.35	2.14	3.13
Mongolia	Ulaanbaatar	--	--	--	<0.01	<0.01	<0.01	0.02	0.09	<0.01	<0.01	--	--
	Terelj	--	--	--	<0.01	<0.01	0.39	0.10	0.12	0.01	0.01	--	--
Philippines	Metro Manila	<0.01	<0.01	<0.01	0.02	2.13	0.69	8.77	1.01	0.04	0.46	0.06	0.06
	Los Banos	--	0.41	0.10	0.07	0.68	0.64	5.49	0.15	0.70	0.93	0.27	0.10
Republic	Kanghwa	0.84	--	--	0.03	0.03	0.58	0.67	5.22	1.53	1.43	0.36	0.02
of Korea	Cheju	0.73	0.46	0.19	<0.01	0.14	2.61	0.75	5.80	0.74	2.71	1.92	--
Russia	Mondy	<0.01	<0.01	<0.01	0.01	0.01	0.09	0.70	0.69	0.14	0.02	0.00	<0.01
	Listvyanka	0.13	0.07	0.08	0.14	0.06	0.08	1.77	1.06	0.09	0.11	0.01	0.14
	Irkutsk	0.10	0.01	<0.01	0.02	0.01	0.19	2.15	1.47	0.12	0.05	<0.01	0.01
Thailand	Bangkok	0.00	0.00	0.15	1.46	2.91	0.20	0.13	0.88	2.09	4.95	0.00	0.00
	Samutprakarn	0.00	0.00	0.00	0.08	1.42	0.97	0.69	0.65	5.89	4.79	0.00	0.00
	Patumthani	0.00	0.10	0.05	0.56	0.07	1.07	0.05	0.13	1.19	2.18	0.00	0.00
	Khao Lam	0.00	0.00	0.00	0.00	0.10	0.25	0.31	0.23	0.37	1.15	0.00	0.00
Vietnam	Hanoi	0.02	0.08	1.05	0.11	0.43	0.30	0.45	0.82	0.13	1.09	<0.01	0.00
	Hoa Binh	0.16	0.70	0.67	0.24	0.71	1.32	7.59	0.78	1.23	0.81	<0.01	0.00

Table 3.48 Results of ion balance and conductivity agreement check

Country	Name of sites	Sample(N)	R1(N)	R1(AA)	%	R2(N)	R2(AA)	%	R1&R2(N)	R1&R2(AA)	%
China	Chongqing										
	-Guanyinqiao	94	77	54	70	77	49	64	77	38	49
	-Nanshan	41	41	27	66	41	26	63	41	17	41
	Xi'an										
	-Shizhan	44	44	14	32	44	21	48	44	8	18
	-Weishuiyuan	30	30	10	33	30	16	53	30	6	20
	-Dabagou	24	24	7	29	24	7	29	24	0	0
	Xiamen										
	-Hongwen	46	46	19	41	46	24	52	46	10	22
	-Xiaoping	67	66	22	33	66	33	50	66	15	23
	Zhuhai										
	-Xiang Zhou	54	54	30	56	54	33	61	54	20	37
	-Zhuxian Cavern	63	63	32	51	63	53	84	63	28	44
Indonesia	Jakarta	4	0	0	--	0	0	--	0	0	--
	Serpong	--	--	--	--	--	--	--	--	--	--
	Kototabang	20	0	0	--	0	0	--	0	0	--
	Bandung	56	0	0	--	0	0	--	0	0	--
Japan	Rishiri	89	85	80	94	85	85	100	85	80	94
	Tappi	180	89	89	100	89	89	100	89	89	100
	Sado-seki	126	90	87	97	90	90	100	90	87	97
	Happo	192	164	151	92	164	164	100	164	151	92
	Oki	166	144	139	97	144	140	97	144	135	94
	Yusuhara	143	139	136	98	139	138	99	139	136	98
	Ogasawara	168	140	137	98	140	140	100	140	137	98
	Hedo	155	141	135	96	140	140	100	140	135	96
	Ijira	49	49	48	98	49	49	100	49	48	98
	Banryu	31	31	28	90	31	31	100	31	28	90
Malaysia	Petaling Jaya	47	46	18	39	46	26	57	46	17	37
	Tanah Rata	49	47	3	6	47	15	32	47	3	6
Mongolia	Ulaanbaatar	44	39	2	5	39	38	97	39	2	5
	Terelj	52	50	10	20	50	49	98	50	10	20
Philippines	Metro Manila	21	21	3	14	21	8	38	21	2	10
	Los Banos	18	18	4	22	18	4	22	18	0	0
Republic	Kanghwa	27	27	17	63	27	26	96	27	16	59
of Korea	Cheju	25	25	11	44	25	23	92	25	10	40
Russia	Mondy	30	30	30	100	30	30	100	30	30	100
	Listvyanka	51	48	47	98	48	48	100	48	47	98
	Irkutsk	122	118	109	92	118	117	99	118	108	92
Thailand	Bangkok	88	86	34	40	86	63	73	86	27	31
	Samutprakarn	56	56	43	77	56	45	80	56	39	70
	Patumthani	65	65	29	45	65	48	74	65	23	35
	Khao Lam	63	63	34	54	63	51	81	63	25	40
Vietnam	Hanoi	32	32	31	97	32	32	100	32	31	97
	Hoa Binh	38	36	35	97	36	36	100	36	35	97

Sample(N) : Number of samples
R1(N) : Number of samples measured and calculated ion balance (R1)
R1(AA) : Number of samples within allowable ranges for R1
R2(N) : Number of samples measured and caluculated conductivity agreement (R2)
R2(AA) : Number of samples within allowable ranges for R2
R1&R2(N) : Number of samples measured and calculated both R1 and R2
R1&R2(AA) : Number of samples within allowable ranges for both R1and R2
Ulaanbaatar, Terelj, Mondy, Listvyanka, Irkutsk
: R1 and R2, calculated including concentrations of additional measured constituents

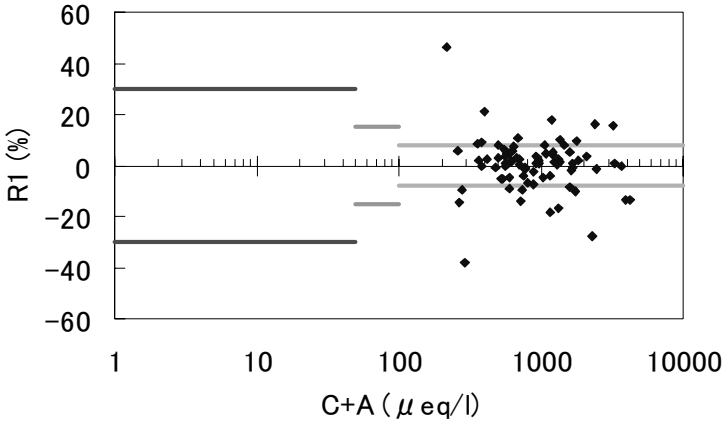


Fig. 3.2 Chongqing(Guanyinqiao) Ion Balance (R1)

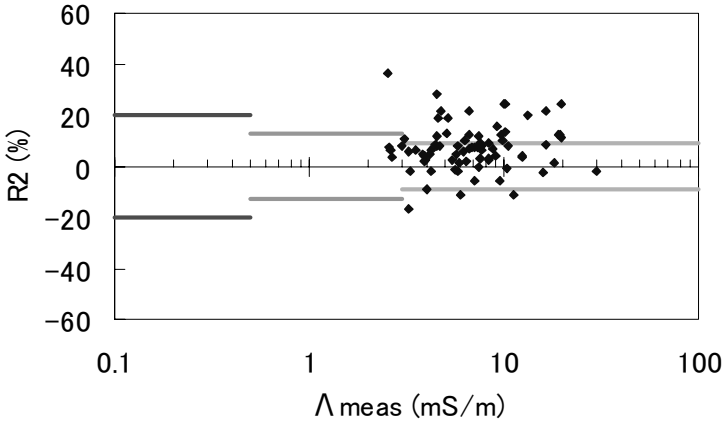


Fig. 3.3 Chongqing(Guanyinqiao) Conductivity Agreement (R2)

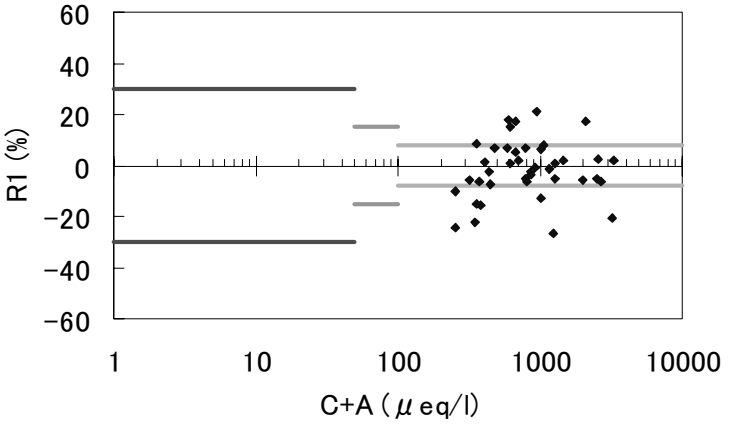


Fig. 3.4 Chongqing(Nanshan) Ion Balance (R1)

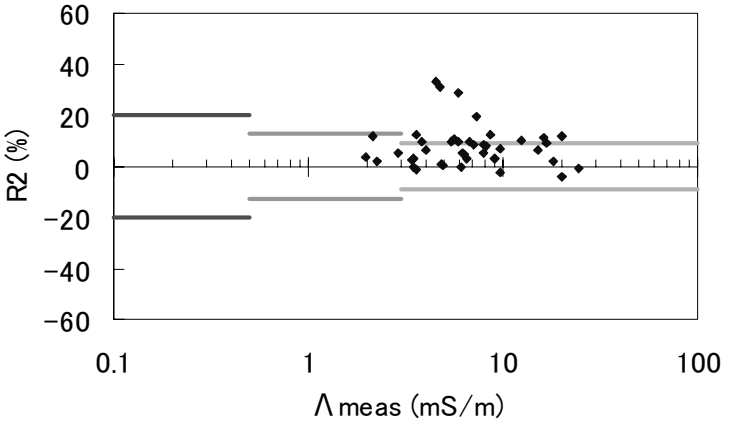


Fig. 3.5 Chongqing(Nanshan) Conductivity Agreement (R2)

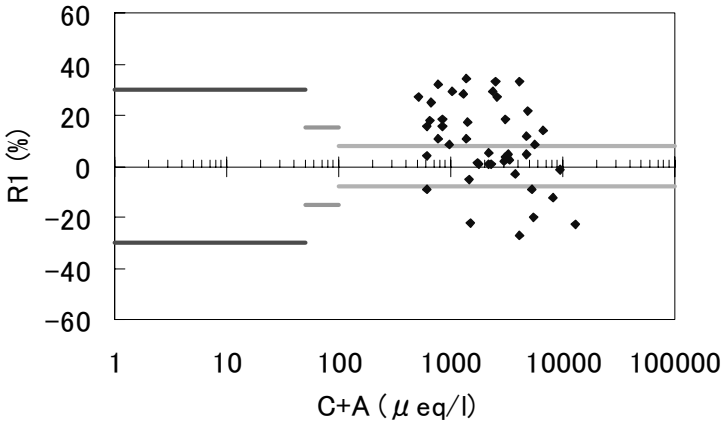


Fig. 3.6 Xi'an(Shizhan) Ion Balance (R1)

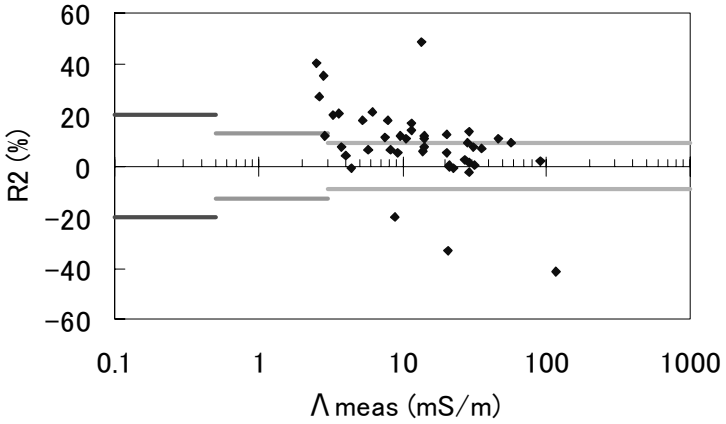


Fig. 3.7 Xi'an(Shizhan) Conductivity Agreement (R2)

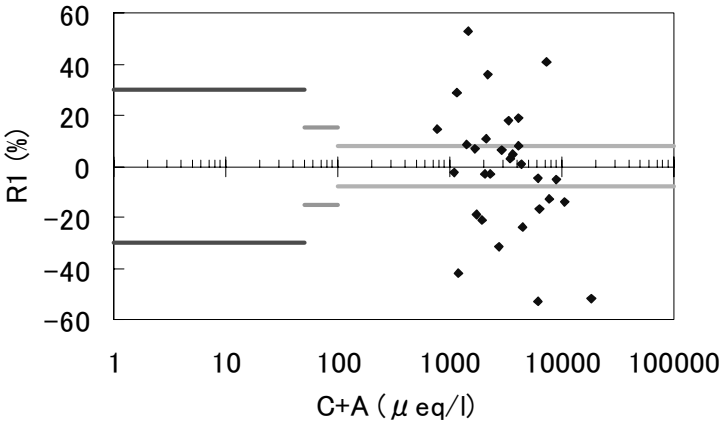


Fig. 3.8 Xi'an(Weishuiyuan) Ion Balance (R1)

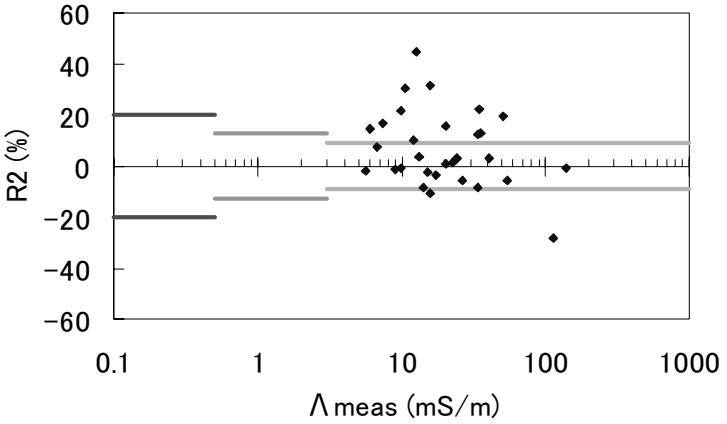


Fig. 3.9 Xi'an(Weishuiyuan) Conductivity Agreement (R2)

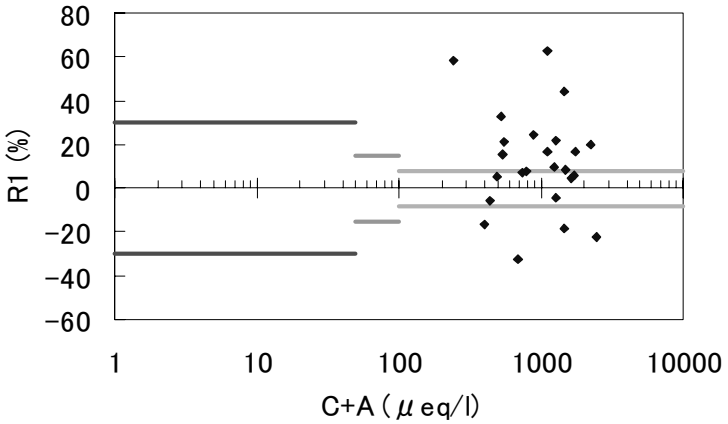


Fig. 3.10 Xi'an(Dabagou) Ion Balance (R1)

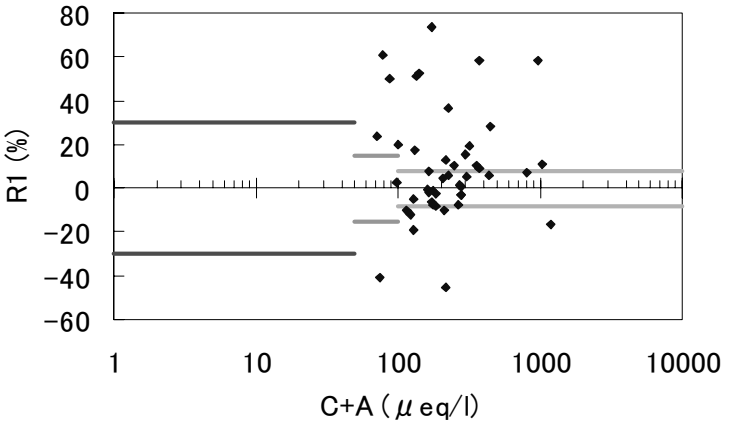


Fig. 3.12 Xiamen(Hongwen) Ion Balance (R1)

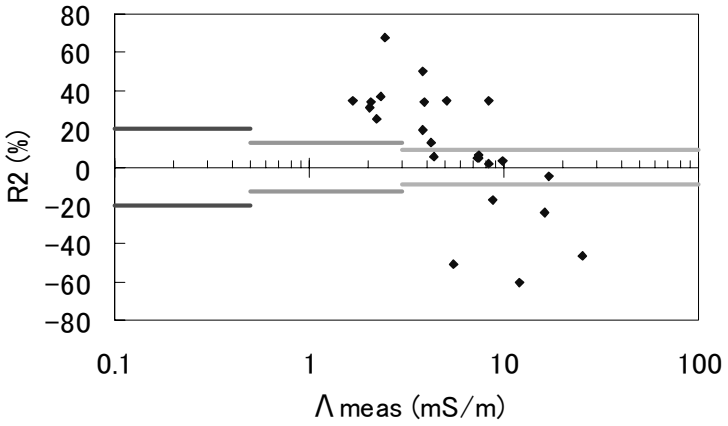


Fig. 3.11 Xi'an(Dabagou) Conductivity Agreement (R2)

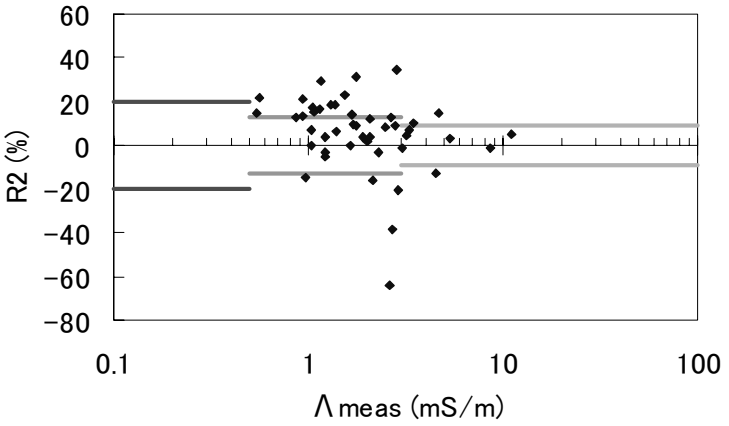


Fig. 3.13 Xiamen(Hongwen) Conductivity Agreement (R2)

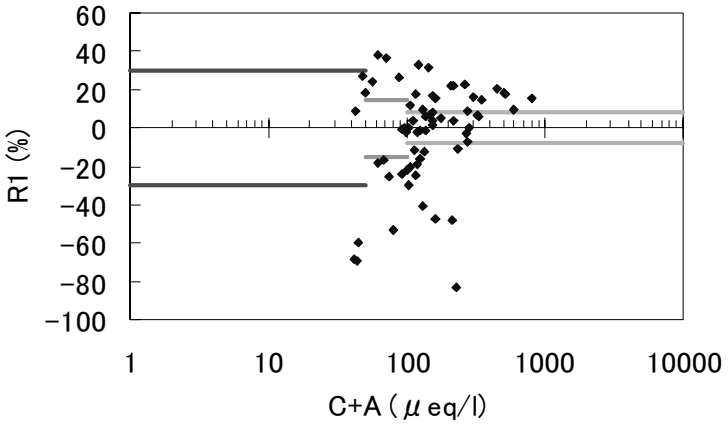


Fig. 3.14 Xiamen(Xiaoping) Ion Balance (R1)

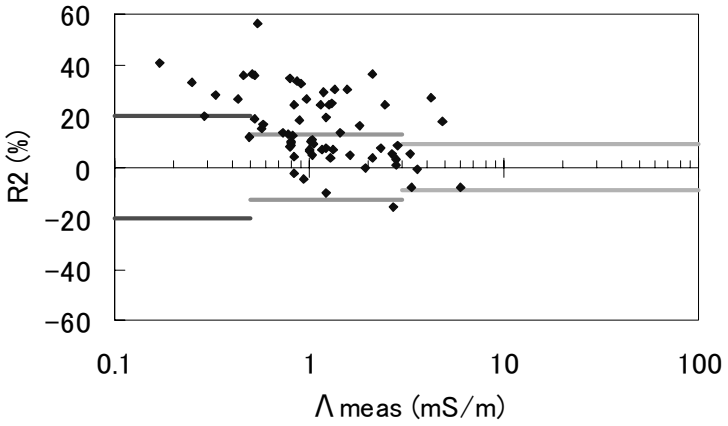


Fig. 3.15 Xiamen(Xiaoping) Conductivity Agreement (R2)

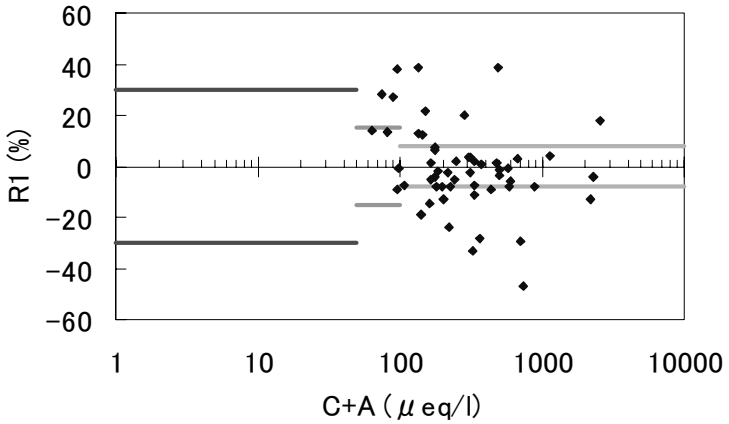


Fig. 3.16 Zhuhai(XiangZhou) Ion Balance (R1)

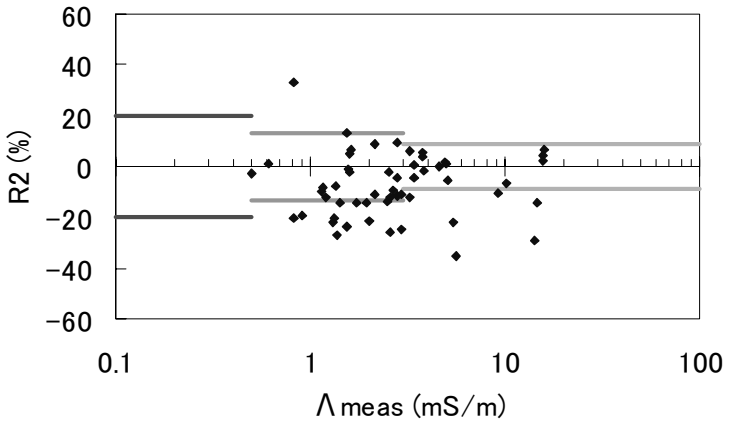


Fig. 3.17 Zhuhai(XiangZhou) Conductivity Agreement (R2)

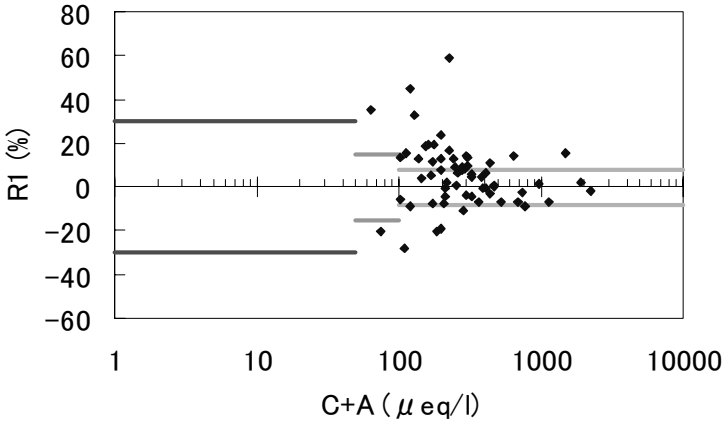


Fig. 3.18 Zhuxian Cavern Ion Balance (R1)

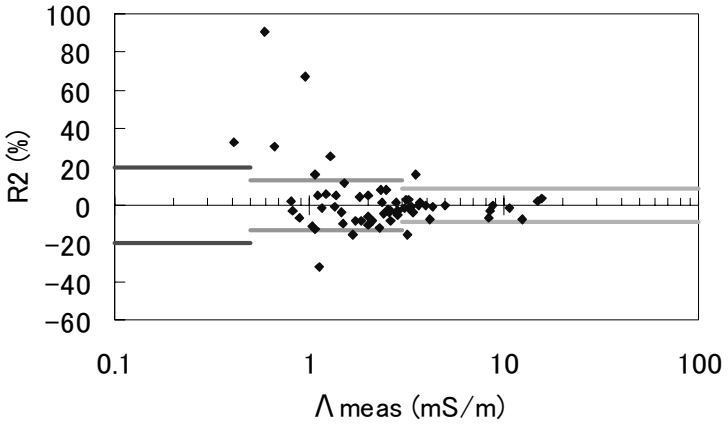


Fig. 3.19 Zhuxian Cavern Conductivity Agreement (R2)

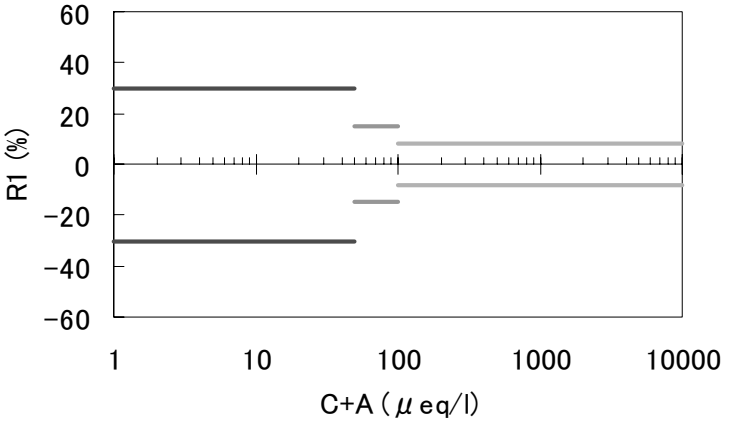


Fig. 3.20 Jakarta Ion Balance (R1)

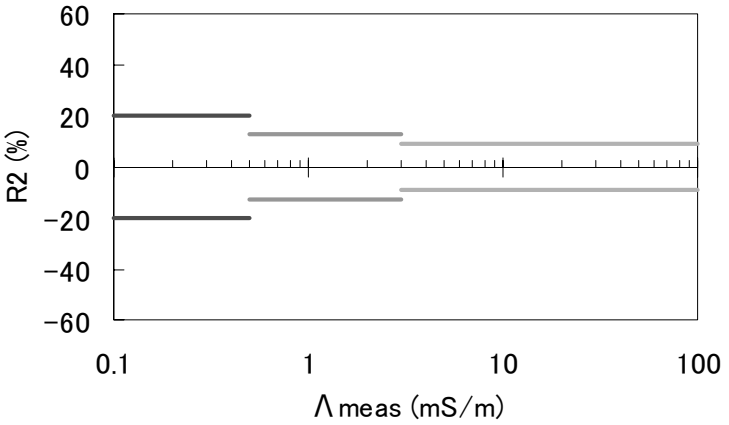


Fig. 3.21 Jakarta Conductivity Agreement (R2)

not reprted

Serpong Ion Balance (R1)

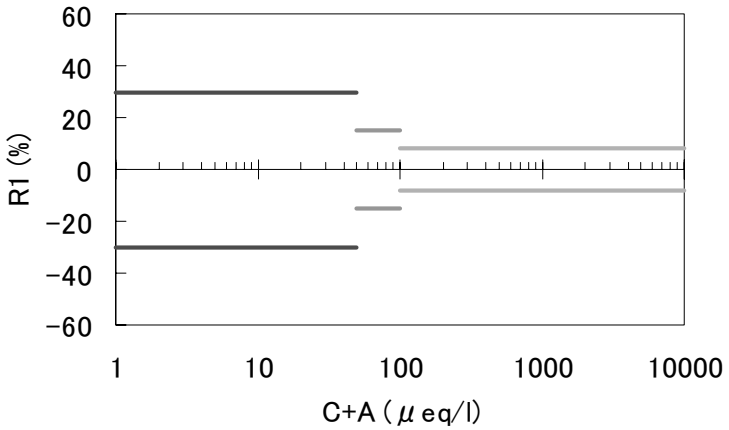


Fig. 3.22 Kototabang Ion Balance (R1)

not reprted

Serpong Conductivity Agreement (R2)

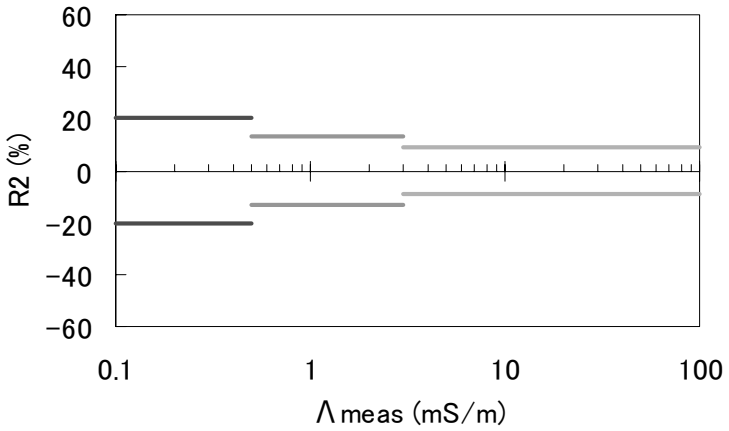


Fig. 3.23 Kototabang Conductivity Agreement (R2)

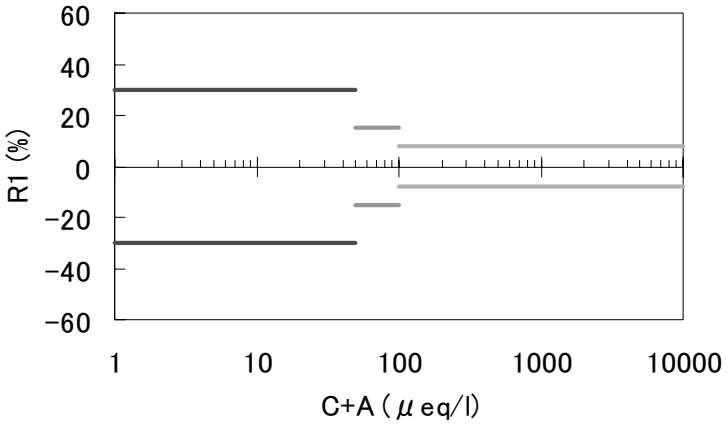


Fig. 3.24 Bandung Ion Balance (R1)

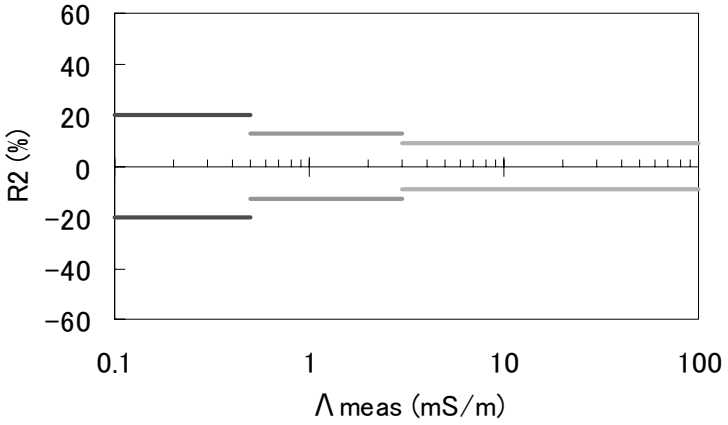


Fig. 3.25 Bandung Conductivity Agreement (R2)

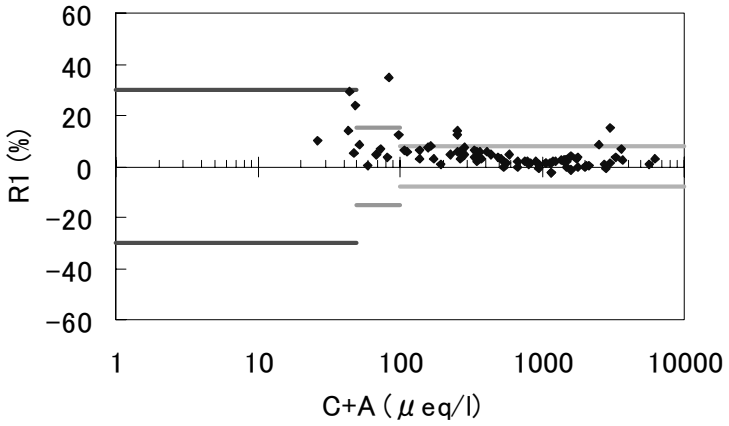


Fig. 3.26 Rishiri Ion Balance (R1)

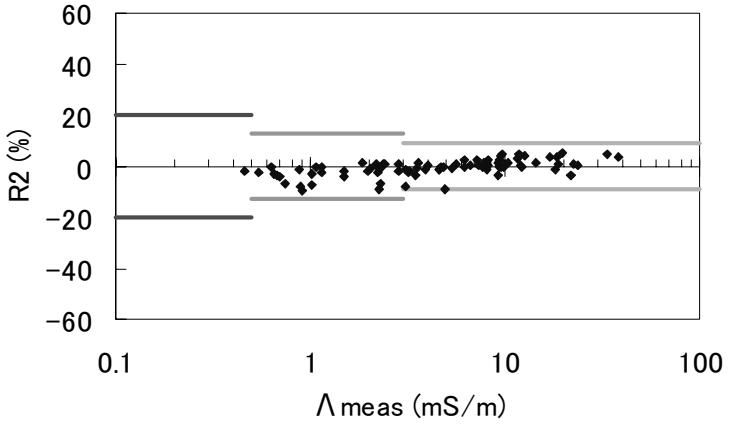


Fig. 3.27 Rishiri Conductivity Agreement (R2)

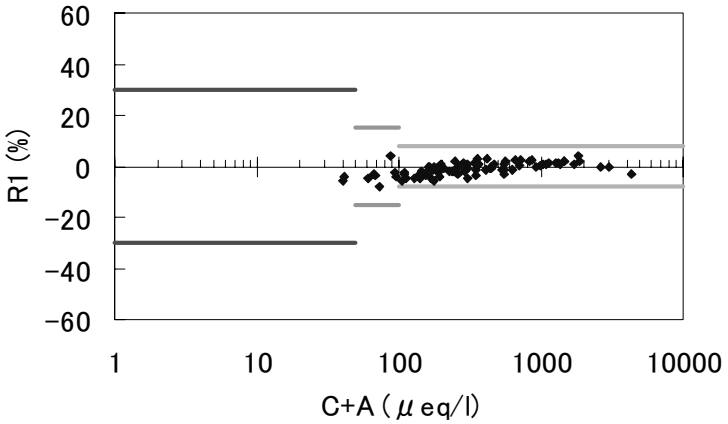


Fig. 3.28 Tappi Ion Balance (R1)

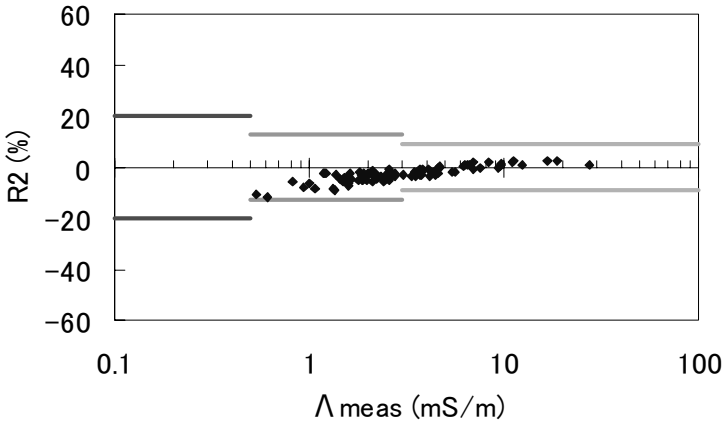


Fig. 3.29 Tappi Conductivity Agreement (R2)

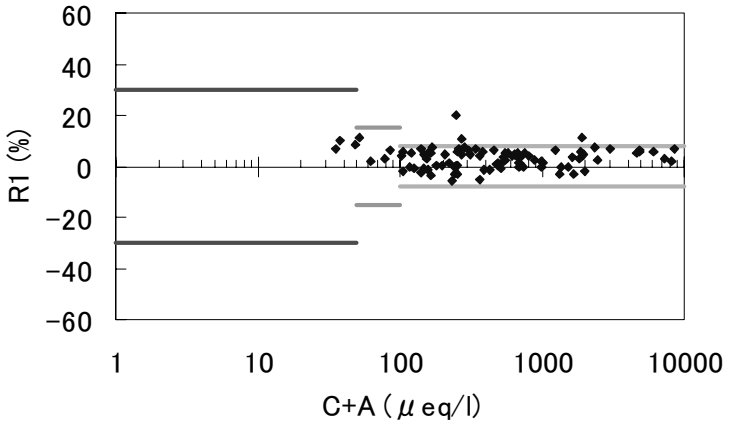


Fig. 3.30 Sado-seki Ion Balance (R1)

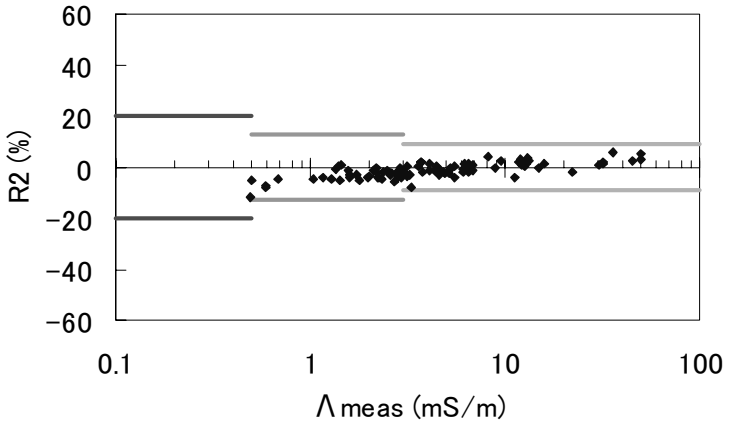


Fig. 3.31 Sado-seki Conductivity Agreement (R2)

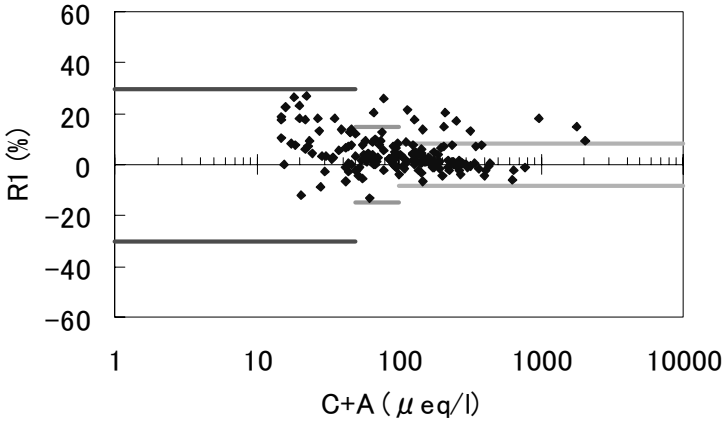


Fig. 3.32 Happo Ion Balance (R1)

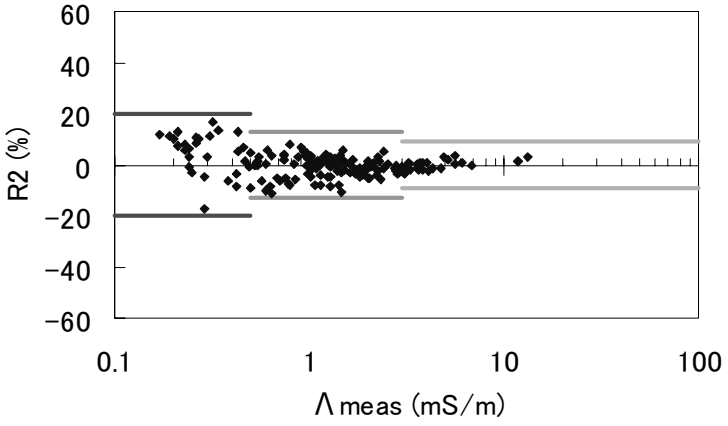


Fig. 3.33 Happo Conductivity Agreement (R2)

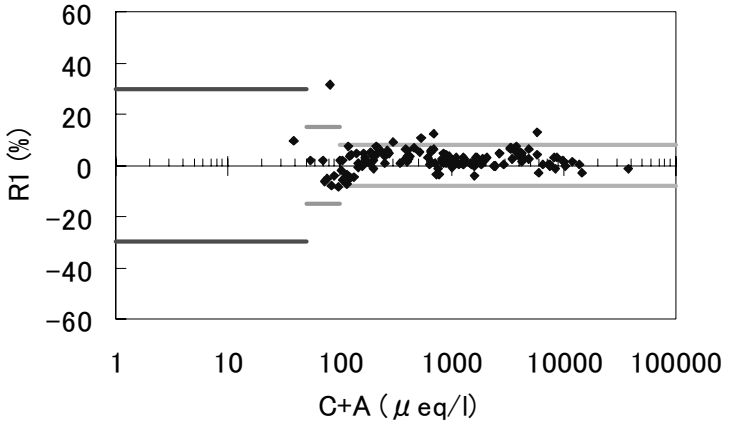


Fig. 3.34 Oki Ion Balance (R1)

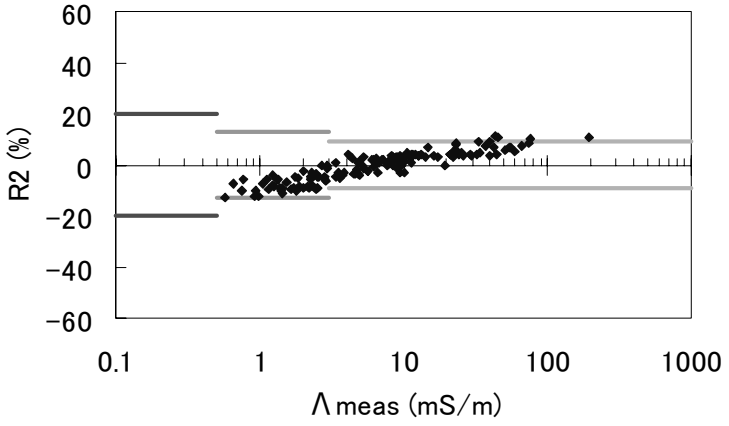


Fig. 3.35 Oki Conductivity Agreement (R2)

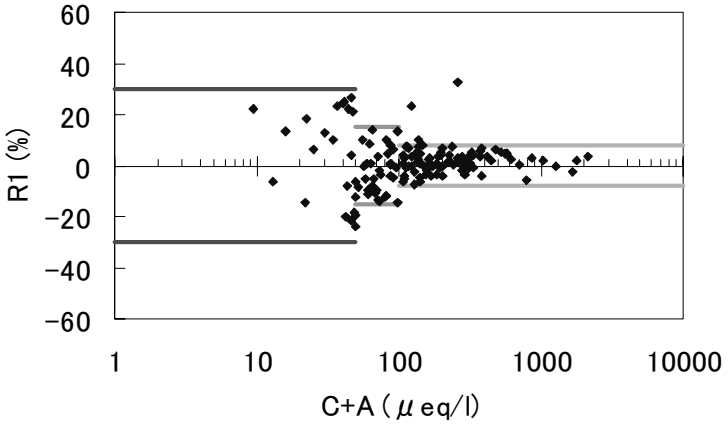


Fig. 3.36 Yusuhara Ion Balance (R1)

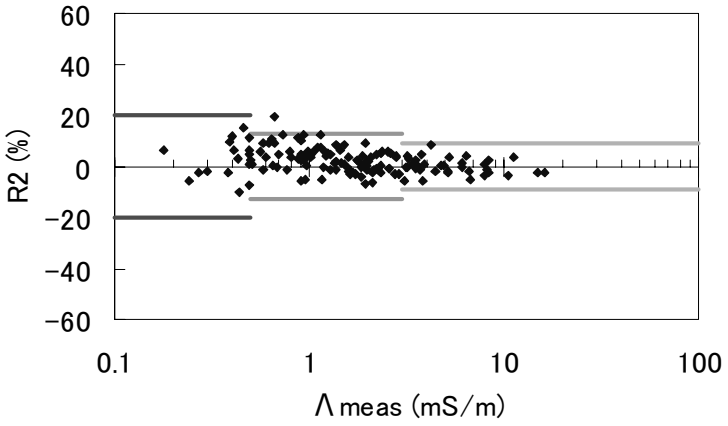


Fig. 3.37 Yusuhara Conductivity Agreement (R2)

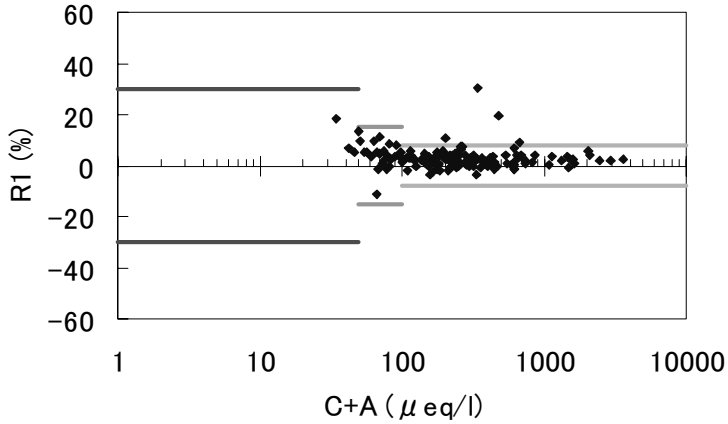


Fig. 3.38 Ogasawara Ion Balance (R1)

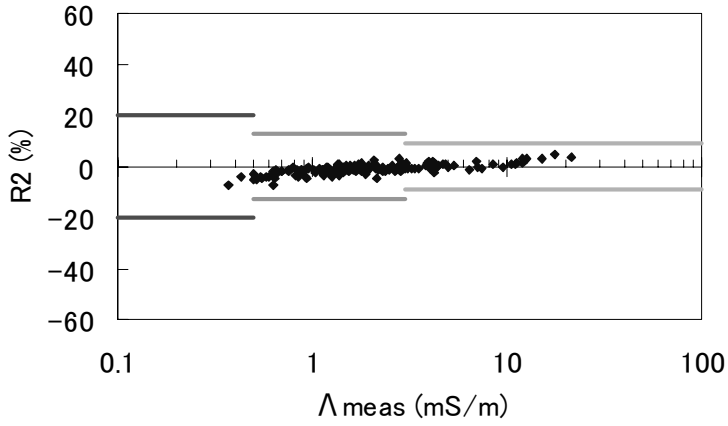


Fig. 3.39 Ogasawara Conductivity Agreement (R2)

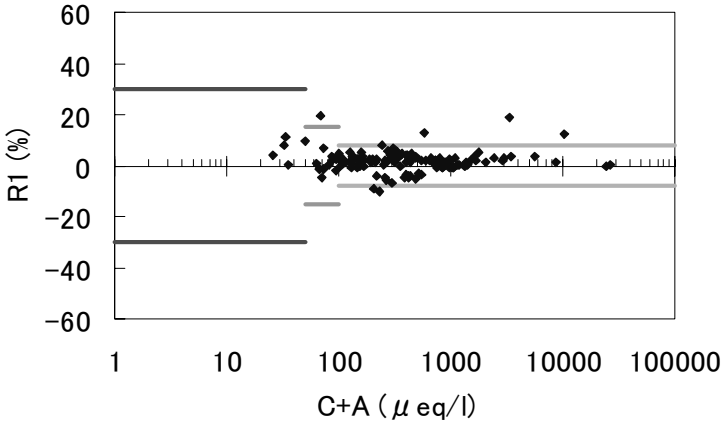


Fig. 3.40 Hedo Ion Balance (R1)

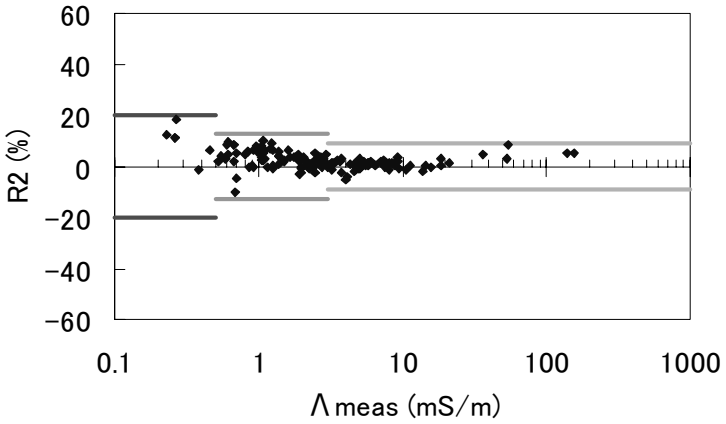


Fig. 3.41 Hedo Conductivity Agreement (R2)

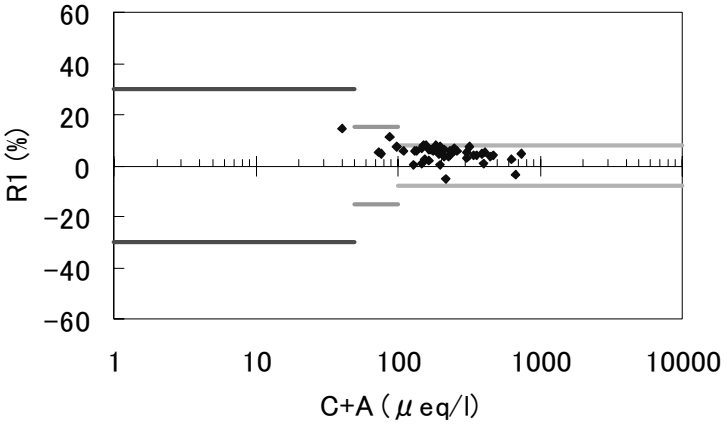


Fig. 3.42 Ijira Ion Balance (R1)

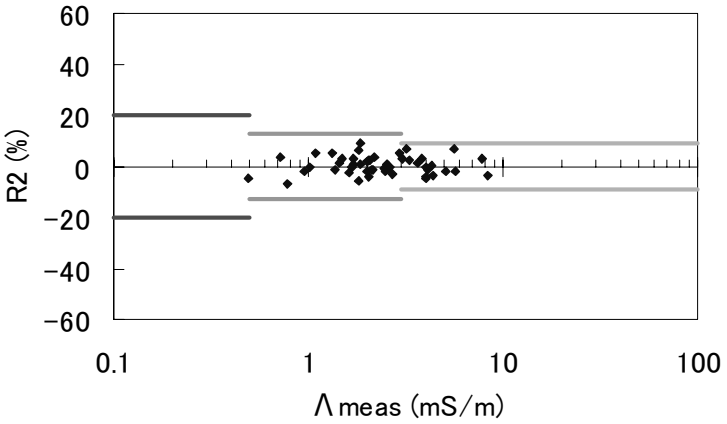


Fig. 3.43 Ijira Conductivity Agreement (R2)

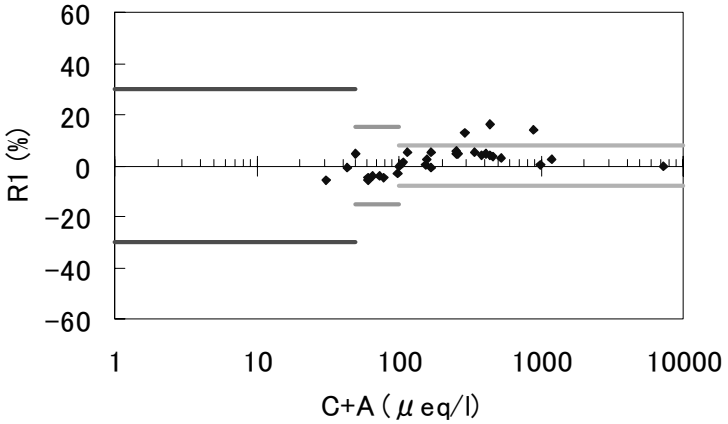


Fig. 3.44 Banryu Ion Balance (R1)

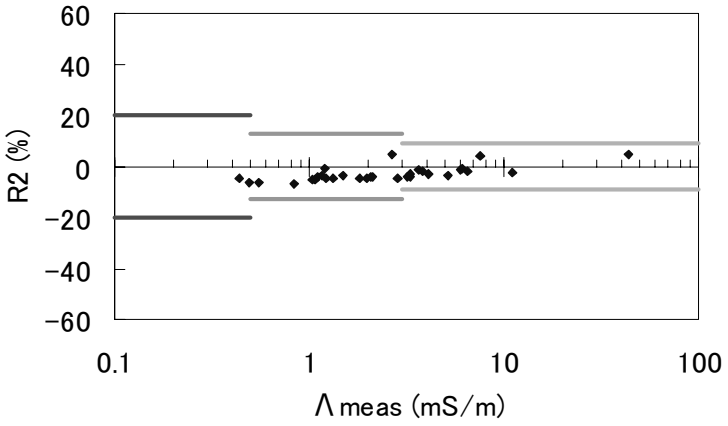


Fig. 3.45 Banryu Conductivity Agreement (R2)

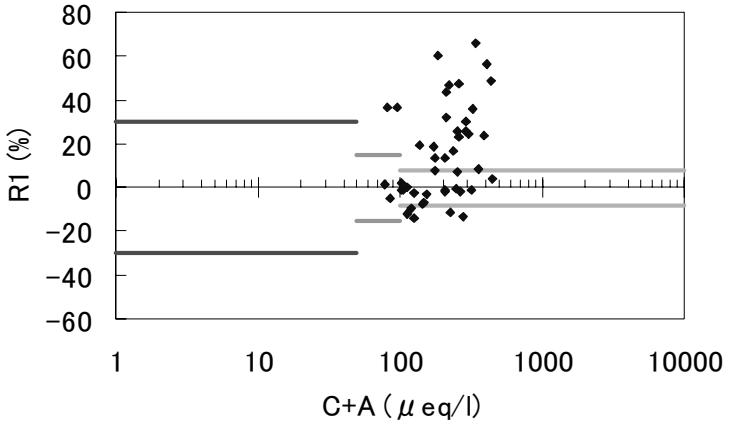


Fig. 3.46 Petaling Jaya Ion Balance (R1)

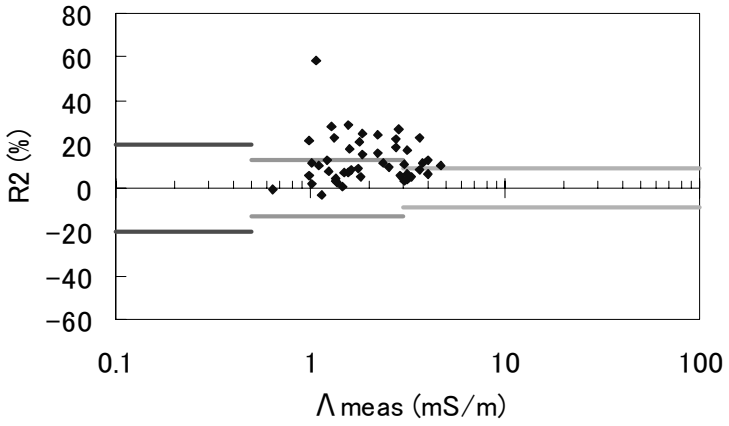


Fig. 3.47 Petaling Jaya Conductivity Agreement (R2)

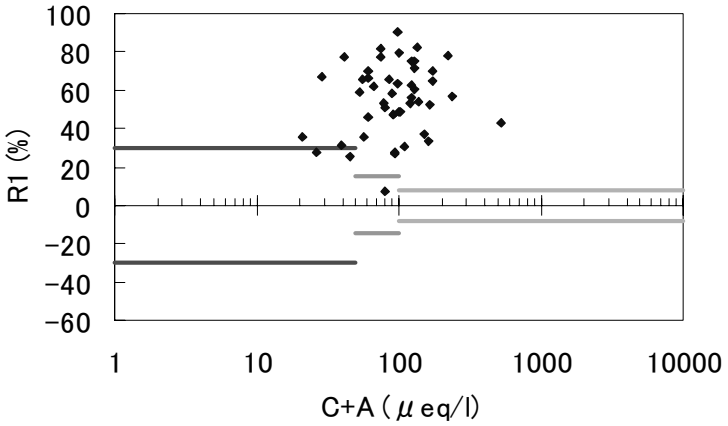


Fig. 3.48 Tanah Rata Ion Balance (R1)

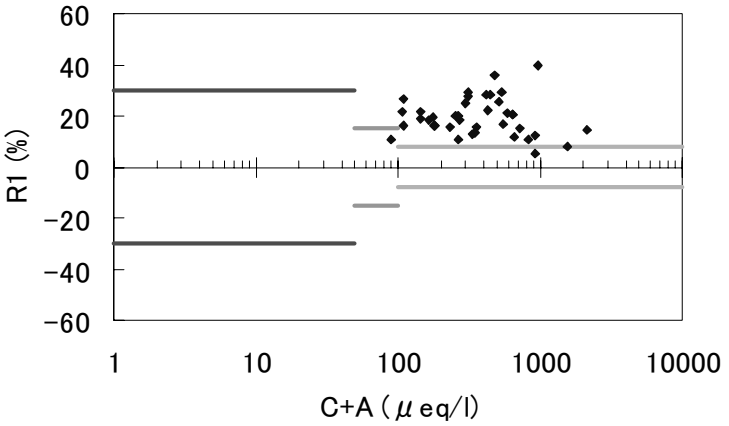


Fig. 3.50 Ulaanbaatar Ion Balance (R1)

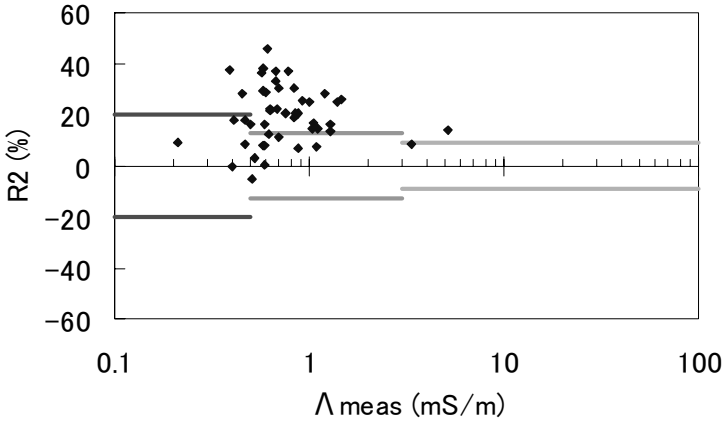


Fig. 3.49 Tanah Rata Conductivity Agreement (R2)

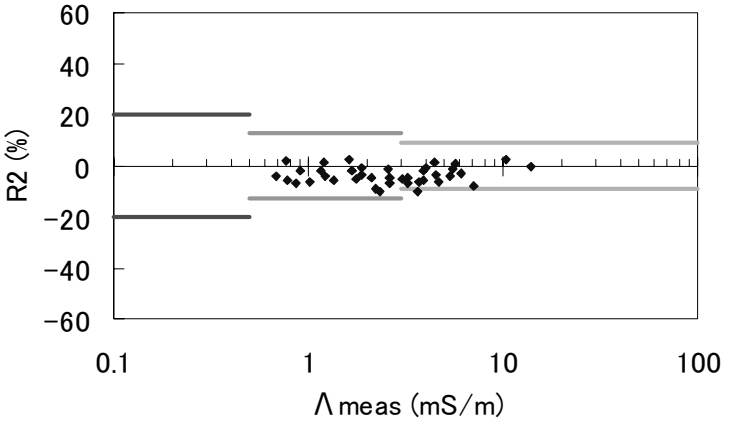


Fig. 3.51 Ulaanbaatar Conductivity Agreement (R2)

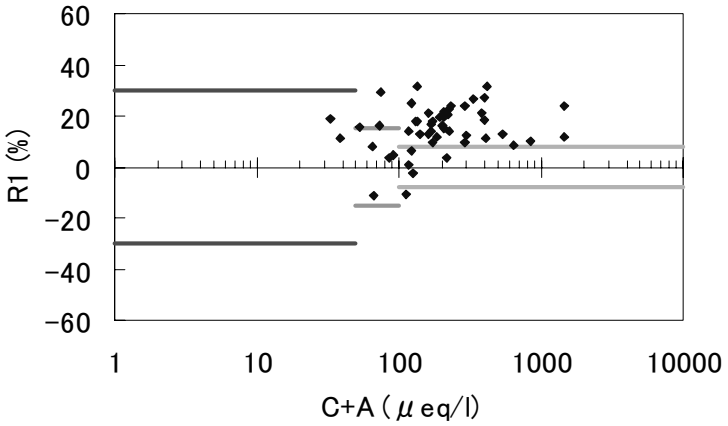


Fig. 3.52 Terelj Ion Balance (R1)

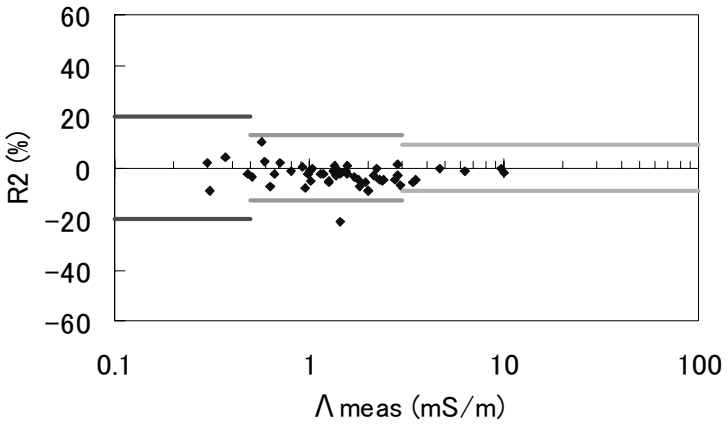


Fig. 3.53 Terelj Conductivity Agreement (R2)

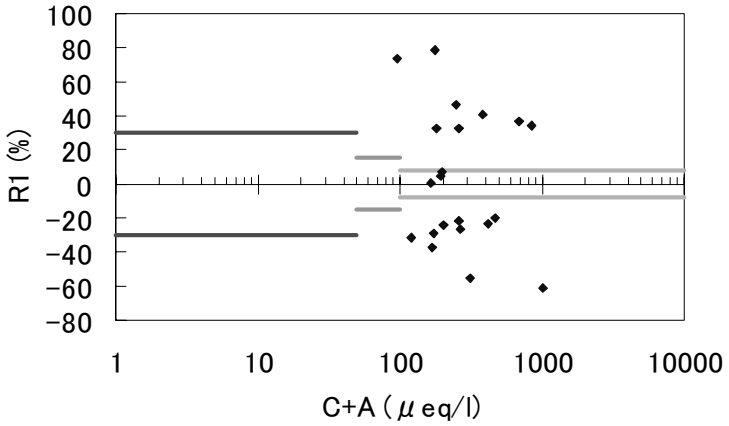


Fig. 3.54 Metro Manila Ion Balance (R1)

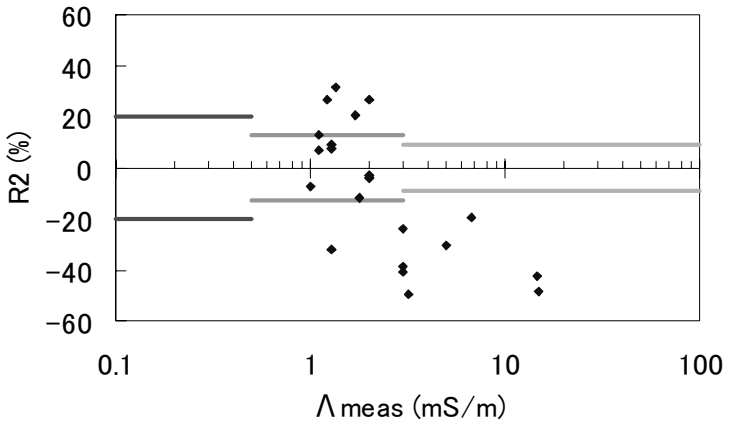


Fig. 3.55 Metro Manila Conductivity Agreement (R2)

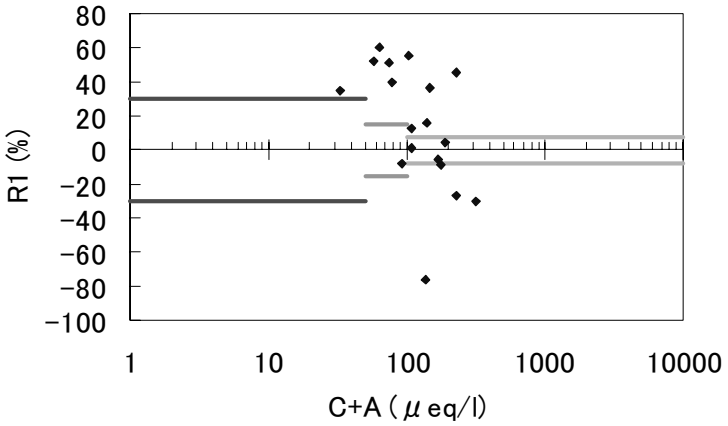


Fig. 3.56 Los Banos Ion Balance (R1)

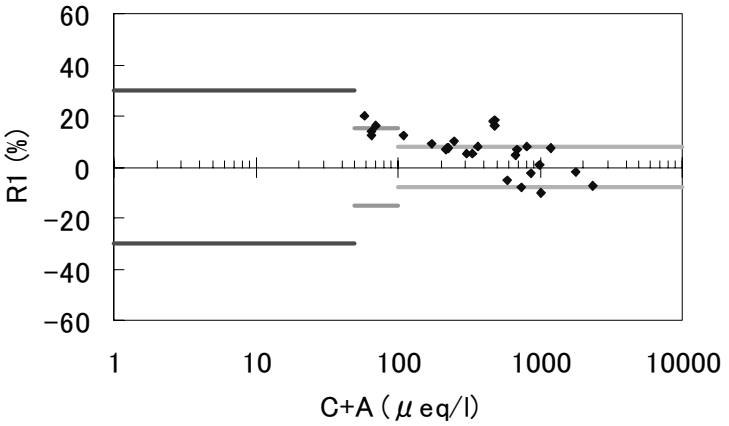


Fig. 3.58 Kanghwa Ion Balance (R1)

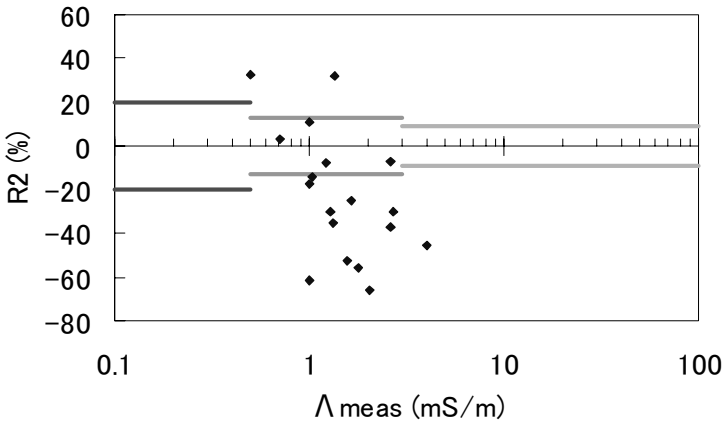


Fig. 3.57 Los Banos Conductivity Agreement (R2)

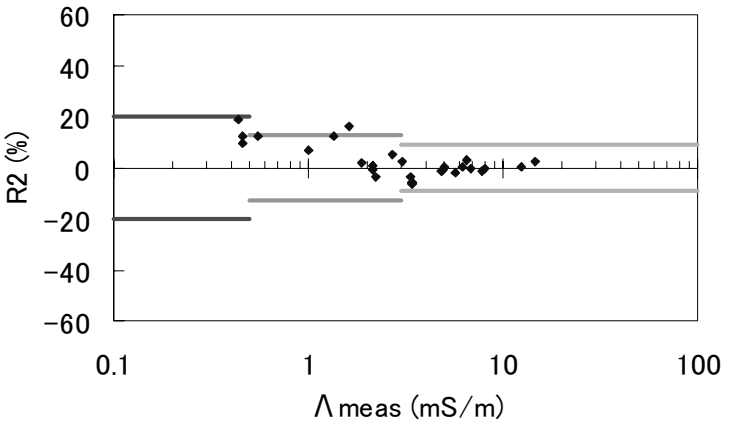


Fig. 3.59 Kanghwa Conductivity Agreement (R2)

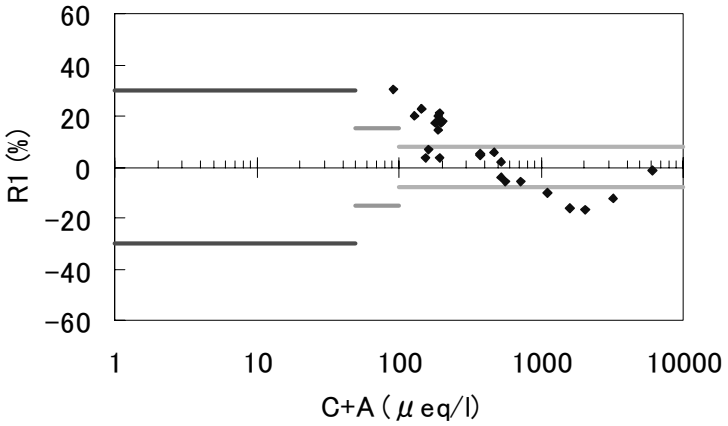


Fig. 3.60 Cheju(Kosan) Ion Balance (R1)

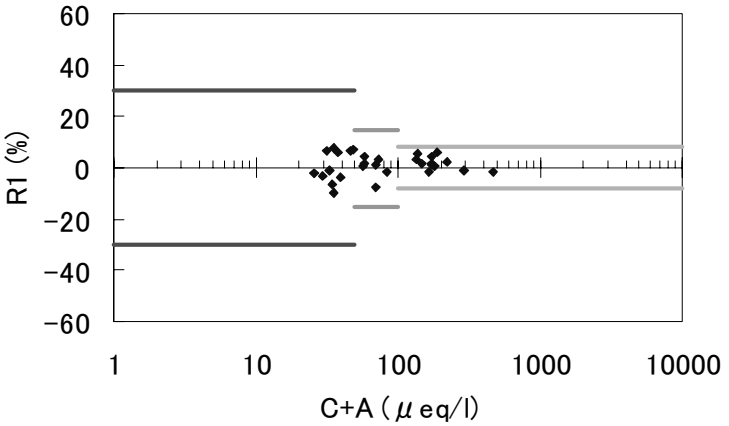


Fig. 3.62 Mondy Ion Balance (R1)

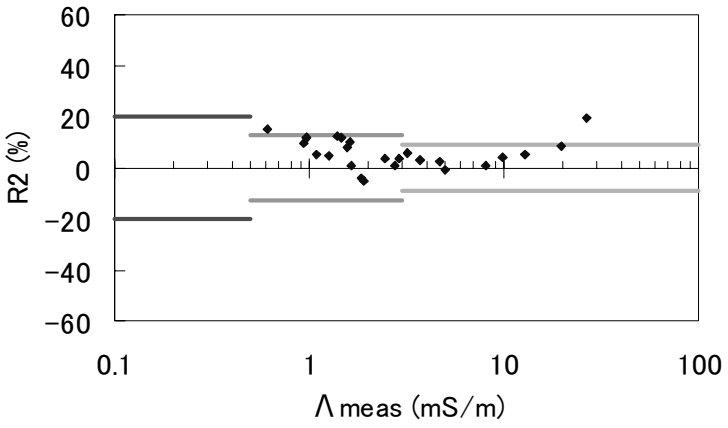


Fig. 3.61 Cheju(Kosan) Conductivity Agreement (R2)

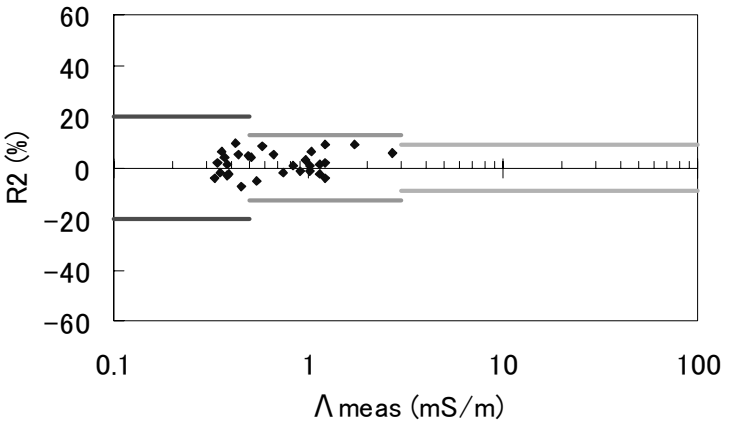


Fig. 3.63 Mondy Conductivity Agreement (R2)

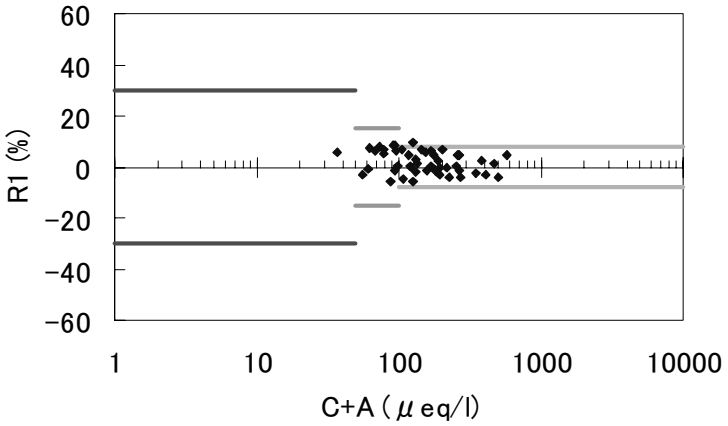


Fig. 3.64 Listvyanka Ion Balance (R1)

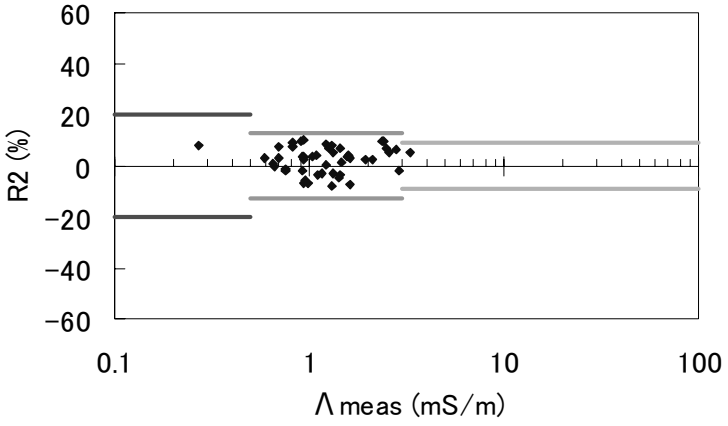


Fig. 3.65 Listvyanka Conductivity Agreement (R2)

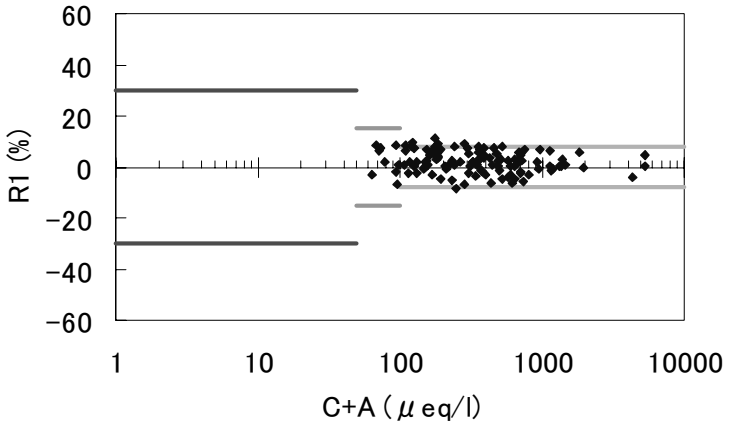


Fig. 3.66 Irkutsk Ion Balance (R1)

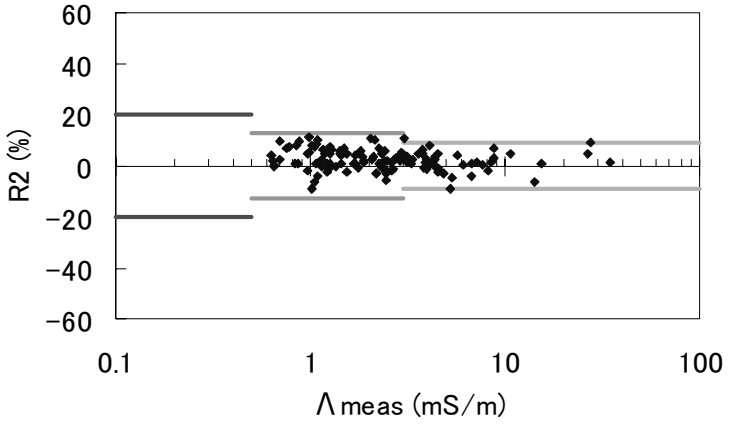


Fig. 3.67 Irkutsk Conductivity Agreement (R2)

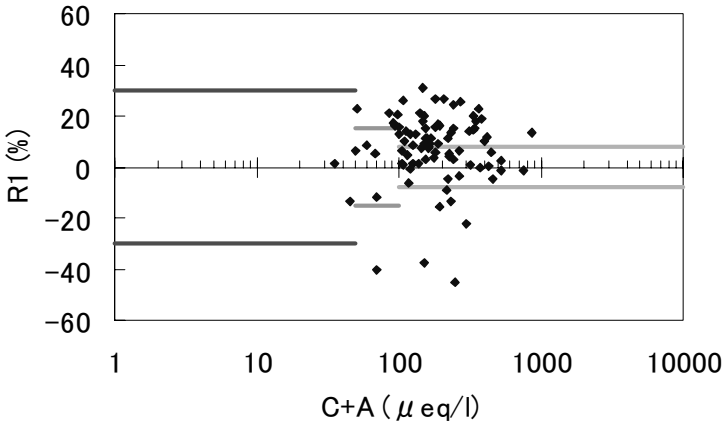


Fig. 3.68 Bangkok Ion Balance (R1)

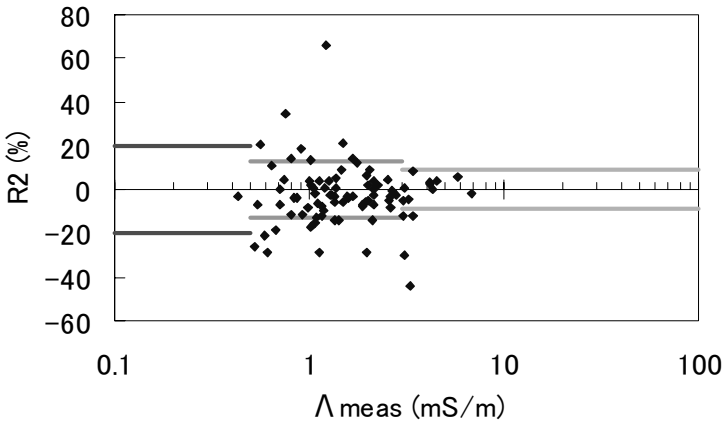


Fig. 3.69 Bangkok Conductivity Agreement (R2)

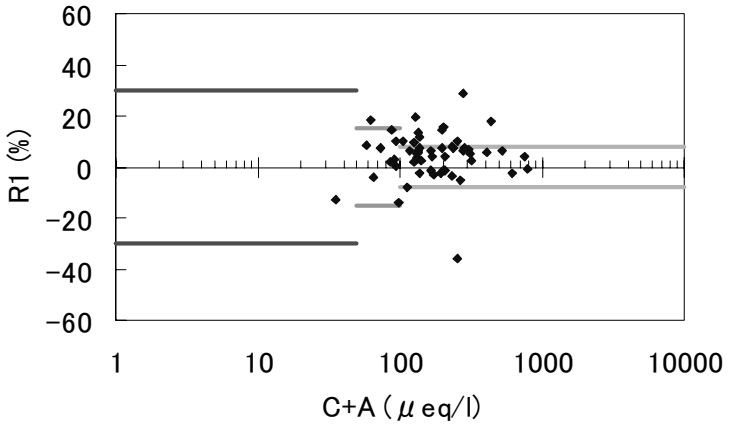


Fig. 3.70 Samutprakarn Ion Balance (R1)

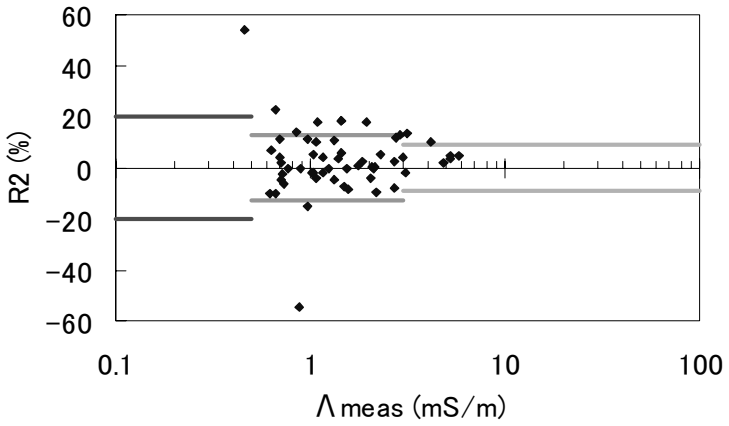


Fig. 3.71 Samutprakarn Conductivity Agreement (R2)

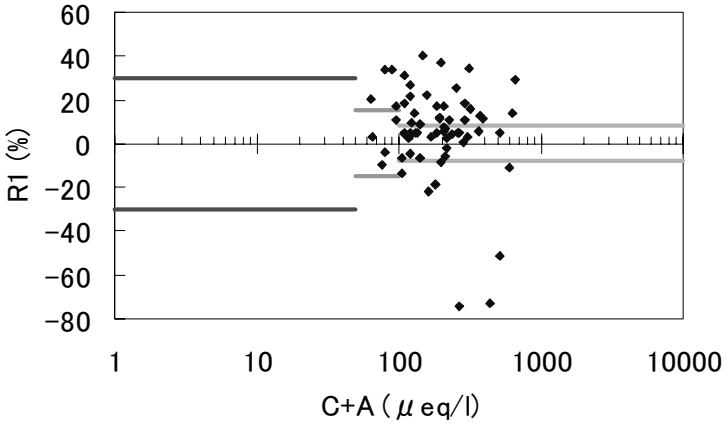


Fig. 3.72 Patumthani Ion Balance (R1)

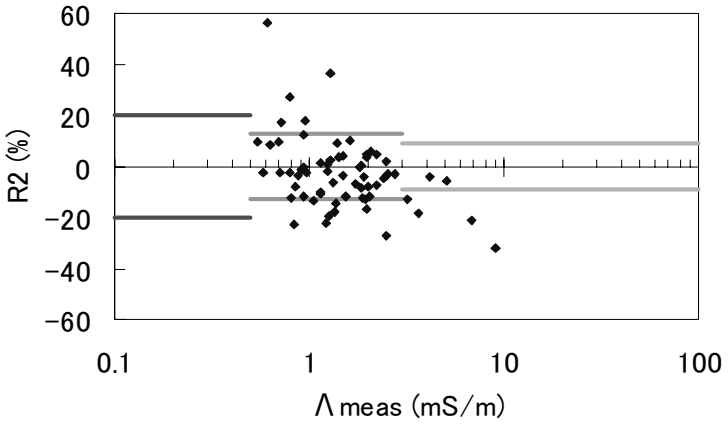


Fig. 3.73 Patumthani Conductivity Agreement (R2)

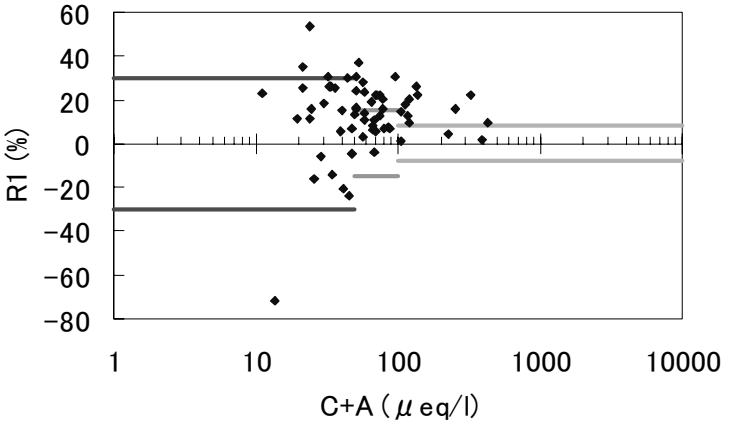


Fig. 3.74 Khao Lam Ion Balance (R1)

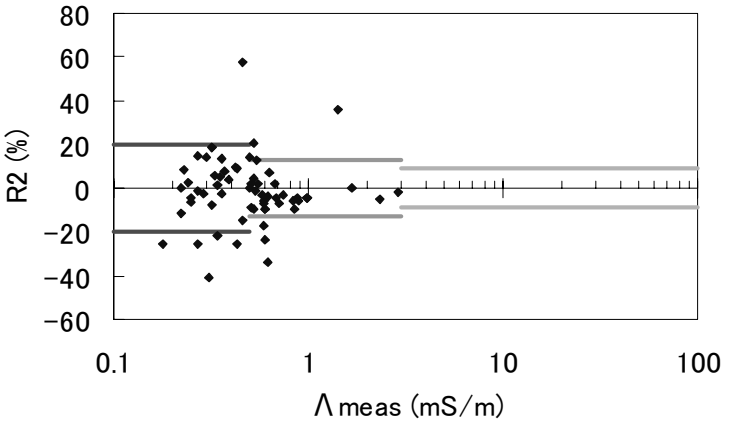


Fig. 3.75 Kao Lam Conductivity Agreement (R2)

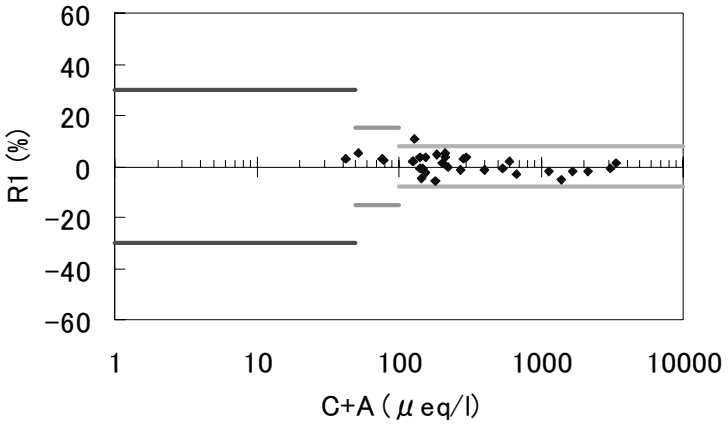


Fig. 3.76 Hanoi Ion Balance (R1)

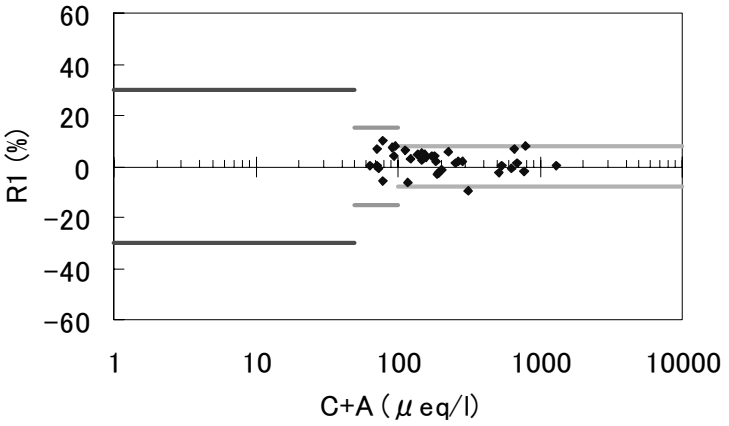


Fig. 3.78 Hoa Binh Ion Balance (R1)

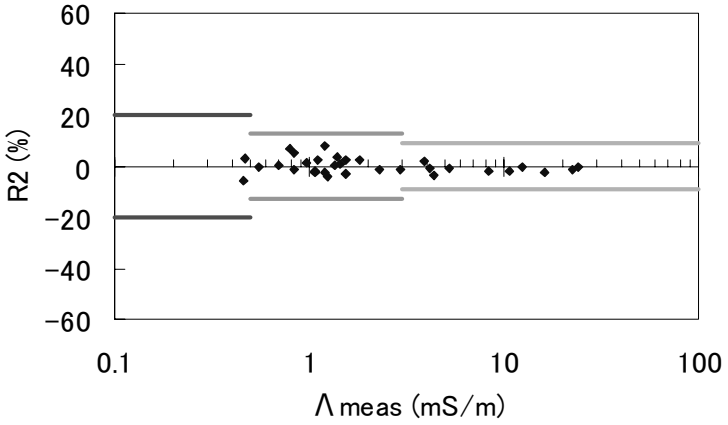


Fig. 3.77 Hanoi Conductivity Agreement (R2)

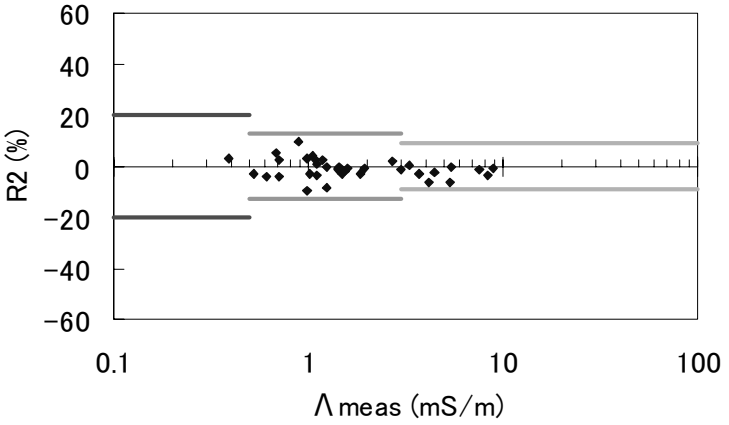


Fig. 3.79 Hoa Binh Conductivity Agreement (R2)

4. Dry Deposition (Air Concentration) Monitoring

4.1 Method

Automatic monitoring methods and filter pack method were used to carry out the dry deposition (air concentration) monitoring mainly focusing on the following priority chemical species, described in the Strategy Paper for Future Direction of Dry Deposition Monitoring of EANET:

First priority: NO_2(urban), SO_2, O_3, and NO, and particulate mass concentration;

Second priority: NO_2(rural and remote), HNO_3, NH_3, particles (SO_4^{2-}, NO_3^-, NH_4^+, and Ca^{2+}).

Sampling methods and parameter for Dry Deposition (Air Concentration) Monitoring are shown in Table 4.1.

1) Automatic monitoring methods

In the case of automatic monitoring method, air concentration monitoring for SO_2, NO_2(urban), NO, O_3, and particulate mass are available, and an hourly average of these components can be reported.

Monitoring data can be obtained directly from the on-site continuous monitor as outputs of computer files or recording charts.

2) Filter pack method

Four-stage filter pack method was used for EANET filter pack monitoring. The four-stage filter pack method can determine gaseous (SO_2, HNO_3, HCl, NH_3) and particulate components (SO_4^{2-}, NO_3^-, Cl^-, NH_4^+, Ca^{2+}) concentrations. Recommended specification of four-stage filter pack method is shown in Fig. 4.1.

3) Determination of concentration

Air concentrations of gaseous species by automatic monitors were calculated from calibration factor obtained by span/zero gas measurement of each constituent. It should be emphasized that commercial "NOx chemiluminescence instruments" with molybdenum converter should not be used for NO_2 measurement at rural and remote sites since its NOx mode responds not only to NO/NO_2 but also to HNO_3 and other organic nitrates unspecifically. The instruments could be used for NO/NOx* (NO, NO_2, PAN and partial HNO_3). Its use in urban sites near emission sources may be acceptable for NO_2 measurement since the major components of NOx would be NO_2 and NO in urban areas.

On the other hand, concentrations of parameter obtained by filter packs were calculated from the comparison between extracted solution and standard solution of corresponding chemicals.

Table 4.1 Sampling Method and Parameter for Dry Deposition (Air Concentration) Monitoring (1)

Country	Name of sites	Characteristics of sites	Method	Parameter
China	Chongqing			
	-Guanyinqiao	Urban	AT	SO_2, NO_2, TSP
	-Nanshan	Rural	-	None
	Xi'an			
	-Shizhan	Urban	-	None
	-Weishuiyuan	Rural	AT	SO_2, NO_2
	-Dabagou	Remote	-	None
	Xiamen			
	-Hongwen	Urban	AT	SO_2
	-Xiaoping	Remote	-	None
	Zhuhai			
	-Xianzhou	Urban	-	SO_2, TSP
	-Zhuxian Cavern	Urban	-	None
Indonesia	Jakarta(BMG)	Urban	-	None
	Serpong(EMC)	Rural	AT	SO_2, NO_2, SPM
	Kototabang	Remote	-	None
	Bandung(LAPAN)	Urban	-	None
Japan	Rishiri	Remote	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Tappi	Remote	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Ogasawara	Remote	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Sado-seki	Remote	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Happo	Remote	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Oki	Remote	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Yusuhara	Remote	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Hedo	Remote	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Lake Ijira	Rural	AT	SO_2, NO, NO_x*, O_3, PM_{10}
	Lake Banryu	Urban	AT	SO_2, NO, NO_2, O_3, PM_{10}
Malaysia	Petaling Jaya	Urban	LV	PM_{10}, TSP
	Tanah Rata	Remote	FP	SO_2,HNO_3,HCl,NH_3,PMC
			PS, LV	SO_2,HNO_3,NO_2,NH_3,PMC
Mongolia	Ulaanbaatar	Urban	FP	SO_2,HNO_3,HCl,NH_3,PMC
	Terelj	Remote	FP	SO_2,HNO_3,HCl,NH_3,PMC

(Note) AT: Automatic monitor, FP: Filter pack, LV: Low volume air sampler, PMC: particulate matter components, PS: passive sampler

Table 4.1 Sampling Method and Parameter for Dry Deposition (Air Concentration) Monitoring (2)

Philippines	Metro Manila Los Banos	Urban Rural	FP FP	SO_2,HNO_3,HCl,NH_3,PMC SO_2,HNO_3,HCl,NH_3,PMC
Republic of Korea	Kanghwa Kosan	Rural Remote	- -	None None
Russia	Mondy Listvjanka Irkutsk	Remote Rural Irkutsk	FP FP FP	SO_2,HNO_3,HCl,NH_3,PMC SO_2,HNO_3,HCl,NH_3,PMC SO_2,HNO_3,HCl,NH_3,PMC
Thailand	Bangkok (OEPP) Samutprakarn(MD) Patumthani(ERTC) Khao Lam	Urban Urban Rural Remote	AT, (LV) AT, (LV) - AT, (LV)	SO_2, PM_{10}, TSP SO_2, NO, NO_2, TSP SO_2, NO, NO_2, PM_{10}
Vietnam	Hanoi Hoa Binh	Urban Rural	FP FP	SO_2,HNO_3,HCl,NH_3,PMC SO_2,HNO_3,HCl,NH_3,PMC

(Note) AT: Automatic monitor, FP: Filter pack, LV: Low volume air sampler, PMC: particulate matter components, PS: passive sampler

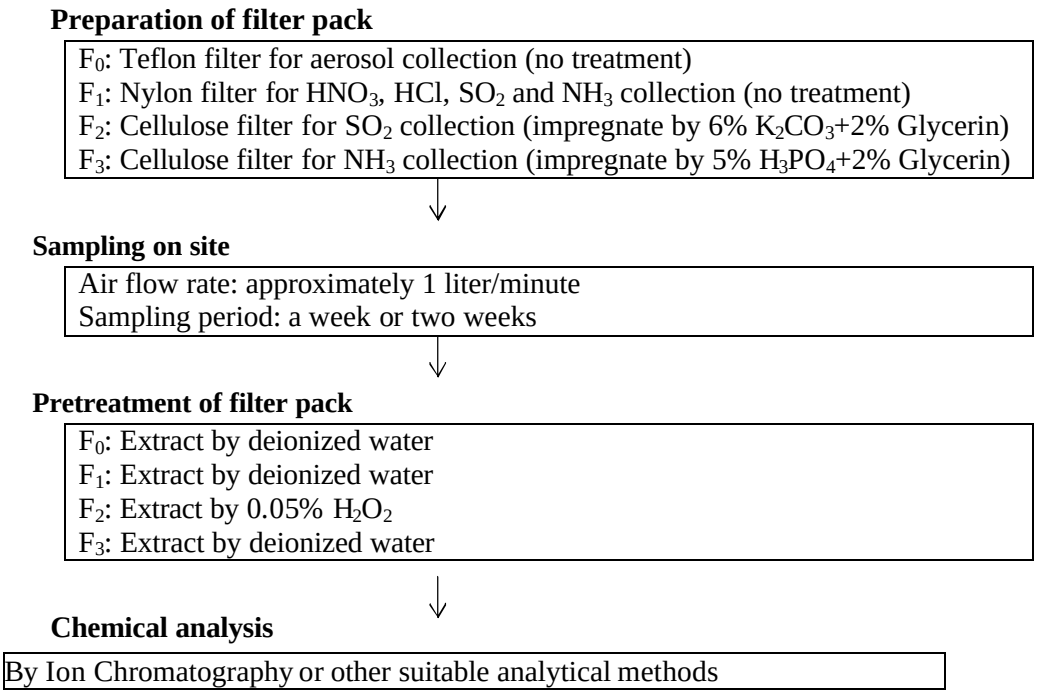


Fig. 4.1 Recommended specification of four-stage filter pack method

4.2 Results of Monitoring

Monitoring data are summed up into monthly average value with maximum, minimum and data completeness in a month. Summarized data are shown in Table 2 through Table 11.

In these tables, terms and abbreviations indicate the followings:

Mean : monthly arithmetic average value
Median : monthly median value (in the case of a lot of data under detection limit)
Max : maximum value in a month
Min : minimum value in a month
% : percentage of period of available data during a month including data under detection limit
%* : percentage of period of available data during a month not including data under detection limit (in the case of a lot of data under detection limit)
UVF : ultraviolet fluorescent method
CLD : chemiluminescence detection method
NOx* : NOx measured by CLD in remote and rural.
NO_2* : NO_2 measured by CLD in remote and rural.

Table 4.2 SO_2 (1)

unit: ppb

		China							
		Guanyinqiao				Hongwen			
		Automatic (daily)				Automatic (daily)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	55	100	103	17	8	100	21	2
	February	61	100	170	23	5	100	12	2
	March	76	100	143	29	7	77	15	4
	April	63	100	119	22	8	83	18	2
	May	42	97	93	5	7	94	12	2
	June	15	93	31	3	4	100	8	1
	July	41	100	101	14	5	100	10	1
	August	34	97	99	5	4	100	17	<1
	September	47	100	106	4	5	100	14	1
	October					5	97	9	2
	November								
	December								

		China							
		Weshuiyuan				Xiangzhou			
		Automatic (daily)				Automatic (daily)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	8	58	20	1	11	87	20	1
	February	3	59	6	1	7	82	12	3
	March	2	55	5	<1	9	77	21	3
	April	3	57	5	1	5	80	14	1
	May	6	61	8	3	4	77	13	1
	June	15	100	30	3	5	97	13	2
	July	15	100	51	9	6	100	18	<1
	August	3	100	17	1	5	100	17	2
	September	2	100	3	1	8	100	21	2
	October	2	100	4	1	6	100	25	1
	November	7	100	24	1	14	97	31	3
	December	8	100	25	2	16	97	90	4

Table 4.2 SO_2 (2)

unit: ppb

		Indonesia			
		Serpong			
		Automatic (hourly)			
		mean	%	Max	Min
2000	January				
	February				
	March				
	April				
	May				
	June				
	July	1	58	10	<1
	August	5	100	20	<1
	September	2	93	8	1
	October	1	94	7	<1
	November	2	97	8	1
	December	2	90	10	1

Table 4.2 SO_2 (3)

unit: ppb

		Japan									
		Rishiri					Tappi				
		UVF (hourly)					UVF (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January						0.3	99	89	7.2	<0.1
	February	0.2	98	89	1.7	<0.1	0.3	100	99	2.9	<0.1
	March	0.2	98	83	5.1	<0.1	0.4	99	91	3.0	<0.1
	April	<0.1	98	45	2.9	<0.1	0.2	98	81	2.1	<0.1
	May	0.1	96	60	3.0	<0.1	0.3	99	75	3.7	<0.1
	June	<0.1	96	30	0.8	<0.1	0.2	96	74	2.4	<0.1
	July	<0.1	98	45	1.5	<0.1	0.2	99	82	3.2	<0.1
	August	<0.1	97	42	1.2	<0.1	0.1	99	92	2.6	<0.1
	September	<0.1	62	16	3.7	<0.1	0.2	99	79	5.0	<0.1
	October	<0.1	100	48	2.1	<0.1	0.2	99	97	4.8	<0.1
	November	0.1	100	85	2.6	<0.1	0.3	99	97	3.1	<0.1
	December	0.4	83	80	3.6	<0.1	0.5	99	96	6.0	<0.1

		Japan									
		Sado-seki					Happo				
		UVF (hourly)					UVF (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	<0.1	98	32	4.3	<0.1	0.3	99	80	4.3	<0.1
	February	0.2	95	79	3.5	<0.1	0.3	97	95	5.4	<0.1
	March	0.3	98	89	4.9	<0.1	0.3	97	86	4.7	<0.1
	April	0.2	98	84	4.3	<0.1	0.3	97	72	4.4	<0.1
	May	<0.1	98	41	2.0	<0.1	0.2	97	65	6.5	<0.1
	June	<0.1	97	47	10.5	<0.1	0.1	97	51	2.6	<0.1
	July	0.2	98	77	8.8	<0.1	0.1	97	65	7.1	<0.1
	August	0.2	98	85	15.0	<0.1	0.2	96	74	24.4	<0.1
	September	0.1	98	60	76.9	<0.1	0.2	97	62	114.4	<0.1
	October	0.1	98	77	22.4	<0.1	0.2	94	68	18.7	<0.1
	November	0.2	98	84	27.0	<0.1	0.3	75	59	31.9	<0.1
	December	0.3	98	89	10.6	<0.1	0.4	97	92	9.7	<0.1

Table 4.2 SO_2 (4)

unit: ppb

		Japan									
		Ogasawara					Oki				
		UVF (hourly)					UVF (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	<0.1	98	31	5.7	<0.1	0.3	98	97	5.9	<0.1
	February	<0.1	97	40	4.6	<0.1	0.4	99	99	5.1	<0.1
	March	<0.1	98	46	3.7	<0.1	0.5	98	94	5.7	<0.1
	April	<0.1	97	28	3.9	<0.1	0.3	90	79	7.3	<0.1
	May	<0.1	97	2	3.5	<0.1	0.3	97	65	4.4	<0.1
	June	<0.1	98	6	2.1	<0.1	0.1	98	67	9.8	<0.1
	July	<0.1	97	2	3.4	<0.1	0.2	98	77	2.6	<0.1
	August	<0.1	98	10	4.9	<0.1	0.3	79	62	8.0	<0.1
	September	<0.1	98	17	3.6	<0.1	<0.1	71	30	2.4	<0.1
	October	<0.1	98	9	4.2	<0.1	0.2	98	91	18.4	<0.1
	November	<0.1	98	29	15.4	<0.1	0.3	95	77	3.9	<0.1
	December	<0.1	98	37	10.9	<0.1	0.5	98	95	4.9	<0.1

		Japan									
		Ijira					Banryu				
		UVF (hourly)					UVF (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	0.1	98	54	2.8	<0.1	0.8	47	46	6.6	<0.1
	February	0.1	97	56	2.4	<0.1	0.7	58	57	9.8	<0.1
	March	0.1	99	62	6.9	<0.1	1.3	21	21	9.2	<0.1
	April	0.1	99	63	5.5	<0.1	0.2	14	10	2.1	<0.1
	May	0.1	99	54	4.7	<0.1	0.4	97	87	6.0	<0.1
	June	0.1	97	51	5.8	<0.1	0.3	98	92	13.6	<0.1
	July	<0.1	97	41	8.1	<0.1	0.4	93	85	8.9	<0.1
	August	0.1	87	49	5.3	<0.1	0.4	98	94	7.5	<0.1
	September	0.1	98	58	109.8	<0.1	0.3	98	90	19.1	<0.1
	October	0.1	99	68	23.7	<0.1	0.5	97	93	28.3	<0.1
	November	0.2	99	88	43.3	<0.1	0.5	98	95	35.8	<0.1
	December	0.1	99	69	7.7	<0.1	0.8	98	97	10.2	<0.1

Table 4.2 SO_2 (5)

unit: ppb

		Japan									
		Yusuhara					Hedo				
		UVF (hourly)					UVF (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	0.6	95	90	20.8	<0.1	0.3	98	81	8.5	<0.1
	February	1.4	55	55	24.8	0.1	0.3	72	72	2.2	<0.1
	March	1.1	98	89	22.8	<0.1	0.2	98	73	6.2	<0.1
	April	0.3	76	61	6.9	<0.1	0.1	99	53	2.1	<0.1
	May	0.7	98	84	20.0	<0.1	0.1	98	68	3.2	<0.1
	June	0.6	55	51	4.1	<0.1	0.1	99	50	4.1	<0.1
	July	0.4	74	57	13.8	<0.1	0.1	98	59	4.9	<0.1
	August	0.3	95	68	4.5	<0.1	<0.1	93	46	1.8	<0.1
	September	0.5	95	83	103.3	<0.1	0.2	99	67	5.9	<0.1
	October	0.5	98	91	13.9	<0.1	0.2	99	70	4.8	<0.1
	November	0.4	86	77	4.5	<0.1	0.3	96	81	81.5	<0.1
	December	1.0	98	94	12.5	<0.1	0.2	99	67	12.3	<0.1

Table 4.2 SO_2 (6)

unit: ppb

		Malaysia				**Mongolia**			
		Tanah Rata				Terelj			
		Filter Packs (weekly)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	N.D.	100	0.1	N.D.	1.2	100	1.3	1.0
	February	N.D.	100	N.D.	N.D.	0.7	100	1.0	0.4
	March	N.D.	100	N.D.	N.D.	0.3	100	0.4	0.2
	April	N.D.	100	N.D.	N.D.	0.3	100	0.4	0.2
	May	N.D.	100	0.1	N.D.	0.1	100	0.2	0.1
	June	N.D.	100	N.D.	N.D.	0.1	100	0.1	0.1
	July	0.1	100	0.1	N.D.	0.1	100	0.1	N.D.
	August	N.D.	100	N.D.	N.D.	N.D.	100	0.1	N.D.
	September	0.1	100	0.1	N.D.	0.2	100	0.2	0.1
	October	0.1	100	0.1	N.D.	0.2	100	0.3	0.1
	November	N.D.	100	0.1	N.D.	0.5	100	0.8	0.2
	December	N.D.	100	0.1	N.D.	0.9	100	1.0	0.7

		Mongolia				**Philippines**			
		Ulaanbaatar				Metro Manila			
		Filter Packs (weekly)				Filter Packs (Flexible)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January								
	February								
	March								
	April	1.8	47	1.8	1.7				
	May	1.4	68	1.6	1.3				
	June	1.2	100	1.8	0.6	3.6	68	4.8	2.7
	July	0.7	100	1.1	0.3	4.1	34	4.1	4.1
	August	1.1	75	1.5	0.6	4.9	43	4.9	4.9
	September	2.0	100	3.0	1.0	6.3	46	11.5	1.1
	October	2.1	100	2.6	1.9		0		
	November					4.7	57	5.0	4.4
	December					5.3	57	6.9	3.7

Table 4.2 SO_2 (7)

unit: ppb

		Philippines				**Russia**			
		Los Banos				Mondy			
		Filter Packs (Flexible)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January					0.1	100	0.1	0.1
	February					N.D.	52	0.0	N.D.
	March					0.1	100	0.1	0.1
	April					0.3	100	0.5	0.1
	May					0.1	100	0.1	N.D.
	June					0.1	100	0.2	0.1
	July					N.D.	87	0.0	N.D.
	August					0.1	93	0.1	0.1
	September	1.2	29	1.2	1.2	N.D.	93	0.0	N.D.
	October								
	November	0.5	32	0.7	0.4	0.1	100	0.1	N.D.
	December	0.6	50	0.7	0.6	N.D.	100	N.D.	N.D.

		Russia							
		Listvjanka				Irkutsk			
		Filter Packs (10days)				Filter Packs (Flexible)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	2.4	100	3.9	1.6	1.7	84	2.2	1.2
	February	0.9	100	1.3	0.6	2.6	96	3.5	1.0
	March	0.8	87	1.4	0.4	13.1	94	30.1	3.3
	April	0.5	93	0.7	0.3	13.7	79	25.0	5.8
	May	0.5	94	0.5	0.4	1.9	93	3.7	N.D.
	June	0.5	97	1.3	N.D.	0.5	89	0.7	0.4
	July	0.3	94	0.3	0.2	0.4	93	0.3	0.1
	August	0.4	94	0.6	0.1	0.2	97	0.3	0.1
	September	0.2	93	0.4	0.1	0.1	97	0.2	0.1
	October	0.2	97	0.3	0.1	0.7	97	2.0	0.2
	November	2.5	90	5.7	0.4	2.3	97	2.6	2.1
	December	3.2	97	4.4	2.0	3.9	97	5.2	2.7

Table 4.2 SO_2 (8)

unit: ppb

		Thailand							
		Khao Lam				Bangkok			
		Automatic (hourly)				Automatic (hourly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January					4	69	33	<1
	February					5	84	35	<1
	March	2	32	2	<1	9	54	52	<1
	April					8	72	55	1
	May					3	47	14	<1
	June					1	73	17	<1
	July	<1	41	1	<1	1	96	7	<1
	August					2	70	20	<1
	September					4	82	23	<1
	October					3	94	27	<1
	November	1	44	4	<1	6	99	28	1
	December					5	96	21	1

		Thailand			
		Samutprakarm			
		Automatic (hourly)			
		mean	%	Max	Min
2000	January	2	86	20	<1
	February	3	76	62	<1
	March	1	24	4	<1
	April	<1	38	3	<1
	May	3	73	22	<1
	June	6	69	36	<1
	July	4	89	25	1
	August	5	62	38	<1
	September	7	93	29	<1
	October	9	90	75	<1
	November	5	87	36	<1
	December	6	82	43	<1

Table 4.3 NO (1)

unit: ppb

		Japan									
		Rishiri					Tappi				
		CLD (hourly)					CLD (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January						0.1	99	67	0.5	<0.1
	February	<0.1	98	37	4.4	<0.1	<0.1	99	45	1.3	<0.1
	March	<0.1	98	33	4.6	<0.1	0.1	99	93	1.4	<0.1
	April	<0.1	98	23	3.3	<0.1	0.1	98	74	2.7	<0.1
	May	<0.1	96	33	22.3	<0.1	0.1	87	65	5.8	<0.1
	June	<0.1	96	34	10.8	<0.1	0.2	90	71	4.8	<0.1
	July	<0.1	98	31	3.6	<0.1	0.1	99	76	4.7	<0.1
	August	<0.1	97	33	1.2	<0.1	0.1	99	93	3.0	<0.1
	September	<0.1	62	15	1.8	<0.1	0.2	80	80	5.5	<0.1
	October	<0.1	100	26	1.4	<0.1	0.1	66	38	1.1	<0.1
	November	<0.1	100	17	1.8	<0.1	0.1	99	66	0.5	<0.1
	December	<0.1	83	15	4.8	<0.1	<0.1	99	15	0.2	<0.1

		Japan									
		Sado-seki					Happo				
		CLD (hourly)					CLD (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	<0.1	98	5	1.6	<0.1	<0.1	99	41	4.0	<0.1
	February	<0.1	95	3	0.5	<0.1	0.1	97	51	5.8	<0.1
	March	<0.1	98	13	0.4	<0.1	<0.1	97	45	2.9	<0.1
	April	<0.1	98	21	0.4	<0.1	<0.1	97	43	2.9	<0.1
	May	<0.1	98	23	1.0	<0.1	<0.1	97	39	6.5	<0.1
	June	<0.1	97	32	4.0	<0.1	<0.1	97	42	2.7	<0.1
	July	<0.1	98	43	7.4	<0.1	<0.1	97	39	4.1	<0.1
	August	<0.1	98	38	1.8	<0.1	<0.1	96	21	0.5	<0.1
	September	<0.1	98	31	0.4	<0.1	<0.1	97	30	5.1	<0.1
	October	<0.1	98	13	0.2	<0.1	<0.1	94	40	6.0	<0.1
	November	<0.1	98	13	0.6	<0.1	<0.1	75	32	1.7	<0.1
	December	<0.1	98	10	1.3	<0.1	<0.1	97	39	4.4	<0.1

Table 4.3 NO (2)

unit: ppb

		Japan									
		Ogasawara					Oki				
		CLD (hourly)					CLD (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	<0.1	98	16	4.7	<0.1	<0.1	98	10	0.5	<0.1
	February	<0.1	97	24	2.9	<0.1	<0.1	98	21	0.6	<0.1
	March	<0.1	98	15	4.2	<0.1	<0.1	97	35	0.8	<0.1
	April	<0.1	97	16	5.2	<0.1	<0.1	90	29	1.5	<0.1
	May	<0.1	97	8	4.7	<0.1	<0.1	97	5	0.4	<0.1
	June	<0.1	98	48	7.9	<0.1	<0.1	98	15	0.6	<0.1
	July	0.1	97	61	8.2	<0.1	<0.1	98	16	1.9	<0.1
	August	<0.1	98	40	9.4	<0.1	<0.1	79	11	1.3	<0.1
	September	<0.1	98	45	32.8	<0.1	<0.1	97	8	3.6	<0.1
	October	<0.1	98	45	14.1	<0.1	<0.1	74	7	0.5	<0.1
	November	<0.1	98	47	8.1	<0.1	<0.1	93	14	1.2	<0.1
	December	<0.1	98	38	18.3	<0.1	<0.1	98	16	0.9	<0.1

		Japan									
		Ijira					Banryu				
		CLD (hourly)					CLD (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	<0.1	99	42	2.8	<0.1	0.1	84	50	24.8	<0.1
	February	0.1	99	65	8.2	<0.1	0.1	85	45	7.1	<0.1
	March	<0.1	99	43	7.1	<0.1	0.1	97	55	12.5	<0.1
	April	<0.1	99	40	4.0	<0.1	0.1	89	50	6.1	<0.1
	May	0.1	87	68	1.8	<0.1	0.1	97	57	16.9	<0.1
	June	0.2	87	76	12.1	<0.1	0.1	98	63	4.0	<0.1
	July	0.2	95	87	6.4	<0.1	0.2	93	67	3.6	<0.1
	August	0.3	99	95	12.6	<0.1	0.2	98	71	6.6	<0.1
	September	0.2	99	77	28.8	<0.1	0.1	98	65	6.1	<0.1
	October	0.1	99	78	5.5	<0.1	0.1	96	59	4.3	<0.1
	November						0.1	73	43	12.9	<0.1
	December	0.1	99	57	19.8	<0.1	0.1	98	54	11.0	<0.1

Table 4.3 NO (3)

unit: ppb

		Japan									
		Yusuhara					Hedo				
		CLD (hourly)					CLD (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	0.3	95	95	1.0	0.1	0.1	98	57	0.4	<0.1
	February	0.3	98	93	1.8	<0.1	0.1	66	66	1.5	0.1
	March	0.2	98	97	1.1	<0.1	0.1	99	60	0.9	<0.1
	April	0.3	98	98	1.1	<0.1	0.1	99	70	1.3	<0.1
	May	0.2	98	98	2.8	<0.1	0.1	99	60	2.9	<0.1
	June	0.2	98	95	1.2	<0.1	<0.1	99	38	2.3	<0.1
	July	0.6	75	71	10.2	<0.1	<0.1	88	15	0.1	<0.1
	August	0.5	66	65	0.9	<0.1	<0.1	93	34	1.6	<0.1
	September	<0.1	98	15	8.1	<0.1	0.1	98	60	0.7	<0.1
	October	<0.1	83	2	0.7	<0.1	0.2	98	98	1.3	0.1
	November	<0.1	96	20	6.4	<0.1	0.1	98	96	1.1	<0.1
	December	0.1	98	57	1.1	<0.1	0.1	99	97	0.7	<0.1

		Thailand				**Thailand**			
		Khao Lam				Samutprakarm			
		CLD (hourly)				CLD (hourly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January								
	February								
	March	<1	32	4	<1				
	April								
	May					13	87	102	<1
	June					17	80	132	<1
	July	<1	41	3	<1	24	93	144	1
	August					24	92	125	2
	September					24	95	159	<1
	October					29	94	286	7
	November	<1	39	3	<1	28	87	315	<1
	December					25	91	244	<1

Table 4.4 NO_2 (1)

unit: ppb

		China							
		Guanyinqiao				Weshuiyuan			
		CLD (daily)				CLD (daily)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	39	100	83	15	8	58	13	5
	February	47	100	194	16	5	59	8	2
	March	62	100	163	14	8	55	20	3
	April	48	100	101	21	8	57	12	4
	May	74	100	192	25	6	61	10	4
	June	40	100	116	9	10	100	67	1
	July	32	100	57	16	12	100	19	6
	August	46	100	135	8	2	100	6	1
	September	73	100	171	19	2	100	4	1
	October					2	100	5	1
	November					7	100	21	2
	December					6	100	17	2

		Indonesia				**Japan**				
		Serpong				Rishiri				
		Automatic (hourly)				CLD/NO_2* (hourly)				
		mean	%	Max	Min	median	%	%*	Max	Min
2000	January					0.7	97	92	3	<0.1
	February					0.6	98	95	13	<0.1
	March					0.7	98	97	7	<0.1
	April					0.9	98	98	5	<0.1
	May					1.0	96	96	15	<0.1
	June					0.6	96	95	9	<0.1
	July	8	58	23	<1	0.7	98	98	7	<0.1
	August	9	52	25	<1	<0.1	97	93	4	<0.1
	September	5	83	29	1	<0.1	62	54	3	<0.1
	October	6	97	30	1	0.5	100	92	10	<0.1
	November	5	87	29	1	0.8	100	100	5	<0.1
	December	5	81	29	1	0.7	83	83	3	<0.1

Table 4.4 NO_2 (2)

unit: ppb

		Japan									
		Tappi					Sado-seki				
		CLD/NO_2* (hourly)					CLD/NO_2* (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	0.7	99	99	5	<0.1	0.8	98	98	5.8	0.3
	February	0.7	99	99	5	<0.1	0.8	95	95	3.3	0.4
	March	1.0	99	99	5	<0.1	1.2	98	98	12.3	0.5
	April	1.1	98	98	16	<0.1	1.7	98	98	12.5	0.3
	May	1.6	87	87	13	<0.1	1.1	98	97	8.7	<0.1
	June	0.9	90	89	9	<0.1	1.0	97	90	8.0	<0.1
	July	0.8	99	90	10	<0.1	0.0	98	34	2.6	<0.1
	August	0.6	99	90	8	<0.1	0.5	98	84	5.9	<0.1
	September	0.6	80	74	10	<0.1	0.4	98	74	5.9	<0.1
	October	0.6	66	65	6	<0.1	0.8	98	98	4.5	0.3
	November	0.7	99	99	7	<0.1	1.2	98	98	7.3	0.3
	December	0.7	99	99	6	<0.1	1.0	98	98	7.5	0.3

		Japan									
		Happo					Ogasawara				
		CLD/NO_2* (hourly)					CLD/NO_2* (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	1.7	99	99	10.0	0.5	0.5	98	98	8.0	<0.1
	February	1.8	97	97	12.3	0.6	0.9	97	97	8.5	<0.1
	March	2.1	97	97	9.6	0.4	0.7	98	95	5.4	<0.1
	April	2.1	97	97	18.1	<0.1	0.2	97	71	10.7	<0.1
	May	2.2	97	97	10.7	<0.1	0.1	97	91	5.2	<0.1
	June	2.4	97	97	10.0	0.4	0.1	98	74	6.7	<0.1
	July	2.4	97	97	8.3	0.2	0.1	97	70	4.2	<0.1
	August	1.6	96	65	6.9	<0.1	<0.1	98	48	4.1	<0.1
	September	1.1	97	72	11.7	<0.1	0.1	98	66	22.4	<0.1
	October	2.0	94	94	7.4	0.2	0.2	98	93	13.4	<0.1
	November	2.3	75	75	11.0	0.1	0.3	98	97	9.4	<0.1
	December	1.8	97	97	11.2	<0.1	0.6	98	97	20.5	<0.1

Table 4.4 NO_2 (3)

unit: ppb

		Japan									
		Oki					Ijira				
		CLD/NO_2* (hourly)					CLD/NO_2* (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	1.0	98	98	7.6	0.3	0.8	99	97	15.5	<0.1
	February	1.2	98	98	6.6	0.5	0.9	99	99	32.1	0.2
	March	1.8	97	97	10.6	0.7	1.0	99	94	37.8	<0.1
	April	1.8	82	82	9.3	0.3	1.4	99	91	21.0	<0.1
	May	1.8	71	71	5.8	0.4	2.5	87	80	26.0	<0.1
	June	1.8	26	26	5.9	0.2	4.3	87	87	30.1	<0.1
	July	0.8	48	48	11.5	<0.1	3.0	95	95	23.8	<0.1
	August	1.0	79	79	8.3	<0.1	4.2	99	99	24.3	0.3
	September	0.5	97	90	10.0	<0.1	3.0	99	99	30.9	0.2
	October	0.7	74	72	8.4	<0.1	1.3	99	99	30.6	<0.1
	November	0.9	67	66	8.2	<0.1					
	December	1.1	98	94	11.4	<0.1	1.2	99	98	50.5	<0.1

		Japan									
		Banryu					Yusuhara				
		CLD/NO_2* (hourly)					CLD/NO_2* (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	3.7	84	84	18.5	0.7	0.6	95	90	20.8	<0.1
	February	3.7	85	85	23.8	0.8	1.4	55	55	24.8	0.1
	March	4.6	47	47	18.7	1.6	1.1	98	89	22.8	<0.1
	April	3.8	89	89	19.8	1.4	0.3	76	61	6.9	<0.1
	May	3.2	97	97	41.1	0.6	0.7	98	84	20.0	<0.1
	June	3.1	98	98	16.9	0.3	0.6	55	51	4.1	<0.1
	July	2.5	93	93	13.6	0.3	0.4	74	57	13.8	<0.1
	August	4.1	6	6	8.2	1.1	0.3	95	68	4.5	<0.1
	September	3.0	62	62	13.7	0.5	0.4	98	66	5.0	<0.1
	October	3.5	96	96	18.0	0.9	0.5	98	91	13.9	<0.1
	November	4.1	73	73	27.4	1.1	0.4	86	77	4.5	<0.1
	December	4.1	98	98	22.7	1.1	1.0	98	94	12.5	<0.1

Table 4.4 NO_2 (4)

unit: ppb

		Japan					**Thailand**			
		Hedo					Khao Lam			
		CLD/NO_2* (hourly)					CLD (hourly)			
		median	%	%*	Max	Min	mean	%	Max	Min
2000	January	0.7	98	98	3.6	0.1				
	February	0.7	98	98	3.9	0.2				
	March	0.7	99	96	5.7	<0.1	3.9	32	9	1
	April	0.6	99	98	5.1	<0.1				
	May	0.5	99	90	4.0	<0.1				
	June	0.3	99	73	3.4	<0.1				
	July	<0.1	88	8	2.6	<0.1	1.0	41	3.0	<0.1
	August	0.2	93	49	3.0	<0.1				
	September	0.2	98	58	1.9	<0.1				
	October	0.4	98	96	3.5	<0.1				
	November	0.5	98	97	2.0	<0.1	2.1	39	7.0	<0.1
	December	0.5	99	99	2.1	<0.1				

		Thailand			
		Samutprakarm			
		CLD (hourly)			
		mean	%	Max	Min
2000	January				
	February				
	March				
	April				
	May	13	87	50	<1
	June	13	80	47	<1
	July	14	93	69	<1
	August	10	92	33	1
	September	12	94	73	<1
	October	19	95	72	1
	November	31	87	126	3
	December	30	92	92	<1

Table 4.5 NOx (1)

unit: ppb

		Japan									
		Rishiri					Tappi				
		CLD/NOx* (hourly)					CLD/NOx* (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January						0.7	99	99	5.4	0.1
	February	0.6	98	95	13.0	<0.1	0.7	99	99	5.8	0.1
	March	0.7	98	98	7.3	<0.1	1.1	99	99	5.7	0.2
	April	0.8	98	98	5.5	0.2	1.2	98	98	18.2	<0.1
	May	1.0	96	96	36.4	<0.1	1.8	87	87	14.5	0.1
	June	0.6	96	95	15.6	<0.1	1.1	90	90	13.4	<0.1
	July	0.7	98	98	7.1	0.1	0.9	99	93	12.0	<0.1
	August	0.5	97	94	5.4	<0.1	0.8	99	98	10.8	<0.1
	September	0.3	62	54	4.0	<0.1	0.8	80	80	11.2	0.1
	October	0.6	100	91	11.3	<0.1	0.7	66	66	7.1	<0.1
	November	0.9	100	100	5.9	0.2	0.8	99	99	7.2	0.2
	December	0.7	83	83	6.1	0.2	0.7	99	99	6.3	0.2

		Japan									
		Sado-seki					Happo				
		CLD/NOx* (hourly)					CLD/NOx* (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	0.7	98	98	6.9	0.3	1.5	99	99	8.6	0.4
	February	0.8	95	95	3.8	0.3	1.6	97	97	15.6	0.5
	March	1.2	98	98	12.6	0.5	1.9	97	97	9.3	0.4
	April	1.7	98	98	12.8	0.3	1.9	97	97	15.7	<0.1
	May	1.2	98	97	10.3	<0.1	2.2	97	97	11.4	<0.1
	June	1.1	97	90	10.4	<0.1	2.3	97	97	10.0	0.4
	July	<0.1	98	37	11.2	<0.1	2.4	97	97	8.2	0.2
	August	0.6	98	85	7.0	<0.1	1.5	96	65	6.6	<0.1
	September	0.4	98	76	6.4	<0.1	1.2	97	73	12.5	<0.1
	October	0.8	98	98	4.5	0.3	2.0	94	94	9.0	0.2
	November	1.1	98	98	7.1	0.3	2.1	75	75	9.8	0.1
	December	0.9	98	98	7.0	0.3	1.6	97	97	11.0	0.3

Table 4.5 NOx (2)

unit: ppb

		Japan									
		Ogasawara					Oki				
		CLD/NOx* (hourly)					CLD/NOx* (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	0.5	98	98	7.9	<0.1	1.0	98	98	7.6	0.3
	February	0.9	97	97	8.7	<0.1	1.2	98	98	6.9	0.5
	March	0.7	98	95	6.0	<0.1	1.8	97	97	10.7	0.7
	April	0.2	97	73	13.1	<0.1	1.8	82	82	9.5	0.3
	May	0.1	97	88	5.3	<0.1	1.8	71	71	6.2	0.4
	June	0.1	98	80	9.8	<0.1	1.8	26	26	5.9	0.2
	July	0.1	97	93	12.3	<0.1	0.9	48	48	11.5	<0.1
	August	0.1	98	72	12.3	<0.1	1.0	79	79	8.3	<0.1
	September	0.2	98	76	55.2	<0.1	0.5	97	90	10.0	<0.1
	October	0.2	98	95	27.1	<0.1	0.7	74	72	8.4	<0.1
	November	0.4	98	96	15.0	<0.1	0.9	67	66	8.4	<0.1
	December	0.6	98	97	37.2	<0.1	1.1	98	94	11.7	<0.1

		Japan									
		Ijira					Banryu				
		CLD/NOx* (hourly)					CLD (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	0.8	99	97	15.5	<0.1	4.0	84	84	42.5	0.7
	February	0.9	99	99	32.1	0.2	3.8	85	85	26.5	0.9
	March	1.0	99	94	37.8	<0.1	4.8	47	47	29.6	1.8
	April	1.4	99	91	21.0	<0.1	4.0	89	89	24.1	1.4
	May	2.5	87	80	26.0	<0.1	3.4	97	97	58.0	0.6
	June	4.3	87	87	30.1	<0.1	3.3	98	98	18.3	0.3
	July	3.0	95	95	23.8	<0.1	2.8	93	93	13.6	0.3
	August	4.2	99	99	24.3	0.3	4.6	6	6	13.5	1.1
	September	3.0	99	99	30.9	0.2	3.3	62	62	15.4	0.6
	October	1.3	99	99	30.6	<0.1	3.8	96	96	18.5	0.9
	November						4.4	73	73	30.1	1.2
	December	1.2	99	98	50.5	<0.1	4.5	98	98	29.1	1.1

Table 4.5 NOx (3)

unit: ppb

		Japan									
		Yusuhara					Hedo				
		CLD/NOx* (hourly)					CLD/NOx* (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
2000	January	2.3	95	95	9.4	0.7	0.8	98	98	3.7	0.1
	February	3.4	98	93	20.6	<0.1	0.8	98	98	5.4	0.3
	March	3.2	98	98	10.6	0.9	1.0	99	99	5.8	0.1
	April	2.4	98	98	7.1	0.6	0.8	99	99	5.2	0.1
	May	1.6	98	98	16.2	0.4	0.7	99	98	6.6	<0.1
	June	1.0	97	96	24.9	<0.1	0.6	99	74	3.9	<0.1
	July	1.2	75	71	20.4	<0.1	0.1	88	19	2.6	<0.1
	August	0.8	65	65	4.1	0.3	0.5	93	49	3.5	<0.1
	September	0.5	98	67	8.6	<0.1	0.4	98	60	2.1	<0.1
	October	1.9	83	83	16.4	0.6	0.7	98	98	3.8	0.2
	November	2.1	96	96	14.2	<0.1	0.7	98	98	3.0	0.1
	December	2.2	98	98	11.2	0.3	0.7	99	99	2.8	<0.1

		Thailand							
		Khao Lam				Samutprakarn			
		CLD (hourly)				CLD (hourly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January								
	February								
	March	4.0	32	9.0	1.0				
	April								
	May					25.6	87	116.0	<0.1
	June					30.3	81	152.0	<0.1
	July	1.1	41	4.0	<0.1	37.5	93	158.0	3.0
	August					34.3	92	153.0	3.0
	September					34.8	95	196.0	<0.1
	October					48.0	95	310.0	8.0
	November	2.3	39	9.0	<0.1	59.2	87	365.0	3.0
	December					53.2	92	299.0	<0.1

Table 4.6 O_3 (1)

unit: ppb

		Japan									
		Rishiri					Tappi				
		UV photometric (hourly)					UV photometric (hourly)				
		median	%	S.D.	Max	Min	median	%	S.D.	Max	Min
2000	January						45	99	3	57	36
	February	47	98	3	92	40	49	100	3	56	42
	March	52	94	6	80	42	56	99	6	79	46
	April	53	98	6	73	34	58	98	7	83	38
	May	51	96	9	73	18	56	99	12	90	25
	June	38	96	8	53	14	47	96	12	90	20
	July	33	98	11	62	7	44	99	12	73	18
	August	20	97	8	55	3	37	99	10	61	12
	September	29	62	9	56	8	41	99	9	61	3
	October	35	100	6	51	14	45	99	5	65	27
	November	37	100	4	51	23	43	99	5	64	29
	December	34	83	6	48	15	42	99	3	59	31

		Japan									
		Sado-seki					Happo				
		UV photometric (hourly)					UV photometric (hourly)				
		median	%	S.D.	Max	Min	median	%	S.D.	Max	Min
2000	January	43	98	3	55	33	48	99	5	59	15
	February	46	95	2	57	40	51	97	4	65	38
	March	53	98	6	72	43	59	97	6	76	44
	April	60	98	9	90	43	66	97	8	92	12
	May	64	98	11	107	39	75	97	14	191	42
	June	49	97	17	93	6	65	97	19	117	19
	July	35	98	10	66	12	49	97	17	96	2
	August	33	98	10	64	13	50	96	17	112	14
	September	36	98	9	62	10	41	97	14	74	11
	October	38	98	5	57	29	47	94	7	66	15
	November	35	98	5	57	26	42	75	10	60	4
	December	33	98	3	42	24	48	97	6	68	8

Table 4.6 O_3 (2)

unit: ppb

		Japan									
		Ogasawara					Oki				
		UV photometric (hourly)					UV photometric (hourly)				
		median	%	S.D.	Max	Min	median	%	S.D.	Max	Min
2000	January	40	98	6	51	18	39	99	4	56	20
	February	43	97	7	54	9	45	99	5	69	28
	March	48	98	7	63	18	53	98	8	89	34
	April	33	97	19	70	<1	59	90	10	93	37
	May	32	97	20	82	<1	61	71	8	88	34
	June	4	98	4	22	<1	54	72	16	100	23
	July	4	97	5	23	<1	33	92	13	94	9
	August	10	98	6	108	<1	35	97	11	69	8
	September	12	98	11	52	<1	40	97	12	80	9
	October	15	98	10	76	<1	41	98	7	66	22
	November	11	98	8	98	<1	41	95	7	73	23
	December	18	98	6	97	<1	38	98	5	56	22

		Japan									
		Ijira					Banryu				
		UV photometric (hourly)					UV photometric (hourly)				
		median	%	S.D.	Max	Min	median	%	S.D.	Max	Min
2000	January	28	99	12	53	2	31	98	10	56	8
	February	36	99	10	52	11	40	98	9	66	18
	March	40	99	11	66	6	47	97	12	90	19
	April	44	99	15	87	4	52	97	15	93	16
	May	24	99	21	102	1	50	97	17	86	9
	June	29	98	26	133	<1	42	98	19	97	4
	July	32	51	22	126	2	27	93	15	76	2
	August						27	98	17	74	1
	September	27	99	22	113	<1	30	98	18	82	1
	October	27	99	13	103	4	27	97	15	64	2
	November	22	99	13	56	<1	26	98	13	67	4
	December	22	99	10	45	3	29	98	11	55	8

Table 4.6 O_3 (3)

unit: ppb

		Japan									
		Yusuhara					Hedo				
		UV photometric (hourly)					UV photometric (hourly)				
		median	%	S.D.	Max	Min	median	%	S.D.	Max	Min
2000	January	40	99	6	60	19	48	98	4	64	34
	February	49	56	6	81	33	52	98	4	65	40
	March	56	99	8	84	3	57	99	9	83	20
	April	59	97	8	88	34	57	99	14	90	11
	May	46	99	11	79	5	53	98	21	86	5
	June	41	99	15	123	9	25	99	21	85	1
	July	29	96	13	75	5	20	97	10	61	5
	August	18	96	9	60	4	16	95	10	63	2
	September						41	97	19	88	9
	October	40	99	10	65	13	37	99	17	70	8
	November	28	96	10	56	7	43	98	9	62	16
	December	29	99	13	236	<1	47	96	5	59	25

		Thailand			
		Khao Lam			
		Automatic (hourly)			
		mean	%	Max	Min
2000	January				
	February				
	March	39	32	102	4
	April				
	May				
	June				
	July	8	41	24	<1
	August				
	September				
	October				
	November	13	44	35	<1
	December				

Table 4.7 HNO_3 (1)

unit: ppb

		Malaysia				**Mongolia**			
		Tanah Rata				Terelj			
		Filter Packs (weekly)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	0.1	100	0.1	N.D.	N.D.	100	N.D.	N.D.
	February	0.1	100	0.1	0.1	0.1	100	0.1	0.1
	March	0.1	100	0.2	0.1	0.1	100	0.1	0.1
	April	N.D.	100	0.1	N.D.	0.1	100	0.1	0.1
	May	0.1	100	0.2	N.D.	0.1	100	0.1	0.1
	June	N.D.	100	N.D.	N.D.	0.2	100	0.2	0.2
	July	0.1	100	0.2	N.D.	0.1	100	0.1	0.1
	August	N.D.	100	0.1	N.D.	0.1	100	0.1	0.1
	September	0.1	100	0.2	N.D.	N.D.	100	N.D.	N.D.
	October	N.D.	100	0.1	N.D.	N.D.	100	0.1	N.D.
	November	N.D.	100	0.1	N.D.	N.D.	100	0.1	N.D.
	December	N.D.	100	0.1	N.D.	0.1	100	0.1	N.D.

		Mongolia				**Philippines**			
		Ulaanbaatar				Metro Manila			
		Filter Packs (weekly)				Filter Packs (Flexible)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January								
	February								
	March								
	April	0.2	47	0.2	0.2				
	May	0.2	68	0.2	0.2				
	June	0.2	100	0.2	0.2	0.4	68	0.7	N.D.
	July	0.2	100	0.3	0.1	0.3	34	0.3	0.3
	August	0.5	75	1.1	N.D.	1.0	43	1.0	0.7
	September	N.D.	100	0.1	N.D.	0.8	46	0.9	0.7
	October	0.2	100	0.5	0.1		0		
	November					0.6	57	0.7	0.5
	December					0.9	57	1.2	0.6

Table 4.7 HNO_3 (2)

unit: ppb

		Philippines				**Russia**			
		Los Banos				Mondy			
		Filter Packs (Flexible)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January					N.D.	100	N.D.	N.D.
	February					0.4	52	0.4	0.4
	March					N.D.	100	N.D.	N.D.
	April					N.D.	100	0.1	N.D.
	May					N.D.	100	N.D.	N.D.
	June					N.D.	100	N.D.	N.D.
	July					N.D.	87	N.D.	N.D.
	August					N.D.	93	N.D.	N.D.
	September	0.5	29	0.5	0.5	N.D.	93	N.D.	N.D.
	October								
	November	0.3	32	0.4	0.2	N.D.	100	N.D.	N.D.
	December	0.2	50	0.2	0.2	N.D.	100	N.D.	N.D.

		Russia							
		Listvjanka				Irkutsk			
		Filter Packs (10days)				Filter Packs (Flexible)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	N.D.	100	0.1	N.D.	0.1	84	0.2	N.D.
	February	1.2	100	3.4	N.D.	N.D.	96	N.D.	N.D.
	March	0.3	87	0.4	0.2	0.1	94	0.2	N.D.
	April	N.D.	93	N.D.	N.D.	N.D.	79	0.1	N.D.
	May	N.D.	94	0.1	N.D.	0.1	93	0.2	0.1
	June	N.D.	97	N.D.	N.D.	N.D.	89	N.D.	N.D.
	July	N.D.	94	N.D.	N.D.	N.D.	93	N.D.	N.D.
	August	N.D.	94	N.D.	N.D.	N.D.	97	N.D.	N.D.
	September	N.D.	93	N.D.	N.D.	N.D.	97	N.D.	N.D.
	October	1.1	97	3.3	N.D.	N.D.	97	N.D.	N.D.
	November	N.D.	90	N.D.	N.D.	N.D.	97	N.D.	N.D.
	December	0.1	97	0.1	N.D.	0.1	97	0.1	0.1

Table 4.7 HNO_3 (3)

unit: ppb

		Vietnam							
		Hanoi				Hoa Binh			
		Filter Packs (weekly)				Filter Packs (weekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	0.2	100	0.3	0.1	0.3	100	0.4	0.2
	February	0.3	100	0.4	0.2	0.4	100	0.5	0.4
	March	0.4	100	0.5	0.4	0.7	100	0.8	0.5
	April	0.5	100	0.6	0.4	0.7	100	0.8	0.6
	May	1.2	60	1.4	0.9	0.6	100	0.6	0.5
	June	1.0	50	1.0	1.0	0.5	100	0.6	0.4
	July					0.5	100	0.6	0.3
	August					0.4	25	0.4	0.4
	September								
	October								
	November								
	December	0.6	100	1.1	N.D.	N.D.	80	0.1	N.D.

Table 4.8 HCl (1)

unit: ppb

		Malaysia				**Mongolia**			
		Tanah Rata				Terelj			
		Filter Packs (weekly)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	0.3	100	0.7	0.1	N.D.	100	N.D.	N.D.
	February	0.1	100	0.2	0.1	0.2	100	0.2	0.2
	March	0.1	100	0.2	0.1	0.2	100	0.2	0.2
	April	N.D.	100	0.1	N.D.	0.2	100	0.2	0.2
	May	0.1	100	0.2	N.D.	0.2	100	0.2	0.2
	June	0.1	100	0.1	N.D.	0.3	100	0.3	0.2
	July	0.2	100	0.3	N.D.	0.3	100	0.3	0.3
	August	0.1	100	0.1	0.1	0.1	100	0.1	N.D.
	September	0.1	100	0.2	N.D.	0.1	100	0.1	0.1
	October	0.1	100	0.2	0.1	0.1	100	0.2	N.D.
	November	0.1	100	0.2	N.D.	0.1	100	0.1	0.1
	December	0.1	100	0.1	N.D.	0.1	100	0.1	N.D.

		Mongolia				**Philippines**			
		Ulaanbaatar				Metro Manila			
		Filter Packs (weekly)				Filter Packs (Flexible)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January								
	February								
	March								
	April	0.4	47	0.5	0.3				
	May	0.3	68	0.3	0.3				
	June	0.4	100	0.4	0.3	9.8	68	13.8	3.3
	July	0.3	100	0.6	0.1	6.3	34	6.3	6.3
	August	0.4	75	0.9	0.2	4.2	43	4.2	1.4
	September	0.3	100	0.3	0.2	3.0	46	4.6	1.4
	October	0.2	100	0.3	0.1		0		
	November					4.1	57	4.7	3.5
	December					4.8	57	5.3	4.4

Table 4.8 HCl (2)

unit: ppb

		Philippines				**Russia**			
		Los Banos				Mondy			
		Filter Packs (Flexible)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January					0.2	100	0.3	0.1
	February					0.1	52	0.1	0.1
	March					N.D.	100	N.D.	N.D.
	April					N.D.	100	N.D.	N.D.
	May					N.D.	100	N.D.	N.D.
	June					N.D.	100	N.D.	N.D.
	July					N.D.	87	N.D.	N.D.
	August					N.D.	93	N.D.	N.D.
	September	1.2	29	1.2	1.2	N.D.	93	N.D.	N.D.
	October								
	November	2.4	32	2.8	2.0	0.1	100	0.1	0.1
	December	0.8	50	0.9	0.7	N.D.	100	N.D.	N.D.

		Russia							
		Listvjanka				Irkutsk			
		Filter Packs (10days)				Filter Packs (Flexible)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	0.1	100	0.2	N.D.	N.D.	84	N.D.	N.D.
	February	0.2	100	0.4	N.D.	N.D.	96	0.1	N.D.
	March	0.6	87	1.1	0.2	0.2	94	0.4	N.D.
	April	0.1	93	0.4	N.D.	0.1	79	0.2	N.D.
	May	N.D.	94	N.D.	N.D.	0.8	93	1.1	0.5
	June	N.D.	97	N.D.	N.D.	0.2	89	0.3	N.D.
	July	0.5	94	0.9	0.2	N.D.	93	N.D.	N.D.
	August	0.6	94	1.1	0.3	N.D.	97	N.D.	N.D.
	September	0.3	93	0.3	0.3	0.1	97	0.3	N.D.
	October	0.5	97	0.5	0.4	0.7	97	0.7	0.6
	November	0.7	90	1.2	0.2	1.1	97	1.7	0.6
	December	0.1	97	0.1	0.1	0.7	97	0.9	0.5

Table 4.8 HCl (3)

		Vietnam							
		Hanoi				Hoa Binh			
		Filter Packs (weekly)				Filter Packs (weekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	0.3	100	0.3	0.2	0.1	100	0.4	N.D.
	February	0.3	100	0.4	0.2	0.1	100	0.1	N.D.
	March	0.5	100	0.7	0.3	0.1	100	0.2	0.1
	April	0.7	100	0.9	0.6	0.1	100	0.1	0.1
	May	1.4	60	1.8	0.8	0.1	100	0.1	0.1
	June	2.1	50	2.3	1.8	0.1	100	0.1	0.1
	July					0.1	100	0.1	N.D.
	August					0.1	25	0.1	0.1
	September								
	October								
	November								
	December	0.5	100	1.1	N.D.				

Table 4.9 NH_3 (1)

unit: ppb

		Malaysia				**Mongolia**			
		Tanah Rata				Terelj			
		Filter Packs (weekly)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	0.3	100	0.4	0.2	N.D.	100	N.D.	N.D.
	February	0.4	100	0.6	0.3	0.1	100	0.2	0.1
	March	0.4	100	0.5	0.2	0.4	100	0.6	0.1
	April	0.3	100	0.5	0.1	0.9	100	1.3	0.6
	May	0.5	100	0.9	0.3	1.5	100	1.8	1.1
	June	0.3	100	0.5	0.2	2.6	100	2.8	2.3
	July	1.7	100	3.6	0.2	0.8	100	1.1	0.5
	August	0.4	100	0.5	0.3	2.6	100	2.9	2.2
	September	0.4	100	0.9	0.1	1.5	100	2.0	1.0
	October	0.4	100	0.4	0.3	0.7	100	0.8	0.6
	November	0.4	100	0.5	0.3	0.3	100	0.7	N.D.
	December	0.4	100	0.5	0.3	0.5	100	0.5	0.5

		Mongolia				**Philippines**			
		Ulaanbaatar				Metro Manila			
		Filter Packs (weekly)				Filter Packs (Flexible)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January								
	February								
	March								
	April	6.3	23	6.3	6.3				
	May	8.4	68	10.3	6.0				
	June	10.0	100	12.2	8.1	N.D.	68	N.D.	N.D.
	July	11.2	100	12.1	10.3	N.D.	34	N.D.	N.D.
	August	11.4	75	15.8	7.5	N.D.	43	N.D.	N.D.
	September	7.7	100	10.3	6.3	N.D.	46	N.D.	N.D.
	October	3.9	100	4.2	3.3		0		
	November					N.D.	57	N.D.	N.D.
	December					N.D.	57	N.D.	N.D.

Table 4.9 NH_3 (2)

unit: ppb

		Philippines				**Russia**			
		Los Banos				Mondy			
		Filter Packs (Flexible)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January					0.1	100	0.1	0.1
	February					0.1	52	0.1	0.1
	March					0.3	100	0.4	0.3
	April					1.3	100	2.5	N.D.
	May					0.8	100	0.8	0.8
	June					0.7	100	1.3	0.1
	July					1.0	87	1.2	0.9
	August					1.7	93	2.3	1.1
	September	N.D.	29	N.D.	N.D.	0.1	93	0.1	0.1
	October								
	November	N.D.	32	N.D.	N.D.	0.3	100	0.4	0.2
	December	N.D.	50	N.D.	N.D.	N.D.	100	0.1	N.D.

		Russia							
		Listvjanka				Irkutsk			
		Filter Packs (10days)				Filter Packs (Flexible)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	0.4	100	0.9	N.D.	1.2	84	2.0	0.1
	February	0.9	100	1.8	0.3	0.2	96	0.5	N.D.
	March	0.9	87	1.1	0.6	0.1	94	0.3	N.D.
	April	0.9	93	1.1	0.6	0.1	79	0.1	N.D.
	May	1.2	94	1.5	1.0	1.7	93	2.5	1.2
	June	1.1	97	1.8	N.D.	7.0	89	9.8	4.9
	July	2.0	94	2.1	1.8	4.8	93	5.5	3.2
	August	2.5	94	3.5	1.9	2.7	97	2.9	1.8
	September	1.6	93	2.5	0.7	2.1	97	2.5	1.5
	October	0.6	97	1.0	0.3	0.6	97	0.6	0.5
	November	1.1	90	1.5	0.3	0.6	97	1.0	0.3
	December	0.2	97	0.2	0.2	0.4	97	0.4	0.4

Table 4.9 NH_3 (3)

		Vietnam							
		Hanoi				Hoa Binh			
		Filter Packs (weekly)				Filter Packs (weekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	3.7	100	5.7	1.6	4.8	100	8.8	0.9
	February	3.4	100	4.0	2.4	5.0	100	5.8	4.3
	March	6.7	100	8.6	3.6	6.6	100	8.7	4.6
	April	6.3	100	6.7	5.6	7.4	100	9.6	6.3
	May	16.8	60	21.0	12.6	7.7	100	10.6	4.9
	June	20.7	50	25.8	15.5	7.2	100	8.3	6.3
	July					9.0	100	12.8	6.0
	August					13.0	25	13.0	13.0
	September								
	October								
	November								
	December	9.8	100	15.4	7.0	0.7	80	2.0	N.D.

Table 4.10 Particulate mass concentration (1)

unit: mg/m^3

		China							
		Guanyinqiao				Xiangzhou			
		TSP				**TSP**			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	194	90	359	104	177	42	264	45
	February	333	72	497	114	132	43	190	62
	March	326	81	628	109	190	42	340	63
	April	237	87	427	97	98	47	176	43
	May	296	42	491	107	76	45	128	43
	June	246	100	415	102	61	40	97	38
	July	185	81	277	81	78	45	123	40
	August	211	19	367	108	67	42	125	26
	September					105	43	201	49
	October					95	42	154	41
	November					164	43	265	74
	December					166	39	284	30

		Indonesia				**Japan**				
		Serpong				Rishiri				
		SPM ß-ray absorption (hourly)				**PM10** ß-ray absorption (hourly)				
		mean	%	Max	Min	mean	%	S.D.	Max	Min
2000	January									
	February									
	March									
	April									
	May									
	June									
	July	71	90	209	14	15	44	11	51	<1
	August	93	100	211	14	13	94	11	59	<1
	September	14	47	95	1	13	95	19	224	<1
	October	46	90	213	1	18	96	11	55	<1
	November	22	60	117	1	23	95	23	258	<1
	December	17	45	95	1	13	81	11	129	<1

Table 4.10 Particulate mass concentration (2)

unit: μg/m^3

		Japan									
		Tappi					Sado-seki				
		PM10 Teom (hourly)					**PM10** Teom (hourly)				
		mean	%	S.D.	Max	Min	mean	%	S.D.	Max	Min
2000	January						20	100	9	62	<1
	February						19	100	7	45	<1
	March						36	100	45	680	<1
	April	111	45	109	844	<1	44	100	40	210	<1
	May	94	100	81	746	<1	28	100	18	176	<1
	June	98	100	87	382	<1	22	100	18	90	<1
	July	102	99	86	586	<1	20	100	15	170	<1
	August	72	100	48	321	<1	17	100	12	78	<1
	September	42	73	49	314	<1	20	100	15	101	<1
	October	17	99	8	60	<1	21	100	10	70	<1
	November	22	99	20	134	<1	25	100	15	89	<1
	December	15	100	9	71	<1	20	100	11	70	<1

		Japan									
		Happo					Ogasawara				
		PM10 ß-ray absorption (hourly)					**PM10** ß-ray absorption (hourly)				
		mean	%	S.D.	Max	Min	mean	%	S.D.	Max	Min
2000	January										
	February										
	March										
	April										
	May										
	June										
	July	16	81	12	78	<1	8	96	5	29	<1
	August	22	93	20	130	<1	11	96	7	40	<1
	September	13	96	18	130	<1	13	94	8	60	<1
	October	10	95	10	47	<1	10	96	6	42	<1
	November	8	92	11	173	<1	13	96	9	46	<1
	December	6	90	9	100	<1	12	96	7	41	<1

Table 4.10 Particulate mass concentration (3)

unit: ㎎**/m^3**

		Japan									
		Oki					Ijira				
		PM10 Teom (hourly)					**PM10** Teom (hourly)				
		mean	%	S.D.	Max	Min	mean	%	S.D.	Max	Min
2000	January	22	100	11	60	<1					
	February	25	100	12	88	3					
	March	45	100	46	517	<1					
	April	45	100	33	209	<1	36	100	57	464	<1
	May	31	100	18	162	<1	29	99	16	101	<1
	June	22	97	12	60	<1	26	99	18	289	<1
	July	18	21	11	56	3	27	100	21	173	<1
	August	15	99	7	46	<1	25	100	15	105	<1
	September	16	100	8	44	<1	23	100	18	114	<1
	October	19	100	9	71	<1	19	100	11	73	<1
	November	24	99	12	68	<1	19	100	14	155	<1
	December	29	99	17	100	<1	15	99	11	92	<1

		Japan									
		Banryu					Yusuhara				
		PM10 Teom (hourly)					**PM10** ß-ray absorption (hourly)				
		mean	%	S.D.	Max	Min	mean	%	S.D.	Max	Min
2000	January	20	100	13	102	<1					
	February	26	100	16	99	<1					
	March	48	100	89	1641	<1					
	April	55	99	50	362	<1					
	May	36	99	24	230	2					
	June	26	100	13	93	<1					
	July	21	97	13	92	<1					
	August	21	95	9	51	<1					
	September	21	100	10	68	<1					
	October	22	99	10	61	<1					
	November	23	100	12	78	1	16	96	13	91	<1
	December	25	100	13	77	5	15	96	10	60	<1

Table 4.10 Particulate mass concentration (4)

unit: μg/m^3

		Malaysia							
		Petaling Jaya							
		PM10				**TSP**			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	34	100	58	16	52	100	80	25
	February	38	79	76	24	50	100	73	21
	March	37	100	86	8	59	100	100	33
	April	36	100	58	15	69	100	120	37
	May	45	100	97	13	76	100	130	39
	June	34	100	74	23	63	100	92	33
	July	48	74	75	15	89	100	198	46
	August	39	100	69	21	83	100	292	44
	September	43	100	67	24	76	100	124	43
	October	27	97	42	17	50	97	79	25
	November	35	100	55	19	59	100	104	22
	December	28	100	42	12	53	100	72	34

		Thailand				**Thailand**			
		Khao Lam				Bangkok			
		PM10				**PM10**			
		mean	%	Max	Min	mean	%	Max	Min
2000	January					83	100	133	47
	February					86	100	129	51
	March	73	32	158	5	62	100	111	40
	April					38	100	52	22
	May					54	60	57	51
	June					38	83	43	30
	July	16	43	41	5	49	40	60	37
	August					39	50	48	24
	September					32	80	47	25
	October					42	100	49	27
	November	25	41	79	5	70	100	102	40
	December					82	40	89	75

Table 4.10 Particulate mass concentration (5)

unit: μg/m^3

		Thailand							
		Bangkok				Samutprakarm			
		TSP (weekly)				**TSP** (weekly)			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	110	80	138	86	110	100	150	71
	February	124	80	171	75	133	60	178	64
	March	86	100	142	63	77	80	119	50
	April	48	80	66	26	56	80	67	48
	May	61	80	76	50	66	100	85	42
	June	57	60	61	53	59	40	64	53
	July	70	80	89	53	90	40	103	77
	August	54	64	73	39	69	57	85	54
	September	53	60	74	35	68	100	131	42
	October	59	100	74	37	90	80	107	79
	November	93	100	118	61	110	77	152	79
	December	102	60	104	100	104	100	113	97

Table 4.11 Particulate component (1)

unit: mg/m^3

		Malaysia								
		Tanah Rata (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January	0.7	0.2	0.4	0.2	0.3	0.1	N.D.	N.D.	100
	February	1.2	0.2	0.1	0.3	0.2	0.1	N.D.	N.D.	100
	March	1.3	0.1	N.D.	0.4	0.1	0.1	0.1	N.D.	100
	April	0.8	0.1	N.D.	0.2	N.D.	0.1	N.D.	N.D.	100
	May	2.0	0.1	N.D.	0.5	0.1	0.1	0.1	N.D.	100
	June	0.7	0.1	N.D.	0.2	N.D.	0.1	0.1	N.D.	100
	July	2.0	0.8	0.1	0.7	0.2	0.2	0.2	N.D.	100
	August	0.7	0.2	N.D.	0.2	0.1	0.1	0.1	N.D.	100
	September	2.3	0.2	N.D.	0.6	0.1	0.2	N.D.	N.D.	100
	October	1.1	0.2	0.1	0.3	0.2	0.1	0.1	N.D.	100
	November	1.2	N.D.	N.D.	0.3	0.1	0.1	0.1	N.D.	100
	December	0.7	0.1	N.D.	0.2	0.1	0.1	0.1	N.D.	100

		Mongolia								
		Terelj (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January	1.3	0.3	N.D.	0.1	0.2	0.3	0.4	N.D.	100
	February	1.7	0.1	0.1	0.2	N.D.	N.D.	0.1	N.D.	100
	March	1.5	0.1	0.1	0.3	N.D.	N.D.	0.4	N.D.	100
	April	1.3	0.4	0.1	0.2	0.1	0.1	0.2	N.D.	100
	May	0.9	0.2	0.1	0.3	N.D.	0.1	0.5	N.D.	100
	June	1.2	0.2	N.D.	0.3	N.D.	0.1	0.4	N.D.	100
	July	1.0	0.6	0.1	0.4	0.2	0.1	0.3	N.D.	100
	August	1.2	0.3	0.2	0.3	0.1	0.1	0.4	0.1	100
	September	0.4	0.1	0.1	0.1	0.1	0.1	0.1	N.D.	100
	October	0.8	0.2	0.1	0.3	0.1	0.1	0.4	N.D.	100
	November	0.9	0.2	N.D.	0.3	N.D.	N.D.	0.2	N.D.	100
	December	1.4	0.2	N.D.	0.4	N.D.	N.D.	0.3	N.D.	100

Table 4.11 Particulate component (2)

unit: mg/m^3

		Mongolia								
		Ulaanbaatar (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January									
	February									
	March									
	April	2.7	1.1	1.0	0.6	0.3	0.4	3.4	0.1	47
	May	2.6	0.5	0.3	0.4	0.3	0.2	4.9	0.1	68
	June	1.7	0.5	0.4	0.5	0.3	0.2	4.1	0.1	60
	July	2.2	1.1	0.3	0.3	0.6	0.2	3.5	0.1	100
	August	2.1	1.2	0.5	0.2	0.3	0.2	3.2	0.2	50
	September	1.3	0.5	0.4	0.2	0.2	0.1	3.3	0.2	100
	October	2.4	1.0	0.9	0.6	0.2	0.2	3.0	0.1	100
	November									
	December									

		Philippines								
		Metro Manila (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January									
	February									
	March									
	April									
	May									
	June	3.0	N.D.	6.0	N.D.	2.2	74.1	0.3	2.1	68
	July	1.9	N.D.	5.5	N.D.	3.0	0.5	0.4	1.4	34
	August	1.1	0.6	3.2	N.D.	0.5	0.6	0.7	5.0	43
	September	2.9	0.8	0.6	N.D.	0.6	0.3	0.1	2.4	46
	October	1.8	1.2	0.7	N.D.	0.8	0.5	0.1	2.9	14
	November	1.8	0.9	1.3	N.D.	0.6	23.4	0.7	2.2	57
	December	1.5	1.1	1.0	N.D.	1.3	0.4	0.1	2.8	57

Table 4.11 Particulate component (3)

unit: mg/m^3

		Philippines								
		Los Banos (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January									
	February									
	March									
	April									
	May									
	June									
	July									
	August									
	September					1.2	0.9	1.1	0.3	29
	October									
	November					0.3	0.3	1.5	0.1	32
	December	0.5	0.2	1.1	N.D.	0.2	0.2	0.5	N.D.	50

		Russia								
		Mondy (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January	0.8	N.D.	N.D.	0.3	N.D.	N.D.	0.1	N.D.	100
	February	1.0	N.D.	N.D.	0.2	N.D.	0.1	0.2	N.D.	52
	March	1.1	N.D.	N.D.	0.3	N.D.	0.1	0.2	N.D.	100
	April	0.3	N.D.	N.D.	0.1	N.D.	N.D.	0.1	N.D.	100
	May	0.6	0.1	0.1	0.1	0.1	0.2	0.2	N.D.	100
	June	0.4	0.1	0.2	0.1	0.2	0.7	0.1	N.D.	100
	July	0.3	0.1	0.1	0.1	N.D.	0.1	0.1	N.D.	87
	August	0.4	0.1	N.D.	0.1	N.D.	N.D.	0.1	N.D.	93
	September	0.2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	93
	October									
	November	0.4	N.D.	N.D.	0.1	0.1	N.D.	N.D.	N.D.	100
	December	0.3	N.D.	N.D.	0.1	N.D.	N.D.	N.D.	N.D.	100

Table 4.11 Particulate component (4)

unit: mg/m^3

		Russia								
		Listvjanka (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January	2.3	0.4	0.5	0.1	0.2	0.1	0.7	0.1	100
	February	2.2	0.3	0.1	0.6	0.1	N.D.	0.5	0.1	100
	March	3.6	0.5	N.D.	1.5	N.D.	0.1	0.4	0.1	87
	April	1.4	0.3	0.4	0.5	N.D.	N.D.	0.3	N.D.	93
	May	1.1	1.3	0.3	1.2	N.D.	0.7	0.5	0.1	94
	June	0.8	0.2	0.3	1.3	N.D.	0.8	0.6	0.1	97
	July	0.8	0.1	0.8	1.1	N.D.	0.5	0.3	0.1	94
	August	0.5	N.D.	0.3	0.5	N.D.	0.2	0.3	N.D.	94
	September	0.9	1.5	N.D.	0.7	N.D.	0.3	0.4	0.1	93
	October	0.4	0.9	0.3	0.4	N.D.	0.2	0.5	0.1	97
	November	2.0	1.2	1.2	0.8	N.D.	0.3	0.8	0.1	90
	December	0.9	N.D.	0.2	0.3	N.D.	N.D.	0.1	N.D.	97

		Russia								
		Irkutsk (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January	4.5	1.1	0.1	1.2	0.1	N.D.	0.3	0.1	84
	February	9.3	2.3	0.3	3.0	0.2	0.1	0.9	0.2	96
	March	5.3	2.0	0.4	2.3	0.3	0.3	1.2	0.3	94
	April	0.5	0.3	0.1	0.3	0.1	0.1	0.9	0.1	79
	May	2.5	1.0	0.2	1.2	0.2	0.5	1.6	0.3	93
	June	2.0	1.0	N.D.	0.3	0.2	3.4	0.7	0.2	89
	July	0.4	N.D.	N.D.	0.4	0.4	0.5	0.2	0.1	93
	August	N.D.	0.4	N.D.	0.2	0.1	0.1	0.2	N.D.	97
	September	0.3	0.1	0.3	0.2	0.1	0.1	0.5	N.D.	97
	October	0.4	0.1	N.D.	0.5	N.D.	0.1	0.3	0.1	97
	November	0.7	0.6	N.D.	1.0	N.D.	0.3	0.5	0.1	97
	December	2.4	0.5	N.D.	1.6	0.1	0.1	0.4	0.1	97

Table 4.11 Particulate component (5)

unit: mg/m^3

		Vietnam								
		Hanoi (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January	0.3	0.1	N.D.	0.2	N.D.	N.D.	0.7	N.D.	100
	February	0.8	0.2	0.1	0.3	0.1	N.D.	0.7	N.D.	100
	March	0.7	0.2	0.4	0.1	0.1	N.D.	0.2	N.D.	100
	April	0.4	0.2	0.2	0.1	0.2	0.1	0.4	N.D.	100
	May	1.2	0.4	0.5	0.9	0.4	N.D.	1.9	0.2	60
	June	2.8	0.7	1.0	0.9	0.6	0.8	2.8	0.2	50
	July									
	August									
	September									
	October									
	November									
	December	1.2	0.2	0.4	4.8	2.9	0.1	7.3	0.5	80

		Vietnam								
		Hoa Binh (Filter pack)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
2000	January	4.8	0.8	0.1	0.9	0.1	0.3	1.6	N.D.	100
	February	4.6	1.6	0.5	1.2	0.1	0.6	1.9	N.D.	100
	March	1.4	0.7	0.5	0.3	0.3	0.5	1.1	N.D.	100
	April	3.5	0.7	0.3	0.4	0.3	0.7	1.4	0.1	100
	May	1.7	0.3	0.6	0.9	0.6	0.3	1.6	0.3	100
	June	2.1	0.2	0.3	1.0	0.3	0.2	0.8	0.2	100
	July	1.1	0.2	0.3	0.5	0.2	0.2	0.8	0.1	100
	August	0.6	0.2	0.3	0.5	0.3	0.3	0.9	0.3	25
	September									
	October									
	November									
	December	0.4	N.D.	N.D.	1.3	N.D.	N.D.	1.1	0.1	80

Supplement (1)

unit: ppb

		Malaysia							
		Tanah Rata							
		Passive Sampler							
		SO_2				**HNO_3**			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	1.1	100	1.4	0.8	0.2	100	0.3	0.1
	February	1.1	100	1.4	0.8	0.3	100	0.4	0.2
	March	3.6	100	4.2	3.1	1.8	100	2.3	1.4
	April	1.1	20	1.1	1.1	0.3	20	0.3	0.3
	May	1.2	100	1.6	1.0	0.6	100	1.0	0.3
	June	2.0	100	2.3	1.7	0.6	100	1.0	0.5
	July	2.0	100	2.5	1.4	0.5	100	0.8	0.3
	August	2.1	100	2.3	1.9	0.4	100	0.6	0.3
	September	1.2	100	1.8	0.9	0.6	100	1.5	0.2
	October	0.9	100	1.6	0.4	0.3	100	0.4	0.2
	November	1.0	100	1.3	0.8	0.4	100	0.6	0.3
	December	1.0	100	1.5	0.6	0.4	100	0.5	0.3

		Malaysia							
		Tanah Rata							
		Passive Sampler							
		NO_2				**NH_3**			
		mean	%	Max	Min	mean	%	Max	Min
2000	January	0.8	100	1.2	0.5	4.1	100	5.0	2.8
	February	0.8	100	0.9	0.6	4.0	100	5.7	2.6
	March	0.9	100	1.1	0.8	5.1	100	7.6	2.4
	April	0.8	20	1.1	0.6	3.6	20	5.1	2.2
	May	1.0	100	1.2	0.6	5.9	100	7.1	4.0
	June	1.2	100	1.4	0.8	7.4	100	9.4	5.5
	July	1.1	100	1.4	0.8	7.2	100	10.5	6.1
	August	1.3	100	1.8	1.0	4.2	100	5.6	3.5
	September	1.2	100	1.6	0.7	6.3	100	9.1	4.6
	October	0.7	100	0.9	0.6	4.4	100	6.2	2.6
	November	1.0	100	1.1	0.9	8.2	100	13.0	6.1
	December	1.0	100	1.3	0.5	6.3	100	9.6	4.5

Supplement (2)

unit: mg/m^3

		Malaysia								
		Tanah Rata								
		Low Volume Sampler (weekly)								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	
		mean	mean	mean	mean	mean	mean	mean	mean	%
2000	January	0.7	0.1	0.2	0.2	0.3	0.1	N.D.	N.D.	100
	February	1.2	0.1	N.D.	0.3	0.1	0.1	N.D.	N.D.	100
	March	1.8	N.D.	N.D.	0.4	0.1	0.1	N.D.	N.D.	100
	April	1.2	N.D.	N.D.	0.3	N.D.	0.1	N.D.	N.D.	100
	May	2.1	0.1	N.D.	0.6	0.1	0.1	N.D.	N.D.	100
	June	1.3	0.1	N.D.	0.4	0.1	0.1	0.1	N.D.	100
	July	2.2	0.4	0.1	0.8	0.2	0.3	0.1	N.D.	100
	August	0.9	0.1	N.D.	0.2	0.1	0.1	0.1	N.D.	100
	September	3.5	0.1	N.D.	1.0	0.1	0.3	N.D.	N.D.	100
	October	1.2	0.1	N.D.	0.3	0.1	0.1	N.D.	N.D.	100
	November	1.6	0.1	N.D.	0.4	0.1	0.1	N.D.	N.D.	100
	December	0.9	0.1	N.D.	0.2	0.1	0.1	N.D.	N.D.	100

5. Soil and Vegetation Monitoring

5.1 Method

In the Technical Manual for Monitoring Soil and Vegetation (2nd ISAG, 2000), objectives of the monitoring have been clarified, and the basic survey was proposed for the initial objectives (establishment of baseline data and early detection of possible impact). According to the Technical Manual, the basic survey, whose items are described in the Table 5.1, was basically carried out in the participating countries in 2000. Actual items in respective site depend on site.

Table 5.1. Basic survey for soil and forest

Item	Parameters
Soil	- pH(H_2O), pH(KCl), Exchangeable base cations (Na, K, Ca, and Mg), Exchangeable acidity, Effective cation exchangeable capacity (ECEC) - 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)

1) Monitoring Sites

Since the interval of soil and vegetation monitoring was decided as 3 – 5 years in the Technical Manual, most sites, which were reported in 1999, were not surveyed in 2000. Monitoring site and items in 2000 were shown in Table 5.2.

Table 5.2. Outline of the Monitoring Site in 2000

Country	Site	Nearest deposition monitoring site	Soil type	Items*
China	Chongqing	Chongqing	Not reported	S
	Xiamen -xiaping	Xiamen	Not reported	S, F
	Zhuhai -Zhuxiandong	Zhuhai	Not reported	S, F
Japan	Lake Ijira	Ijira	Dystric Cambisol	S, F
	Lake Banryu	Banryu	Ferralic Cambisol/ Arenosols	F
Malaysia	Pasoh	-	Dystric Nitosols/ Rhodic Ferralsol	S

Philippines	Mt. Makilling	Los Banos	Eutric Cambisol	F
	UP Quezon, Land Grant		Dystric Nitosol	S
Russia	Bolshie Koty	Listvyanka	Mollic Leptosol/ Umbric Leptosol	S
Thailand	Kao Laem Dam	Kao Laem Dam	Ferric Acrisol	S, F

*S, Soil monitoring; F, Forest monitoring

2) Field Operation

Basically, two forests, whose soils have different sensitivities to acid deposition, are recommended to be selected in an area. Several plots, at least two plots, occupying areas from 5m x 5m to 10m x 10m, should be selected randomly at each forest (each soil type). Five subplots for soil sampling, each occupying 1m x 1m, are selected at the center and on the diagonal lines of the plot (Fig.5.1). For General description of trees, three coaxial plots were established (Fig. 5.2). Observation of tree decline was carried out basically for selected twenty trees.

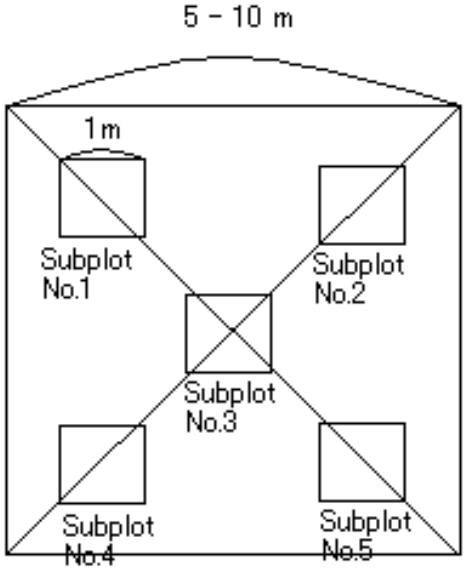


Figure 5.1 Plot for soil sampling

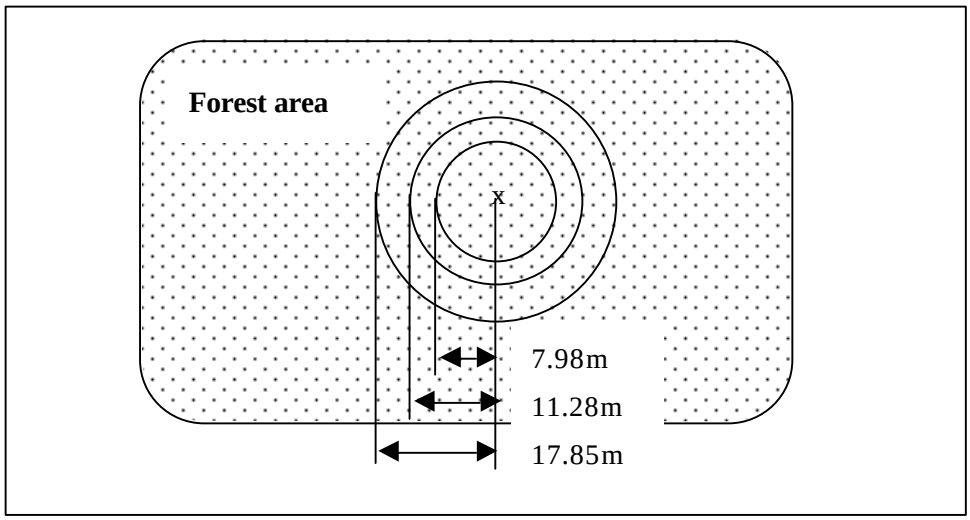


Figure 5.2. Plots for description of trees

For description of trees, a measuring plot should be subdivided to three coaxial circles of 1000, 400 and 200 square meters for the detailed survey when average tree height is around 20m.

3) Laboratory Operation

Analytical method, which was recommended in the manual, is shown in Table 5.3.

Table 5.3. Analytical equipment and methods for soil monitoring

Parameters	Equipment/methods
Chemical Properties of Soil	
a) Moisture Content	Drying oven, Balance
b) pH (H_2O) and pH (KCl)	Glass electrode
c) Exchangeable Base Cations (Ca, Mg, K and Na)	AAS, ICP-AES or ICP-MS
d) Exchangeable Acidity	(CH_3COONH_4-Extraction)
e) Exchangeable Al , H	Titration (KCl-Extraction)
f) Effective Cation Exchangeable Capacity (ECEC)	ibid.
g) Carbonate Content (for calcareous soil)	Calculation (as sum of exchangeable cations)
h) Total Carbon Content	Volumetric calcimeter
i) Total Nitrogen Content	Titration (Walkley-Black method) or CN-analyzer
j) Available Phosphate	Titration (Kjeldahl method) or CN-analyzer Spectrophotometry (Bray-1 test)
k) Sulfate	Turbidimetry, IC, ICP-AES or ICP-MS
Physical Properties of Soil	
a) Fine Earth Bulk Density	Metal sampling cylinder, Drying oven, Balance
b) Penetration Resistance (in the fieldwork)	Pocket penetrometer

5.2 Results of Monitoring

Results of basic survey for soil and forest were shown in the following tables.

Table 5.4 to 5.9: Results of soil chemical analysis

Table 5.10: Results of description of trees

Table 5.11: Results of understory vegetation

Table 5.12: Results of observation of tree decline

Figure 5.3: Photographic record of tree decline

Table 5.4 a) Results of soil chemical analysis: China-1 (Chongqing)

Sample No.	Location	Soil type*	Plot No.	Sub-plot No	Layer analyzed	Repeat** analysis	Moisture content (wt%)	pH		Exchangeable base cations				Ex-acidity	Ex-acid cation		ECEC	Base Saturation	T-C	T-N
										Ca	Mg	K	Na		Al	H				
								H_2O	KCl	(cmol(+) kg^{-1})								(%)	(g kg^{-1})	
	Jin Yun Shan		1	1	A			3.73	3.24	0.457	0.13	0.096	0.061		8.75		11	6.8	27.5	0.211
				2	A			3.64	3.17	0.423	0.185	0.109	0.047		8.54		10.9	7.0	23.9	0.179
				3	A	-		3.8	3.27	0.374	0.129	0.089	0.052		9.55		11.6	5.6	26	0.201
				4	A			3.68	3.09	0.721	0.167	0.123	0.064		7.98		11.9	9.0	26.2	0.184
				5	A			3.7	3.13	0.498	0.082	0.131	0.069		7.33		11.7	6.7	17.7	0.138
			2	1	A			3.94	3.51	0.762	0.167	0.122	0.028		7.07		11.2	9.6	39.6	0.298
				2	A			3.89	3.4	0.555	0.129	0.105	0.033		4.45		8.25	10.0	21.4	0.196
				3	A	-		3.84	3.51	0.554	0.148	0.12	0.029		5.34		10.3	8.3	44.1	0.303
				4	A			3.77	3.24	0.834	0.256	0.118	0.042		7.93		11.6	10.8	41.9	0.24
				5	A			3.88	3.33	0.482	0.115	0.044	0.02		4.07		6.76	9.8	13.5	0.188
			1	1	B			4.01	3.62	0.47	0.11	0.095	0.06		5.95		7.87	9.3	6.73	0.038
				2	B			4	3.57	0.417	0.154	0.08	0.045		5.74		8.13	8.6	4.18	0.036
				3	B	-		4.06	3.66	0.367	0.12	0.068	0.047		6.38		9.35	6.4	5.97	0.052
				4	B			4.24	3.52	0.525	0.082	0.09	0.062		4.67		7.96	9.5	8	0.065
				5	B			4.11	3.55	0.585	0.16	0.054	0.066		5.86		8.09	10.7	5.63	0.047
			2	1	B			4.24	3.6	0.421	0.071	0.034	0.021		3.21		6.21	8.8	7.71	0.062
				2	B			4.36	3.88	3.283	0.75	0.055	0.041		1.89		6.37	64.8	3.71	0.048
				3	B	-		4.07	3.66	0.339	0.099	0.049	0.014		3.7		7.04	7.1	8.29	0.062
				4	B			4.15	3.65	0.23	0.06	0.063	0.042		3.24		5.3	7.5	5.05	0.049
				5	B			5.01	4.14	3.99	0.869	0.058	0.032		1.5		6.61	74.9	3.31	0.034

*Soil type was not reported. **Repeat analysis was not reported.

Table 5.4 b) Results of soil chemical analysis: China-2 (Xiamen-xiaoping)

Sample No.	Location	Soil type*	Plot No.	Sub-plot No	Layer analyzed (cm)		Repeat** analysis	Moisture content (wt%)	pH		Exchangeable base cations				Ex-acidity	Ex-acid cation		ECEC	Base Saturation	T-C	T-N
											Ca	Mg	K	Na		Al	H				
									H_2O	KCl	(cmol(+) kg^{-1})								(%)	(g kg^{-1})	
	Xianjiaoji			1	A	25		3.89	4.42	4.09	0.01	0.09	0.24	0.15	4.48	4.2	0.28	4.97	9.9	28.05	1.506
				2	A	35		3.73	4.52	4.09	0.04	0.07	0.28	0.13	4.39	4.16	0.23	4.91	10.6	28.42	1.475
				3	A	30	-	3.95	4.43	4.1	0.04	0.06	0.28	0.18	4.53	4.32	0.22	5.09	11.0	27.98	1.535
				4	A	30		3.97	4.42	4.12	0.08	0.04	0.29	0.08	4.39	4.14	0.25	4.88	10.0	28.33	1.583
				5	A	45		3.68	4.54	4.1	0.01	0.08	0.29	0.16	4.61	4.32	0.28	5.15	10.5	27.79	1.568
			XPT-1001	1	B	75		3.55	4.79	4.16	0.01	0.06	0.29	0.1	4.63	4.48	0.15	5.09	9.0	6.3	0.457
				2	B	45		3.49	4.75	4.14	0.01	0.09	0.28	0.15	4.53	4.35	0.18	5.06	10.5	6.03	0.482
				3	B	45	-	3.35	4.69	4.15	0.01	0.06	0.3	0.05	4.51	4.34	0.16	4.93	8.5	6.32	0.506
				4	B	70		3.65	4.72	4.14	0.05	0.08	0.28	0.01	4.7	4.55	0.15	5.12	8.2	6.32	0.503
				5	B	52		3.58	4.75	4.15	0.07	0.06	0.29	0.07	4.65	4.53	0.12	5.14	9.5	6.31	0.452
				1	A	50		3.71	4.55	4.03	0.02	0.03	0.4	0.17	5.45	5.28	0.17	6.07	10.2	28.2	1.89
				2	A	30		3.66	4.53	4.03	0.01	0.08	0.42	0.19	5.48	5.33	0.15	6.18	11.3	28.22	1.864
				3	A	15	-	3.89	4.6	4.06	0.01	0.05	0.37	0.11	5.43	5.26	0.17	5.97	9.0	28.51	1.924
				4	A	30		3.64	4.45	4.09	0.01	0.06	0.28	0.15	5.51	5.4	0.12	6.01	8.3	28.2	1.93
			XPT-1002	5	A	25		3.84	4.55	4.05	0.01	0.1	0.32	0.21	5.46	5.29	0.17	6.1	10.5	28.1	1.864
				1																	
				2	B	50		3.58	4.7	4.08	0.01	0.04	0.3	0.19	4.83	4.63	0.2	5.37	10.1	8.41	0.616
				3	B	60	-	3.53	4.75	4.09	0.03	0.04	0.33	0.25	4.8	4.61	0.18	5.45	11.9	8.28	0.627
				4	B	60		3.73	4.65	4.1	0.01	0.08	0.29	0.13	4.87	4.71	0.17	5.38	9.5	8.42	0.669
				5	B	30		3.49	4.69	4.16	0.01	0.05	0.35	0.11	4.78	4.6	0.18	5.3	9.8	8.4	0.636

*Soil type was not reported. **Repeat analysis was not reported.

Table 5.4 c) Results of soil chemical analysis: China-3 (Xiamen-xiaoping)

Sample No.	Location	Soil type*	Plot No.	Sub-plot No	Layer analyzed (cm)		Repeat** analysis	Moisture content (wt%)	pH		Exchangeable base cations				Ex-acidity	Ex-acid cation		ECEC	Base Saturation	T-C	T-N
											Ca	Mg	K	Na		Al	H				
									H_2O	KCl	(cmol(+) kg^{-1})								(%)	(g kg^{-1})	
	Huacuo		XPT-2001	1	A	25		1.84	5.02	4.22	0.01	0.07	0.22	0.16	2.12	2.01	0.11	2.58	17.8	9.02	0.775
				2	B	60		1.78	5.06	4.2	0.02	0.03	0.39	0.13	2.09	1.99	0.1	2.66	21.4	9.5	0.743
				3	B	35	-	1.82	5.1	4.23	0.01	0.08	0.29	0.1	2.16	2.03	0.13	2.64	18.2	9.43	0.79
				4	B	65		1.81	5.06	4.22	0.01	0.06	0.33	0.15	2.19	2.04	0.15	2.74	20.1	9.52	0.764
				5	B	60		1.87	5.08	4.23	0.01	0.04	0.37	0.13	2.12	1.96	0.16	2.67	20.6	9.53	0.797
				1	B	50	-	1.39	4.87	4.17	0.02	0.04	0.29	0.08	2.11	1.89	0.23	2.54	16.9	4.01	0.524
			XPT-2002	1	B	80		2.34	4.95	4.25	0.06	0.13	0.22	0.1	2.41	2.25	0.16	2.92	17.5	5.2	0.466
				2	B	80		2.44	4.86	4.26	0.05	0.1	0.26	0.09	2.38	2.23	0.15	2.88	17.4	5.18	0.497
				3	B	100	-	2.36	4.85	4.3	0.01	0.08	0.29	0.14	2.41	2.28	0.13	2.93	17.7	5.23	0.463
				4	B	90		2.52	4.9	4.26	0.04	0.04	0.33	0.15	2.48	2.33	0.15	3.04	18.4	5.26	0.51
				5	B	75		2.18	4.96	4.26	0.01	0.05	0.29	0.08	2.47	2.29	0.18	2.9	14.8	0	0
	Zhuangyuanshan		XPT-3001	1	A	5		2.49	4.82	4.09	0.05	0.08	0.16	0.14	3.33	3.1	0.23	3.76	11.4	22.12	1.325
				2	A	5		2.57	4.92	4.1	0.01	0.07	0.18	0.2	3.35	3.14	0.21	3.81	12.1	22.18	1.365
				3	A	5	-	2.45	4.92	4.09	0.01	0.06	0.22	0.16	3.29	3.12	0.18	3.74	12.0	21.37	1.402
				4	A	15		2.56	4.85	4.1	0.01	0.06	0.17	0.14	3.4	3.14	0.26	3.78	10.1	22.01	1.353
				5	A	5		2.62	4.72	4.09	0.04	0.05	0.16	0.22	3.33	3.1	0.23	3.8	12.4	21.6	1.322
				1																	
				2																	
				3	B	40	-	2.77	4.7	4.12	0.01	0.05	0.2	0.08	3.44	3.31	0.13	3.78	9.0	14.19	1.137
				4	B	20		2.73	4.65	4.15	0.01	0.04	0.22	0.1	3.5	3.39	0.11	3.87	9.6	13.31	1.192
				5	B	10		2.79	4.6	4.16	0.01	0.08	0.29	0.14	3.42	3.31	0.11	3.94	13.2	14.4	1.16
			XPT-3002	1	A	40		2.73	4.69	4.07	0.01	0.05	0.19	0.14	3.79	3.57	0.23	4.18	9.3	21.64	1.296
				2	A	30		2.85	4.8	4.08	0.04	0.08	0.17	0.1	3.8	3.57	0.23	4.19	9.3	21.2	1.335
				3	A	20	-	2.61	4.6	4.09	0.01	0.04	0.22	0.13	3.76	3.56	0.2	4.16	9.6	20.26	1.27
				4	A	20		2.95	4.69	4.05	0.01	0.04	0.15	0.18	3.85	3.59	0.26	4.23	9.0	20.7	1.336
				5	A	30		2.78	4.76	4.06	0.01	0.05	0.23	0.16	3.78	3.55	0.23	4.23	10.6	20.8	1.289
				1	B	80		2.84	4.97	4.1	0.01	0.04	0.12	0.11	2.64	2.6	0.03	2.92	9.6	4.15	0.79
				2	B	70		2.83	4.85	4.12	0.01	0.06	0.17	0.17	2.65	2.62	0.03	3.06	13.4	4.23	0.839
				3	B	60	-	2.83	4.9	4.15	0.03	0.05	0.27	0.1	2.68	2.64	0.05	3.13	14.4	4.12	0.796
				4	B	75		3.02	4.79	4.06	0.01	0.07	0.2	0.15	2.62	2.61	0.02	3.05	14.1	4.12	0.835
				5	B	80		2.64	4.82	4.09	0.01	0.03	0.12	0.09	2.6	2.53	0.07	2.85	8.8	4.09	0.757

*Soil type was not reported. **Repeat analysis was not reported.

Table 5.4 d) Results of soil chemical analysis: China-4 (Zhuhai -Zhuxiandong)

Sample No.	Location (Vegetation type)	Soil type*	Plot No.	Sub-plot No	Layer analyzed	Repeat** analysis	Moisture content (wt%)	pH		Exchangeable base cations				Ex-acidity	Ex-acid cation		ECEC	Base Saturation	T-C	T-N
										Ca	Mg	K	Na		Al	H				
								H_2O	KCl	(cmol(+) kg^{-1})								(%)	(g kg^{-1})	
	Acacia auriculiformis				0-10	-		4.32	3.64	0.78	0.34	0.26	0.5	3.08	2.62	0.46	4.96	37.9	17.39	1.22
					10-20			4.3	3.7	0.82	0.22	0.23	0.57	3.21	2.74	0.47	5.05	36.4	11.53	0.84
	Acacia confusa				0-10	-		3.98	3.5	1.14	0.35	0.27	0.52	3.3	2.53	0.77	5.58	40.9	33.18	2.76
					10-20			4.06	3.73	0.94	0.22	0.22	0.48	2.99	2.5	0.49	4.85	38.4	19.03	1.57
	Dicranopteris Dichotoma				0-10	-		4.07	3.36	0.35	0.18	0.23	0.09	5.33	4.79	0.54	6.18	13.8	24.49	1.22
					10-20			4.11	3.61	0.26	0.14	0.19	0.04	4.43	4.12	0.31	5.06	12.5	12.21	0.76
	Pinus elliottii				0-10	-		4.3	3.56	0.58	0.23	0.16	0.35	3.85	3.28	0.57	5.17	25.5	21.86	1.17
					10-20			4.23	3.65	0.32	0.14	0.21	0.06	3.77	3.31	0.46	4.5	16.2	13.35	0.76

*Soil type was not reported. **Repeat analysis was not reported.

Table 5.5 a) Results of soil chemical analysis: Japan-1

Sample No.	Location	Soil type	Plot No.	Subplot No.	Layer analyzed	Repeat** analysis	Moisture content	pH		Exchangeable base cation (B)				Ex-acidity (A)	Ex- acid cations		ECEC (A)+(B)	Base saturation	SO_4^{2-}
										Ca	Mg	K	Na		Al	H			
							(wt%)	H_2O	KCl	(cmol(+)kg^{-1})								(%)	(S-mg/kg)
1	Lake Ijira	Dystric Cambisol	Lake Ijira-1	1	0-5		3.4	4.0	3.2	0.32	0.91	0.27	0.33	7.02	7.95	1.14	8.85	20.7	44
5				2	0-6		2.5	3.7	3.0	0.33	0.70	0.26	0.35	9.34	10.85	1.30	10.98	14.9	47
9				3	0-5	1st	5.2	3.9	3.0	0.54	1.55	0.30	0.39	9.80	9.39	0.97	12.58	22.1	35
13				4	0-5		3.5	4.0	3.2	0.26	0.80	0.25	0.29	8.34	8.79	0.96	9.94	16.1	51
17				5	0-6		3.6	3.9	3.2	0.33	1.15	0.22	0.32	6.40	7.47	1.01	8.42	24.0	62
21			Lake Ijira-2	1	0-7		2.5	4.2	3.2	0.24	0.72	0.21	0.20	10.10	12.65 *S	1.89 *S	11.47	11.9	33
25				2	0-3		2.4	4.1	3.2	0.27	1.01	0.09	0.21	7.19	9.86 *S	1.35 *S	8.77	18.0	31
29				3	0-4	1st	2.6	4.1	3.2	0.42	0.92	0.13	0.22	8.92	11.21 *S	1.50 *S	10.61	15.9	34
33				4	0-7		4.6	3.9	3.1	0.45	0.96	0.05	0.24	8.21	12.75 *S	1.67 *S	9.91	17.2	31
37				5	0-7		5.2	4.0	3.2	0.22	0.18	0.03	0.22	10.13	13.14 *S	1.53 *S	10.78	6.0	49
41			Lake Ijira-3	1	0-7		3.2	4.0	3.3	0.21	0.47	0.03	0.25	9.26	7.97	0.86	10.22	9.4	37
45				2	0-5		9.4	4.2	3.4	0.16	0.72	0.02	0.14	8.29	8.88	0.78	9.33	11.1	43
49				3	0-7	1st	4.4	4.0	3.3	0.25	0.46	0.03	0.15	5.32	8.50	1.05	6.21	14.3	48
53				4	0-6		4.3	4.2	3.4	0.17	0.41	0.02	0.13	6.81	6.79	0.48	7.54	9.7	52
57				5	0-6		2.6	4.0	3.2	0.16	0.25	0.02	0.01	9.43	9.96	1.05	9.87	4.5	37
61			Lake Ijira-4	1	0-4		2.7	4.4	3.6	0.28	0.37	0.04	0.02	5.40	6.60	0.76	6.11	11.6	61
65				2	0-10		3.3	4.8	3.6	0.25	0.50	0.03	0.02	5.19	6.76	0.55	5.99	13.4	72
69				3	0-3	1st	2.6	4.7	3.6	0.36	0.88	0.03	0.21	4.51	6.43	0.67	5.99	24.7	47
73				4	0-3		4.1	4.7	3.6	0.66	1.52	0.04	0.24	4.16	6.11	0.63	6.62	37.2	58
77				5	0-3		3.7	4.9	3.6	0.40	0.79	0.03	0.18	4.63	5.94	1.03	6.03	23.2	79

Note: Soil samples were collected from the uppermost and subsequent layers according to soil horizon, not by fixed layer. ECEC was calculated from exchangeable base cations and exchangeable acidity. *Letter "S" show abnormal data judged by the relation between Ex-acidity and Ex-acid cations. **For Ex-cations, duplicate analysis was carried out for each extract. For other parameters, analysis procedures were repeated.

Table 5.5 b) Results of soil chemical analysis: Japan-2

Sample No.	Location	Soil type	Plot No.	Subplot No.	Layer analyzed	Repeat** analysis	Moisture content	pH		Exchangeable base cation (B)				Ex-acidity (A)	Ex- acid cations		ECEC (A)+(B)	Base saturation	SO_4^{2-}
										Ca	Mg	K	Na		Al	H			
							(wt%)	H_2O	KCl	(cmol(+)kg^{-1})								(%)	(S-mg/kg)
2	Lake Ijira	Dystric Cambisol	Lake Ijira-1	1	0-5		3.4	4.0	3.3	0.34	0.93	0.27	0.35	7.04	7.95	1.14	8.93	21.2	44
6				2	0-6		2.6	3.8	3.0	0.33	0.70	0.26	0.35	9.34	10.86	1.30	10.98	14.9	54
10				3	0-5	2nd	5.3	3.9	3.0	0.54	1.50	0.30	0.39	9.71	9.39	0.97	12.44	21.9	35
14				4	0-5		3.6	4.0	3.3	0.28	0.80	0.25	0.31	8.34	8.80	0.98	9.98	16.4	55
18				5	0-6		3.7	3.9	3.2	0.33	1.16	0.22	0.31	6.22	7.47	1.01	8.24	24.5	69
22			Lake Ijira-2	1	0-7		2.6	4.2	3.2	0.26	0.74	0.21	0.20	9.89	12.65 *S	1.89 *S	11.30	12.5	37
26				2	0-3		2.5	4.1	3.2	0.28	1.01	0.10	0.22	7.19	9.86 *S	1.30 *S	8.80	18.3	33
30				3	0-4	2nd	2.7	4.1	3.3	0.44	0.94	0.13	0.24	8.92	11.33 *S	1.36 *S	10.67	16.4	37
34				4	0-7		4.5	3.9	3.1	0.46	0.98	0.07	0.24	8.21	12.75 *S	1.67 *S	9.96	17.6	34
38				5	0-7		5.3	4.0	3.2	0.23	0.18	0.03	0.25	10.13	13.14 *S	1.51 *S	10.82	6.4	56
42			Lake Ijira-3	1	0-7		3.2	4.0	3.3	0.22	0.47	0.03	0.26	9.07	7.97	0.88	10.05	9.8	44
46				2	0-5		9.5	4.2	3.4	0.17	0.74	0.02	0.14	8.29	8.88	0.78	9.36	11.4	47
50				3	0-7	2nd	4.4	3.9	3.3	0.25	0.47	0.03	0.15	5.53	8.50	1.05	6.43	14.0	52
54				4	0-6		4.3	4.2	3.4	0.19	0.41	0.02	0.13	6.75	6.82	0.48	7.50	10.0	52
58				5	0-6		2.6	4.0	3.2	0.16	0.25	0.02	0.01	9.60	9.69	1.05	10.04	4.4	37
62			Lake Ijira-4	1	0-4		2.8	4.5	3.6	0.28	0.38	0.04	0.02	5.62	6.60	0.78	6.34	11.4	58
66				2	0-10		3.3	4.8	3.6	0.25	0.51	0.03	0.02	5.13	6.76	0.53	5.94	13.6	65
70				3	0-3	2nd	2.7	4.7	3.6	0.37	0.89	0.04	0.21	4.62	6.43	0.67	6.13	24.6	44
74				4	0-3		4.2	4.7	3.6	0.67	1.55	0.04	0.26	4.16	6.11	0.62	6.68	37.7	55
78				5	0-3		3.7	4.9	3.7	0.42	0.79	0.03	0.18	4.63	5.94	1.03	6.05	23.5	72

Note: Soil samples were collected from the uppermost and subsequent layers according to soil horizon, not by fixed layer. ECEC was calculated from exchangeable base cations and exchangeable acidity. *Letter "S" show abnormal data judged by the relation between Ex-acidity and Ex-acid cations. **For Ex-cations, duplicate analysis was carried out for each extract. For other parameters, analysis procedures were repeated.

Table 5.5 c) Results of soil chemical analysis: Japan-3

Sample No.	Location	Soil type	Plot No.	Subplot No.	Layer analyzed	Repeat** analysis	Moisture content	pH		Exchangeable base cation (B)				Ex-acidity (A)	Ex- acid cations		ECEC (A)+(B)	Base saturation	SO_4^{2-}
										Ca	Mg	K	Na		Al	H			
							(wt%)	H_2O	KCl	(cmol(+)kg^{-1})								(%)	(S-mg/kg)
3	Lake Ijira	Dystric Cambisol	Lake Ijira-1	1	10-15		2.2	4.5	4.0	0.06	0.18	0.23	0.20	2.68	2.27	0.15	3.35	20.0	408
7				2	11-16		1.9	4.3	3.6	0.12	0.23	0.27	0.22	6.96	6.96	0.61	7.80	10.8	95
11				3	10-15	1st	3.1	4.0	3.3	0.18	0.29	0.28	0.25	5.86	6.53	0.94	6.86	14.6	54
15				4	10-15		2.0	4.2	3.7	0.08	0.21	0.19	0.17	5.07	5.34	0.34	5.72	11.4	187
19				5	11-16		2.7	4.4	3.8	0.07	0.24	0.20	0.17	3.70	3.61	0.26	4.38	15.5	256
23			Lake Ijira-2	1	12-17		2.5	4.6	3.7	0.08	0.23	0.16	0.12	4.93	7.10 *S	0.87 *S	5.52	10.7	81
27				2	8-13		1.7	4.5	3.7	0.07	0.22	0.09	0.14	4.89	7.07 *S	0.52 *S	5.41	9.6	88
31				3	9-14	1st	2.3	4.4	3.5	0.19	0.24	0.03	0.20	5.73	8.25 *S	0.71 *S	6.39	10.3	64
35				4	12-17		3.4	4.3	3.5	0.15	0.16	0.03	0.15	7.72	10.20 *S	0.96 *S	8.21	6.0	48
39				5	12-17		4.7	4.3	3.7	0.07	0.05	0.03	0.16	5.51	7.40 *S	0.77 *S	5.82	5.3	136
43			Lake Ijira-3	1	12-17		2.9	4.2	3.5	0.10	0.11	0.03	0.01	6.63	6.80	0.58	6.88	3.6	72
47				2	10-15		3.0	4.4	3.7	0.05	0.12	0.01	0.01	4.90	4.60	0.32	5.09	3.7	133
51				3	12-17	1st	2.9	4.4	3.7	0.06	0.07	0.02	0.01	4.90	4.53	0.36	5.06	3.2	174
55				4	11-16		2.2	4.4	3.7	0.06	0.10	0.02	0.01	4.26	4.18	0.29	4.45	4.3	146
59				5	11-16		2.1	4.2	3.6	0.07	0.08	0.03	0.02	7.35	6.80	0.46	7.55	2.6	95
63			Lake Ijira-4	1	9-14		2.6	4.7	3.7	0.13	0.13	0.04	0.02	4.90	5.85	0.55	5.22	6.1	133
67				2	15-20		2.0	4.6	3.6	0.07	0.05	0.02	0.01	5.12	6.54	0.65	5.27	2.8	91
71				3	8-13	1st	3.1	4.8	3.7	0.21	0.36	0.05	0.03	4.88	5.86	0.69	5.53	11.8	113
75				4	8-13		2.3	4.8	3.7	0.17	0.23	0.04	0.02	4.44	5.59	0.56	4.90	9.4	160
79				5	8-13		3.1	4.8	3.7	0.14	0.12	0.03	0.02	5.06	5.80	0.64	5.37	5.8	134

Note: Soil samples were collected from the uppermost and subsequent layers according to soil horizon, not by fixed layer. ECEC was calculated from exchangeable base cations and exchangeable acidity. *Letter "S" show abnormal data judged by the relation between Ex-acidity and Ex-acid cations. **For Ex-cations, duplicate analysis was carried out for each extract. For other parameters, analysis procedures were repeated.

Table 5.5 d) Results of soil chemical analysis: Japan-4

Sample No.	Location	Soil type	Plot No.	Subplot No.	Layer analyzed	Repeat** analysis	Moisture content	pH		Exchangeable base cation (B)				Ex-acidity (A)	Ex- acid cations		ECEC (A)+(B)	Base saturation	SO_4^{2-}
										Ca	Mg	K	Na		Al	H			
							(wt%)	H_2O	KCl	(cmol(+)kg^{-1})								(%)	(S-mg/kg)
4	Lake Ijira	Dystric Cambisol	Lake Ijira-1	1	10-15		2.2	4.5	4.0	0.06	0.18	0.23	0.20	2.52	2.27	0.16	3.19	21.0	408
8				2	11-16		2.0	4.3	3.6	0.12	0.23	0.27	0.22	6.96	6.96	0.61	7.80	10.8	108
12				3	10-15	2nd	3.1	4.0	3.3	0.18	0.28	0.28	0.25	5.82	6.53	0.96	6.81	14.5	58
16				4	10-15		2.1	4.1	3.7	0.08	0.23	0.21	0.17	5.22	5.34	0.38	5.91	11.7	214
20				5	11-16		2.7	4.4	3.8	0.07	0.24	0.20	0.18	3.70	3.61	0.26	4.39	15.7	284
24			Lake Ijira-2	1	12-17		2.3	4.6	3.7	0.08	0.23	0.16	0.13	4.93	7.10 *S	0.83 *S	5.53	10.8	92
28				2	8-13		1.8	4.5	3.7	0.07	0.22	0.09	0.14	5.00	7.07 *S	0.54 *S	5.52	9.4	98
32				3	9-14	2nd	2.3	4.4	3.6	0.19	0.24	0.03	0.20	5.69	8.25 *S	0.71 *S	6.35	10.4	71
36				4	12-17		3.4	4.3	3.6	0.15	0.16	0.03	0.15	7.67	10.20 *S	0.93 *S	8.16	6.0	51
40				5	12-17		4.7	4.3	3.7	0.07	0.05	0.03	0.16	5.45	7.40 *S	0.77 *S	5.76	5.4	150
44			Lake Ijira-3	1	12-17		3.0	4.2	3.6	0.08	0.11	0.03	0.02	6.63	6.80	0.58	6.87	3.5	82
48				2	10-15		3.0	4.4	3.7	0.05	0.12	0.02	0.01	4.85	4.60	0.32	5.05	4.0	147
52				3	12-17	2nd	3.0	4.4	3.7	0.06	0.07	0.02	0.01	4.82	4.49	0.34	4.98	3.2	202
56				4	11-16		2.2	4.4	3.8	0.06	0.10	0.02	0.01	4.26	4.38	0.29	4.45	4.3	132
60				5	11-16		2.2	4.2	3.6	0.07	0.08	0.03	0.02	7.56	6.80	0.46	7.76	2.6	88
64			Lake Ijira-4	1	9-14		2.7	4.7	3.7	0.15	0.13	0.04	0.03	4.75	5.85	0.53	5.10	6.9	123
68				2	15-20		2.2	4.6	3.7	0.08	0.05	0.03	0.02	5.12	6.54	0.63	5.30	3.4	85
72				3	8-13	2nd	3.2	4.8	3.7	0.23	0.37	0.05	0.31	5.00	5.86	0.69	5.96	16.1	106
76				4	8-13		2.3	4.6	3.7	0.16	0.23	0.04	0.02	4.44	5.59	0.56	4.89	9.2	146
80				5	8-13		3.2	4.6	3.7	0.14	0.12	0.03	0.02	5.15	5.80	0.64	5.46	5.7	123

Note: Soil samples were collected from the uppermost and subsequent layers according to soil horizon, not by fixed layer. ECEC was calculated from exchangeable base cations and exchangeable acidity. *Letter "S" show abnormal data judged by the relation between Ex-acidity and Ex-acid cations. **For Ex-cations, duplicate analysis was carried out for each extract. For other parameters, analysis procedures were repeated.

Table 5.6 a) Results of soil chemical analysis: Malaysia-1

Location	Soil type	Plot No.	Sub-plot No	Layer analysed (cm)	Repeat* analysis	Moisture content (wt%)	pH H_2O	pH KCl	Ex-acidity (cmol(+) kg^-	SO_4^{2-} S-mg/kg	Available P P-mg/kg	Bulk Density Mg/m^3
Pasoh	Dystric Nitosol (Tampin Series)	1	1	0-10	1st	0.93	3.8	3.7	2.7	9.92	4.43	1.20
				0-10	2nd		3.8	3.7	2.6	9.92	4.75	
				0-10	3rd		3.8	3.7	2.4		4.75	
				10-20	1st	0.67	4.3	3.8	2.4	9.92	0.63	1.54
				10-20	2nd		4.3	3.8	2.4	9.92	0.32	
				10-20	3rd		4.3	3.8	2.2		0.63	
			45	0-10	1st	12.17	4.5	3.7	2.6	10.95	0.64	1.29
				0-10	2nd		4.5	3.8	2.6	10.95	0.64	
				0-10	3rd		4.5	3.7	2.7		0.64	
				10-20	1st	6.12	4.4	3.9	2.2	12.05	1.91	1.38
				10-20	2nd		4.5	3.9	2.3	10.95	2.55	
				10-20	3rd		4.4	3.9	2.1		3.19	

*Triplicate analysis was carried out.

Table 5.6 b) Results of soil chemical analysis: Malaysia-2

Location	Soil type	Plot No.	Sub-plot No	Layer analysed (cm)	Repeat* analysis	Moisture content (wt%)	pH H_2O	pH KCl	Ex-acidity (cmol(+) kg^-	SO_4^{2-} S-mg/kg	Available P P-mg/kg	Bulk Density Mg/m^3
Pasoh	Dystric Nitosol (Durian Series)	2	1	0-10	1st	1.73	3.6	3.5	4.9	9.66	3.85	0.94
				0-10	2nd		3.6	3.5	4.6	8.51	3.85	
				0-10	3rd		3.6	3.5	5.1		3.85	
				10-20	1st	1.55	4.3	3.9	4.7	8.51	0.4	1.18
				10-20	2nd		4.3	3.9	4.6	9.66	0.4	
				10-20	3rd		4.3	3.9	4.8		0.4	
			45	0-10	1st	10.09	4.0	3.7	3.9	11.38	1.28	0.98
				0-10	2nd		4.0	3.7	4.2	9.66	1.6	
				0-10	3rd		4.0	3.7	4.4		1.28	
				10-20	1st	11.41	4.2	3.8	4.2	9.66	0.32	1.26
				10-20	2nd		4.2	3.8	4.3	10.8	0.64	
				10-20	3rd		4.2	3.8	4.2		0.64	

*Triplicate analysis was carried out.

Table 5.6 c) Results of soil chemical analysis: Malaysia-3

Location	Soil type	Plot No.	Sub-plot No	Layer analysed (cm)	Repeat* analysis	Moisture content (wt%)	pH H_2O	pH KCl	Ex-acidity (cmol(+) kg^-	SO_4^{2-} S-mg/kg	Available P P-mg/kg	Bulk Density Mg/m^3
Pasoh	Rhodic Ferralsol (Munchong Series)	3	1	0-10	1st	1.46	3.9	3.8	3.8	10.43	4.11	1.11
				0-10	2nd		3.9	3.8	3.8	9.29	4.43	
				0-10	3rd		4.0	3.8	3.8		4.75	
				10-20	1st	1.51	4.2	4.0	3.5	10.43	1.58	1.25
				10-20	2nd		4.2	3.9	3.6	10.43	1.9	
				10-20	3rd		4.2	4.0	3.3		1.9	
			45	0-10	1st	8.25	4.8	3.8	3.9	8.74	0.94	0.98
				0-10	2nd		4.8	3.9	3.8	10.95	0.94	
				0-10	3rd		4.7	3.9	3.9		0.94	
				10-20	1st	8.01	4.5	3.9	3.7	10.95	0.63	1.23
				10-20	2nd		4.6	3.9	3.9	10.95	0.63	
				10-20	3rd		4.6	3.9	3.8		0.31	

*Triplicate analysis was carried out.

Table 5.7. Results of soil chemical analysis: The Philippines

Sample No.	Location	Soil type	Plot No.	Sub-plot No	Layer analysed	Repeat* analysis	Moisture content	pH		Exchangeable base cations				Ex-acidity	Ex-acid cations		ECEC	Base saturation	T-C	T-N	Available P	CEC
										Ca	Mg	K	Na		Al	H						
					(cm)		(wt%)	H_2O	KCl	(cmol(+) kg^{-1})								(%)	(g kg^{-1})		P-mg/kg	(cmol(+) kg^{-1})
1	UP Quezon, Land Grant	Dystric Nitosol	1	-	0-5	-	-	4.1	4.0	0.67	0.87	0.55	1.1	4.43	3.95	0.48	7.62	41.9	10.9	4.49	0.0045	27.4
2					5-12			4.2	4.1	0.57	0.52	0.2	1.53	4.15	3.75	0.4	6.97	40.5	8.2	3.5	0.0011	22.8
3					>12			4.6	4.2	0.35	0.43	0.12	1.08	3.64	3.18	0.46	5.62	35.2	3.1	1.24	0.0017	22.0

Note: Soil samples were collected from the uppermost and subsequent layers according to soil horizon, not by fixed layer. ECEC was calculated from exchangeable base cations and exchangeable acidity. *Repeat analysis was not reported.

Table 5.8 a) Results of soil chemical analysis: Russia-1

Sample No.	Location	Soil type	Plot No.	Sub-plot No	Layer analyzed	Repeat* analysis	Moisture content	pH		Exchangeable base cations (B)				Ex-acidity (A)	Ex-acid cations		ECEC (A) +(B)	Base saturation	T-C	T-N
										Ca	Mg	K	Na		Al	H				
					(cm)		(wt%)	H_2O	KCl	(cmol(+) kg^{-1})								(%)	(g kg^{-1})	
1	Bolshie Koty Varnachk	Mollic Leptosol	6	1	$A_{(0-18)}$	-	2.37	6.8	5.9	19.69	3.1	0.25	0.08	0.09	0	0.09	23.21	99.6	31.6	6.8
5				2	$A_{(1-10)}$		2.9	6.7	6.1	28.52	4.1	0.78	0.07	0.07	0.02	0.05	33.54	99.8	62.7	6.7
8				3	$A_{(0-10)}$		2.52	6.6	5.7	25.15	2.9	0.3	0.07	0.22	0.14	0.08	28.64	99.2	42.3	28.9
11				4	$A_{(0-15)}$		3.16	6.8	6.0	37.76	4.58	0.41	0.07	0.04	0	0.04	42.86	99.9	52.8	8.2
14				5	$A_{(1-9)}$		2.67	6.6	5.7	29.74	4.07	0.36	0.13	0.05	0.01	0.04	34.35	99.9	42	9.2
17	Bolshie Koty Temnaya	Umbric Leptosol	7	1	$OA_{(0-10)}$	-	4.86	5.0	4.0	14.53	4.16	0.72	0.07	0.89	0.59	0.3	20.37	95.6	115.2	32.2
21				2	$OA_{(1-7)}$		6.99	5.0	4.1	31.66	8.5	2.45	0.07	1.25	0.67	0.58	43.93	97.2	200.5	27.8
25				3	$OA_{(0-7)}$		7.15	4.7	3.9	23.54	6.7	1.7	0.17	0.77	0.19	0.58	32.88	97.7	222.4	35.3
29				4	$OA_{(1-8)}$		5.85	4.8	3.9	21.73	6.36	0.9	0.06	0.91	0.34	0.57	29.96	97.0	175.6	6.8
33				5	$OA_{(0-8)}$		7.62	4.5	3.4	23.86	8.02	2.2	0.05	1.8	0.96	0.84	35.93	95.0	243.4	9
2	Bolshie Koty Varnachk	Mollic Leptosol	6	1	$B1_{(18-28)}$	-	2.15	6.9	5.6	16.76	3.45	0.23	0.08	0.04	0	0.04	20.56	99.8	10.2	3.6
6				2	$B1_{(10-35)}$		2.21	6.7	5.7	21.73	3.41	0.29	0.09	0.09	0.05	0.04	25.61	99.6	25.9	3.4
9				3	$B1_{(10-30)}$		1.99	7.1	5.9	18.21	2.98	0.2	0.08	0.24	0.15	0.09	21.71	98.9	13.1	2.6
12				4	$B1_{(15-33)}$		2.69	6.9	6.0	25.93	4.31	0.3	0.09	0.07	0.02	0.05	30.7	99.8	29.6	6.6
15				5	$B1_{(9-30)}$		2.45	6.6	5.5	20.45	3.77	0.24	0.17	0.05	0.01	0.04	24.68	99.8	20.4	5.8
18	Bolshie Koty Temnaya	Umbric Leptosol	7	1	$AE_{(10-14)}$	-	3.07	4.8	3.7	10.09	2.44	0.28	0.06	1.27	1.09	0.18	14.14	91.0	81.2	11.5
22				2	$AE_{(7-10)}$		3.2	4.6	3.6	11.79	2.39	0.36	0.05	2.34	1.99	0.35	16.93	86.2	83.7	10.8
26				3	$AE_{(7-11)}$		5.12	4.3	3.4	13.43	3.27	0.7	0.14	2.24	1.48	0.76	19.78	88.7	152.9	23.7
30				4	$AE_{(8-13)}$		3.29	4.5	3.5	9.85	2.41	0.25	0.04	1.96	1.5	0.46	14.51	86.5	90.9	28.7
34				5	$AE_{(8-16)}$		2.78	4.8	3.9	8.26	1.58	0.32	0.03	2.23	1.91	0.32	12.42	82.0	77.5	14.8

Note: Soil samples were collected from the uppermost and subsequent layers according to soil horizon, not by fixed layer. ECEC was calculated from exchangeable base cations and exchangeable acidity. *Repeat analysis was not reported.

Table 5.8 b) Results of soil chemical analysis: Russia-2

Sample No.	Location	Soil type	Plot No.	Sub-plot No	Layer analysed	Repeat* analysis	Moisture content	pH		Exchangeable base cations (B)				Ex-acidity (A)	Ex-acid cations		ECEC (A) +(B)	Base saturation	T-C	T-N
										Ca	Mg	K	Na		Al	H				
					(cm)		(wt%)	H_2O	KCl	(cmol(+) kg^{-1})								(%)	(g kg^{-1})	
3	Bolshie Koty Varnachk	Mollic Leptosol	6	1	$B2_{(28-60)}$	-	2.14	7.0	5.4	18.65	4.6	0.17	0.09	0.05	0	0.05	23.56	99.8	4.5	2.9
7				2	$B2_{(>35)}$		0.84	6.8	5.3	16.64	2.82	0.22	0.12	0.14	0.08	0.06	19.94	99.3	7.3	2.7
10				3	$B2_{(>30)}$		2.08	7.3	5.6	15.58	3.16	0.12	0.09	0.31	0.17	0.14	19.26	98.4	4.1	1.2
13				4	$B2_{(>33)}$		1.88	7.2	5.9	18	3.72	0.19	0.12	0.05	0.01	0.04	22.08	99.8	9.6	4.9
16				5	$B2_{(>30)}$		1.99	6.8	5.3	15.61	3.84	0.15	0.17	0.04	0.02	0.02	19.81	99.8	5.3	3.4
19	Bolshie Koty Temnaya	Umbric Leptosol	7	1	$EB_{(14-19)}$	-	2.1	4.7	3.6	3.12	0.97	0.11	0.07	3.83	3.64	0.19	8.1	52.7	36.5	4.7
23				2	$EB_{(10-18)}$		2.1	4.8	3.7	5.18	1.28	0.14	0.06	3.34	3.12	0.23	10	66.6	36.1	9.5
27				3	$EB_{(11-19)}$		2.33	4.7	3.6	4.64	1.41	0.18	0.02	3.58	3.3	0.28	9.83	63.6	42.3	5.5
31				4	$EB_{(13-20)}$		2.04	4.8	3.6	3.83	0.8	0.08	0.03	3.14	3.04	0.1	7.88	60.2	38.5	21.4
35				5	$BC_{(>16)}$		1.99	5.6	4.4	3.03	0.7	0.15	0.03	1.06	1.01	0.05	4.97	78.7	9.4	2
4	Bolshie Koty Varnachk	Mollic Leptosol	6	1	$BC_{(>60)}$	-	2.39	6.9	5.4	16.89	4.67	0.12	0.07	0.04	0	0.04	21.79	99.8	3.1	2
				2																
				3																
				4																
				5																
20	Bolshie Koty Temnaya	Umbric Leptosol	7	1	$BC_{(>19)}$	-	1.15	5.1	4.0	1.39	0.54	0.26	0.15	2.16	2.11	0.05	4.5	52.0	5.6	1.5
24				2	$BC_{(>18)}$		1.46	5.4	4.3	3.74	0.85	0.11	0.06	1.32	1.28	0.04	6.08	78.3	11.7	3.5
28				3	$BC_{(>19)}$		1.23	5.4	4.3	1.89	0.71	0.16	0.02	1.36	1.33	0.03	4.14	67.1	6.7	4.8
32				4	$BC_{(>20)}$		1.8	5.6	4.3	3.06	0.68	0.05	0.05	1.21	1.16	0.05	5.05	76.0	18.5	2.9

Note: Soil samples were collected from the uppermost and subsequent layers according to soil horizon, not by fixed layer. ECEC was calculated from exchangeable base cations and exchangeable acidity. *Repeat analysis was not reported.

Table 5.9 Results of soil chemical analysis: Thailand

Sample No.	Location	Soil type	Plot No.	Subplot No.	Layer analyzed (cm)	Repeat* analysis	Moisture Content (wt%)	pH		Exchangeable base cations				Ex-acidity	Ex-acid cations		ECEC	Base saturation
										Ca	Mg	K	Na		Al	H		
								H_2O	KCl	(cmol (+) kg^{-1})								
9	Khao Lam Dam	Ferric Acrisols	1	1	0-23	-	17.47	6.3	5.6	24.77	4.28	0.03	0.06	0.11			29.25	99.6
3				2	0-23		16.84	6.6	5.3	24.54	3.47	0.05	0.04	0.1			28.19	99.7
1				3	0-23		17.47	8.4	6.3	26.44	4.88	0.22	0.07	0.1			31.71	99.7
7				4	0-23		15.43	7.0	6.1	30.99	5.51	0.06	0.06	0.1			36.72	99.7
5				5	0-23		13.89	6.6	6.3	27.19	4.35	0.34	0.06	0.18			32.11	99.5
19			2	1	0-20	-	14.23	7.0	6.0	28.95	7.19	0.09	0.45	0.12			36.80	99.7
13				2	0-20		15.28	6.7	6.3	19.30	7.56	0.44	1.05	0.11			28.45	99.6
11				3	0-20		14.39	6.6	6.0	14.39	9.37	0.36	1.45	0.06			25.63	99.8
17				4	0-20		10.97	6.3	5.4	9.36	9.25	0.31	0.01	0.01			18.94	99.9
15				5	0-20		16.36	6.1	5.5	10.43	10.84	0.28	0.01	0.03			21.60	99.8
10			1	1	23+	-	18.30	7.0	5.9	14.45	2.82	0.26	1.23	0.06			18.82	99.7
4				2	23+		14.80	6.2	5.6	13.53	0.74	1.75	0.02	0.09			16.12	99.5
2				3	23+		15.13	5.7	4.9	12.26	1.36	0.03	0.42	0.18			14.24	98.8
8				4	23+		16.11	6.2	5.4	17.30	1.12	0.47	0.02	0.11			19.02	99.4
6				5	23+		14.72	6.2	5.7	12.12	1.01	0.30	0.07	0.1			13.59	99.3
20			2	1	20+	-	12.19	6.8	6.3	13.67	3.40	0.08	0.03	0.01			17.20	99.9
14				2	20+		16.82	7.0	6.0	7.79	5.38	0.26	1.14	0.06			14.63	99.6
12				3	20+		13.90	6.0	4.8	4.55	3.04	0.24	1.39	0.34			9.55	96.5
18				4	20+		12.61	6.2	5.2	3.77	5.16	0.11	0.004	0.06			9.10	99.4
16				5	20+		15.49	5.7	4.5	3.64	3.24	0.08	0.02	0.26			7.24	96.4

*Repeat analysis was carried out, and average data was reported.

Table 5.10 a-1) Description of trees: China-1 (Xiamen —xiaoping)

Name of Plot: (XPT-1001, 1002, 1003) Xianjiaoji Date: 2000-10-30

Survey area A

No.	Species Name	DBH (cm)	Height (m)
1	*Micheliamacclurei Dandyrar Sublaneu Dandy*	12	12.5
2	*Micheliamacclurei Dandyrar Sublaneu Dandy*	14	13
3	*Micheliamacclurei Dandyrar Sublaneu Dandy*	16.5	13.2
4	*Micheliamacclurei Dandyrar Sublaneu Dandy*	18	15
5	*Micheliamacclurei Dandyrar Sublaneu Dandy*	14	13.5
6	*Micheliamacclurei Dandyrar Sublaneu Dandy*	15	14.5
7	*Micheliamacclurei Dandyrar Sublaneu Dandy*	18.5	15.5
8	*Micheliamacclurei Dandyrar Sublaneu Dandy*	18.5	15
9	*Micheliamacclurei Dandyrar Sublaneu Dandy*	17	14.8
10	*Micheliamacclurei Dandyrar Sublaneu Dandy*	16	15
11	*Micheliamacclurei Dandyrar Sublaneu Dandy*	12	13
12	*Micheliamacclurei Dandyrar Sublaneu Dandy*	13	15
13	*Micheliamacclurei Dandyrar Sublaneu Dandy*	20	15.5
14	*Micheliamacclurei Dandyrar Sublaneu Dandy*	17	15
15	*Micheliamacclurei Dandyrar Sublaneu Dandy*	12	14
16	*Micheliamacclurei Dandyrar Sublaneu Dandy*	22	15
17	*Micheliamacclurei Dandyrar Sublaneu Dandy*	12	13.5
18	*Micheliamacclurei Dandyrar Sublaneu Dandy*	14	10.5

Survey area B

No.	Species Name	DBH (cm)	Height (m)
1	*Micheliamacclurei Dandyrar Sublaneu Dandy*	14.5	14
2	*Micheliamacclurei Dandyrar Sublaneu Dandy*	15	13.8
3	*Micheliamacclurei Dandyrar Sublaneu Dandy*	21.5	15
4	*Micheliamacclurei Dandyrar Sublaneu Dandy*	13.5	15
5	*Micheliamacclurei Dandyrar Sublaneu Dandy*	13.5	14.5
6	*Micheliamacclurei Dandyrar Sublaneu Dandy*	20.5	15
7	*Micheliamacclurei Dandyrar Sublaneu Dandy*	9.5	13
8	*Micheliamacclurei Dandyrar Sublaneu Dandy*	10	13.5
9	*Micheliamacclurei Dandyrar Sublaneu Dandy*	12	15
10	*Micheliamacclurei Dandyrar Sublaneu Dandy*	16	10
11	*Micheliamacclurei Dandyrar Sublaneu Dandy*	17	14
12	*Micheliamacclurei Dandyrar Sublaneu Dandy*	14	13.5
13	*Micheliamacclurei Dandyrar Sublaneu Dandy*	12	13.5
14	*Micheliamacclurei Dandyrar Sublaneu Dandy*	18	16

Survey area C

No.	Species Name	DBH (cm)	Height (m)
1	*Micheliamacclurei Dandyrar Sublaneu Dandy*	12	9
2	*Micheliamacclurei Dandyrar Sublaneu Dandy*	14.5	8
3	*Micheliamacclurei Dandyrar Sublaneu Dandy*	6.5	7
4	*Micheliamacclurei Dandyrar Sublaneu Dandy*	16	12
5	*Micheliamacclurei Dandyrar Sublaneu Dandy*	18.5	12
6	*Micheliamacclurei Dandyrar Sublaneu Dandy*	11	10
7	*Micheliamacclurei Dandyrar Sublaneu Dandy*	13.5	13.5
8	*Micheliamacclurei Dandyrar Sublaneu Dandy*	16	13
9	*Micheliamacclurei Dandyrar Sublaneu Dandy*	13.5	12.7
10	*Micheliamacclurei Dandyrar Sublaneu Dandy*	14.5	11.5
11	*Micheliamacclurei Dandyrar Sublaneu Dandy*	7	8
12	*Micheliamacclurei Dandyrar Sublaneu Dandy*	14.5	11.5

Survey was carried out for trees higher than 1.3m height in three square plots (30m*30m).

Table 5.10 a-2) Description of trees: China-2 (Xiamen —xiaoping)

Name of Plot: (XPT-2001, 2002, 2003) Xianjiaoji Date: 2000-10-30

Survey area A

No.	Species Name	DBH (cm)	Height (m)
1	*Fokienia Hodginsii*	13	14.6
2	*Fokienia Hodginsii*	1717.5	14
3	*Fokienia Hodginsii*	3	6.2
4	*Fokienia Hodginsii*	12.7	13
5	*Fokienia Hodginsii*	13.5	13.8
6	*Fokienia Hodginsii*	15	15
7	*Fokienia Hodginsii*	14	10.5
8	*Fokienia Hodginsii*	17.7	10.2
9	*Fokienia Hodginsii*	11.2	11.5
10	*Fokienia Hodginsii*	10.5	11

Survey area B

No.	Species Name	DBH (cm)	Height (m)
1	*Fokienia Hodginsii*	12.3	10.2
2	*Fokienia Hodginsii*	19.2	11
3	*Fokienia Hodginsii*	17.2	12.7
4	*Fokienia Hodginsii*	18	11.2
5	*Fokienia Hodginsii*	7.3	6.6
6	*Fokienia Hodginsii*	18.9	14
7	*Fokienia Hodginsii*	12.7	10
8	*Fokienia Hodginsii*	15.1	14.5
9	*Fokienia Hodginsii*	13.4	13.5
10	*Fokienia Hodginsii*	14	13.8
11	*Fokienia Hodginsii*	14	13.2
12	*Fokienia Hodginsii*	14	13.5
13	*Fokienia Hodginsii*	13	13

Surveyor area C

No.	Species Name	DBH (cm)	Height (m)
1	*Fokienia Hodginsii*	8	8.3
2	*Fokienia Hodginsii*	9	8
3	*Fokienia Hodginsii*	12	9
4	*Fokienia Hodginsii*	11.5	8.6
5	*Fokienia Hodginsii*	12	8.8
6	*Fokienia Hodginsii*	8.3	7.6
7	*Fokienia Hodginsii*	12.3	8.6
8	*Fokienia Hodginsii*	9.5	6
9	*Fokienia Hodginsii*	11.5	8.2
10	*Fokienia Hodginsii*	7.3	7.2
11	*Fokienia Hodginsii*	10	8
12	*Fokienia Hodginsii*	8.5	7.5
13	*Fokienia Hodginsii*	9	8
14	*Fokienia Hodginsii*	9.5	7
15	*Fokienia Hodginsii*	7	6.5

Survey was carried out for trees higher than 1.3m height in three square plots (30m*30m).

Table 5.10 a-3) Description of trees: China-3 (Xiamen —xiaoping)

Name of Plot: (XPT-3001, 3002, 3003) Qianchi Date: 2000-11-4

Survey area A

Serial No.	Species Name	DBH (cm)	Height (m)
1	*Pinus Massoniana*	7.5	5
2	*Pinus Massoniana*	16.5	6.5
3	*Pinus Massoniana*	14	4.5
4	*Pinus Massoniana*	9	4.8
5	*Pinus Massoniana*	12.5	6.3
6	*Pinus Massoniana*	13	5.5
7	*Pinus Massoniana*	14	5.7
8	*Pinus Massoniana*	11.5	6.5
9	*Pinus Massoniana*	11	4.2
10	*Pinus Massoniana*	8	3.5
11	*Pinus Massoniana*	7	3.3
12	*Pinus Massoniana*	12	5
13	*Pinus Massoniana*	14	5.9
14	*Pinus Massoniana*	14.5	6.4
15	*Pinus Massoniana*	10.5	3.5
16	*Pinus Massoniana*	17	3
17	*Pinus Massoniana*	6	2.8

Survey area B

Serial No.	Species Name	DBH (cm)	Height (m)
1	*Pinus Massoniana*	12.7	7.2
2	*Pinus Massoniana*	17	7.3
3	*Pinus Massoniana*	19	7.1
4	*Pinus Massoniana*	10	5.5
5	*Pinus Massoniana*	19	7.3
6	*Pinus Massoniana*	6.5	3.1
7	*Pinus Massoniana*	13.5	6.8
8	*Pinus Massoniana*	11	5.4
9	*Pinus Massoniana*	12	6.5
10	*Pinus Massoniana*	13	6.2
11	*Pinus Massoniana*	10	10.5
12	*Pinus Massoniana*	7.5	4.5
13	*Pinus Massoniana*	8.5	4.9
14	*Pinus Massoniana*	9.5	5.2
15	*Pinus Massoniana*	13.5	7.4
16	*Pinus Massoniana*	10	5.4
17	*Pinus Massoniana*	10	5.3

Survey area C

Serial No.	Species Name	DBH (cm)	Height (m)
1	*Pinus Massoniana*	12.5	6
2	*Pinus Massoniana*	15	6.5
3	*Pinus Massoniana*	9.5	4.3
4	*Pinus Massoniana*	9	4.5
5	*Pinus Massoniana*	11	5.2
6	*Pinus Massoniana*	14	6.3
7	*Pinus Massoniana*	12.5	5.7
8	*Pinus Massoniana*	12	5.1
9	*Pinus Massoniana*	10.6	4.8
10	*Pinus Massoniana*	9.5	4.9
11	*Pinus Massoniana*	8	4.1
12	*Pinus Massoniana*	11	4.5
13	*Pinus Massoniana*	16.5	6.7
14	*Pinus Massoniana*	11	5.2
15	*Pinus Massoniana*	9	3.5
16	*Pinus Massoniana*	11	5.5
17	*Pinus Massoniana*	12	6.3
18	*Pinus Massoniana*	11	5.9
19	*Pinus Massoniana*	12	6.1

Survey was carried out for trees higher than 1.3m height in three square plots (30m*30m).

Table 5.10 b-1) Results of description trees: Lake Ijira-1

Date: 7 Feb. 2001

Survey area 1

No.	Species name	DBH (cm)	Height (m)
1	*Cryptomeria japonica*	3.1	2.5
2	*Chamaecyparis obtusa*	2.6	
3	*Acanthopanax sciadophylloides*	1.9	3.8
4	*Acanthopanax sciadophylloides*	2.5	4.2
5	*Chamaecyparis obtusa*	2	2
6	*Rhus trichocarpa*	1.2	2.5
7	*Chamaecyparis obtusa*	1.9	2
8	*Cryptomeria japonica*	3.6	4.7
9	*Chamaecyparis obtusa*	1.1	
10	*Cryptomeria japonica*	3.7	4.4
11	*Acanthopanax sciadophylloides*	2.9	4.6
12	*Chamaecyparis obtusa*	3.6	4
13	*Cryptomeria japonica*	3.5	4.1
14	*Chamaecyparis obtusa*	1.9	2.4
15	*Chamaecyparis obtusa*	9.6	8
16	*Cryptomeria japonica*	3.3	4.5
17	*Chamaecyparis obtusa*	2.9	
18	*Chamaecyparis obtusa*	1.4	
19	*Chamaecyparis obtusa*	2.5	
20	*Cryptomeria japonica*	23.8	13.5
21	*Chamaecyparis obtusa*	8.5	7.3
22	*Chamaecyparis obtusa*	13.1	11
23	*Chamaecyparis obtusa*	4.4	4.5
24	*Chamaecyparis obtusa*	10	7.8
25	*Chamaecyparis obtusa*	22	13.5
26	*Chamaecyparis obtusa*	9.1	8.1
27	*Chamaecyparis obtusa*	6	
28	*Chamaecyparis obtusa*	27.2	
29	*Chamaecyparis obtusa*	1.5	
30	*Cryptomeria japonica*	0.8	1.5
31	*Chamaecyparis obtusa*	23.5	13
32	*Chamaecyparis obtusa*	16.5	10
33	*Chamaecyparis obtusa*	20.3	13
34	*Chamaecyparis obtusa*	14.3	
35	*Cryptomeria japonica*	22.6	13.5
36	*Chamaecyparis obtusa*	14.3	12
37	*Chamaecyparis obtusa*	9.2	
38	*Chamaecyparis obtusa*	6.9	
39	*Chamaecyparis obtusa*	5	
40	*Chamaecyparis obtusa*	4.9	
41	*Chamaecyparis obtusa*	11.8	
42	*Chamaecyparis obtusa*	12	10.4
43	*Chamaecyparis obtusa*	13	
44	*Chamaecyparis obtusa*	11.7	

Date: 7 Feb. 2001

Survey area 2

No.	Species name	DBH (cm)	Height (m)
51	*Cryptomeria japonica*	45.7	21.1
52	*Chamaecyparis obtusa*	4	3
53	*Pinus densiflora*	27	13.9
54	*Chamaecyparis obtusa*	9.1	
55	*Cryptomeria japonica*	5.1	
56	*Cryptomeria japonica*	5.5	5
57	*Chamaecyparis obtusa*	6.7	8.5
58	*Cryptomeria japonica*	4.4	4
59	*Chamaecyparis obtusa*	9.8	10
60	*Chamaecyparis obtusa*	6.5	6
61	*Chamaecyparis obtusa*	13.7	11.5
62	*Chamaecyparis obtusa*	10.2	8.4
63	*Chamaecyparis obtusa*	10.8	
64	*Chamaecyparis obtusa*	14.5	11.5
65	*Chamaecyparis obtusa*	8.1	
66	*Chamaecyparis obtusa*	22	
67	*Chamaecyparis obtusa*	6.8	
68	*Chamaecyparis obtusa*	7.2	
69	*Chamaecyparis obtusa*	6	
70	*Chamaecyparis obtusa*	17.5	
71	*Chamaecyparis obtusa*	5.1	
72	*Chamaecyparis obtusa*	7.8	
73	*Chamaecyparis obtusa*	18.2	
74	*Chamaecyparis obtusa*	10.5	
75	*Chamaecyparis obtusa*	22.9	
76	*Chamaecyparis obtusa*	16	
77	*Chamaecyparis obtusa*	19.1	12.5
78	*Chamaecyparis obtusa*	15.3	12
79	*Chamaecyparis obtusa*	8.3	

Date: 7 Feb. 2001

Survey area 3

No.	Species name	DBH (cm)	Height (m)
81	*Cryptomeria japonica*	28.9	
82	*Pinus densiflora*	35.9	15.9
83	*Pinus densiflora*	45.7	
84	*Pinus densiflora*	37.6	17.4
85	*Chamaecyparis obtusa*	21	
86	*Pinus densiflora*	28.7	15.8
87	*Chamaecyparis obtusa*	25.7	
88	*Chamaecyparis obtusa*	22.4	
89	*Cryptomeria japonica*	20.7	
90	*Chamaecyparis obtusa*	22.6	
91	*Chamaecyparis obtusa*	18	
92	*Chamaecyparis obtusa*	24.3	
93	*Chamaecyparis obtusa*	18.7	
94	*Chamaecyparis obtusa*	21.9	
95	*Chamaecyparis obtusa*	18.3	
96	*Cryptomeria japonica*	22.3	
97	*Chamaecyparis obtusa*	21.9	
98	*Cryptomeria japonica*	20.3	

Table 5.10 b-2) Results of description trees: Lake Ijira-2

Date: 7 Feb. 2001

Survey area 1

No.	Species name	DBH (cm)	Height (m)
1	*Chamaecyparis obtusa*	11.3	12
2	*Chamaecyparis obtusa*	27.6	
3	*Cleyera japonica*	1.8	2.5
4	*Quercus glauca*	1.4	2.8
5	*Chamaecyparis obtusa*	9.6	6.1
6	*Cleyera japonica*	1.1	2
7	*Castanea crenata*	17.3	12.4
8	*Camellia japonica*	0.6	1.8
9	*Castanopsis cuspidata* var. *cuspi*	12.3	10.8
10	*Castanopsis cuspidata* var. *cuspi*	16.8	11.3
11	*Castanopsis cuspidata* var. *cuspi*	13.8	9.6
12	*Chamaecyparis obtusa*	3	4.2
13	*Chamaecyparis obtusa*	23.4	
14	*Chamaecyparis obtusa*	18.8	15.5
15	*Quercus glauca*	2.9	4.7
16	*Chamaecyparis obtusa*	14.1	11.5
17	*Camellia japonica*	3	3.5
18	*Chamaecyparis obtusa*	20.6	
19	*Castanea crenata*	18	11.3
20	*Quercus glauca*	2.3	2.8
21	*Quercus glauca*	0.6	1.7
22	*Acanthopanax sciadophylloides*	10	9.3
23	*Quercus glauca*	3.6	5
24	*Castanea crenata*	9.4	12.4
25	*Cleyera japonica*	1.1	2.3
26	*Chamaecyparis obtusa*	14.4	12.5
27	*Styrax japonica*	3.2	5.8
28	*Camellia japonica*	0.7	1.7
29	*Chamaecyparis obtusa*	20	14.5
30	*Camellia japonica*	1.5	2.2
31	*Quercus glauca*	2.8	3.2
32	*Quercus glauca*	2.2	2.5
33	*Quercus glauca*	0.8	1.8
34	*Quercus glauca*	0.8	1.8
35	*Chamaecyparis obtusa*	17.9	16.1
36	*Chamaecyparis obtusa*	16.7	12.5
37	*Vaccinium bracteatum*	0.7	16
38	*Chamaecyparis obtusa*	13	8.2
39	*Cleyera japonica*	1.7	2.2
40	*Cleyera japonica*	2.8	2.7
41	*Chamaecyparis obtusa*	17.6	13.5

Date: 7 Feb. 2001

Survey area 2

No.	Species name	DBH (cm)	Height (m)
51	*Chamaecyparis obtusa*	9.6	11.2
52	*Chamaecyparis obtusa*	17.6	
53	*Chamaecyparis obtusa*	26	14
54	*Chamaecyparis obtusa*	27	17.9
55	*Chamaecyparis obtusa*	19.4	13
56	*Chamaecyparis obtusa*	14.5	
57	*Chamaecyparis obtusa*	20.9	13.5
58	*Chamaecyparis obtusa*	5.3	
59	*Chamaecyparis obtusa*	15.5	
60	*Chamaecyparis obtusa*	14.4	
61	*Quercus glauca*	6.7	8.8
62	*Chamaecyparis obtusa*	19.4	
63	*Chamaecyparis obtusa*	8.3	
64	*Chamaecyparis obtusa*	15.4	11.2
65	*Chamaecyparis obtusa*	7.5	8
66	*Chamaecyparis obtusa*	10.9	8.5
67	*Chamaecyparis obtusa*	24.8	17.5
68	*Cryptomeria japonica*	24.1	16.6
69	*Cryptomeria japonica*	16.9	16.7
70	*Chamaecyparis obtusa*	21	14.7

Date: 7 Feb. 2001

Survey area 3

No.	Species name	DBH (cm)	Height (m)
81	*Chamaecyparis obtusa*	24.3	
82	*Chamaecyparis obtusa*	18.2	
83	*Chamaecyparis obtusa*	20.5	
84	*Castanea crenata*	22.2	12.8
85	*Chamaecyparis obtusa*	21.1	
86	*Chamaecyparis obtusa*	18.6	
87	*Chamaecyparis obtusa*	19.5	
88	*Chamaecyparis obtusa*	23.8	
89	*Chamaecyparis obtusa*	21.8	
90	*Cryptomeria japonica*	24.6	15.4
91	*Chamaecyparis obtusa*	23.7	
92	*Cryptomeria japonica*	28.3	16.1
93	*Chamaecyparis obtusa*	21	

Table 5.10 b-3) Results of description trees: Lake Ijira-3

Date: 9 Feb. 2001

Survey area 1

No.	Species name	DBH (cm)	Height (m)
1	*Chamaecyparis obtusa*	10.9	
2	*Chamaecyparis obtusa*	9.5	
3	*Chamaecyparis obtusa*	13.9	
4	*Chamaecyparis obtusa*	15.2	
5	*Chamaecyparis obtusa*	11.3	
6	*Chamaecyparis obtusa*	16.4	
7	*Chamaecyparis obtusa*	16.9	
8	*Chamaecyparis obtusa*	12.1	
9	*Chamaecyparis obtusa*	13.3	
10	*Chamaecyparis obtusa*	11.8	
11	*Chamaecyparis obtusa*	15.2	12
12	*Chamaecyparis obtusa*	17.2	12.4
13	*Chamaecyparis obtusa*	12.1	
14	*Chamaecyparis obtusa*	9.2	9.9
15	*Chamaecyparis obtusa*	9	8.9
16	*Chamaecyparis obtusa*	15.7	12.8
17	*Chamaecyparis obtusa*	11.6	
18	*Chamaecyparis obtusa*	15.2	12.4
19	*Chamaecyparis obtusa*	13.3	
20	*Chamaecyparis obtusa*	15.1	12.2
21	*Chamaecyparis obtusa*	14.5	
22	*Chamaecyparis obtusa*	11.5	
23	*Chamaecyparis obtusa*	8.8	9.3
24	*Chamaecyparis obtusa*	16.9	
25	*Chamaecyparis obtusa*	10.4	10.5
26	*Chamaecyparis obtusa*	19.6	

Date: 9 Feb. 2001

Survey area 2

No.	Species name	DBH (cm)	Height (m)
71	*Chamaecyparis obtusa*	16.8	
72	*Chamaecyparis obtusa*	14.4	
73	*Chamaecyparis obtusa*	14.5	
74	*Chamaecyparis obtusa*	10.8	
75	*Chamaecyparis obtusa*	16.3	12
76	*Chamaecyparis obtusa*	8.6	
77	*Chamaecyparis obtusa*	8.4	
78	*Chamaecyparis obtusa*	14	11.5
79	*Chamaecyparis obtusa*	9.4	
80	*Chamaecyparis obtusa*	13.5	
81	*Chamaecyparis obtusa*	14.1	
82	*Chamaecyparis obtusa*	15.3	
83	*Chamaecyparis obtusa*	10.2	
84	*Chamaecyparis obtusa*	17.9	
85	*Chamaecyparis obtusa*	8.8	
86	*Chamaecyparis obtusa*	10.4	
87	*Chamaecyparis obtusa*	17	
88	*Chamaecyparis obtusa*	8.5	
89	*Chamaecyparis obtusa*	14.9	
90	*Chamaecyparis obtusa*	8.5	
91	*Chamaecyparis obtusa*	11.6	
92	*Chamaecyparis obtusa*	9.3	
93	*Chamaecyparis obtusa*	15.9	13
94	*Chamaecyparis obtusa*	10.2	
95	*Chamaecyparis obtusa*	14	
96	*Chamaecyparis obtusa*	12.5	

Date: 9 Feb. 2001

Survey area 3

No.	Species name	DBH (cm)	Height (m)
121	*Pinus densiflora*	38.5	10.6
122	*Cryptomeria japonica*	33.7	17.2
123	*Cryptomeria japonica*	20.6	11.9
124	*Chamaecyparis obtusa*	18.8	
125	*Chamaecyparis obtusa*	18	
126	*Chamaecyparis obtusa*	18.8	
127	*Chamaecyparis obtusa*	22.9	11.9
128	*Chamaecyparis obtusa*	18.1	
129	*Chamaecyparis obtusa*	20.9	13.8

Table 5.10 b-3) (continued)

Survey area 1(continued)

27	*Chamaecyparis obtusa*	13.9	11.8
28	*Chamaecyparis obtusa*	12.6	
29	*Chamaecyparis obtusa*	15.9	12.6
30	*Chamaecyparis obtusa*	13.4	
31	*Chamaecyparis obtusa*	18.2	
32	*Chamaecyparis obtusa*	11.7	
33	*Chamaecyparis obtusa*	12.3	
34	*Chamaecyparis obtusa*	11.8	
35	*Chamaecyparis obtusa*	16	
36	*Chamaecyparis obtusa*	10	
37	*Chamaecyparis obtusa*	16.5	
38	*Chamaecyparis obtusa*	11.5	
39	*Chamaecyparis obtusa*	14.8	
40	*Chamaecyparis obtusa*	13.3	
41	*Chamaecyparis obtusa*	14.4	10.5
42	*Chamaecyparis obtusa*	21.6	
43	*Chamaecyparis obtusa*	14	
44	*Chamaecyparis obtusa*	10.5	
45	*Chamaecyparis obtusa*	12.4	
46	*Chamaecyparis obtusa*	13.4	
47	*Chamaecyparis obtusa*	10.2	
48	*Chamaecyparis obtusa*	8.4	
49	*Chamaecyparis obtusa*	15.1	
50	*Chamaecyparis obtusa*	14.1	
51	*Chamaecyparis obtusa*	14.1	
52	*Chamaecyparis obtusa*	10.7	
53	*Chamaecyparis obtusa*	16.5	
54	*Chamaecyparis obtusa*	11.1	
55	*Chamaecyparis obtusa*	13.4	
56	*Chamaecyparis obtusa*	13.1	
57	*Chamaecyparis obtusa*	10.6	
58	*Chamaecyparis obtusa*	17.4	
59	*Chamaecyparis obtusa*	14.1	
60	*Chamaecyparis obtusa*	16.6	
61	*Chamaecyparis obtusa*	14.3	
62	*Chamaecyparis obtusa*	15.8	

Survey area 2 (continued)

97	*Chamaecyparis obtusa*	16.7	
98	*Chamaecyparis obtusa*	12.7	
99	*Chamaecyparis obtusa*	13.9	
100	*Chamaecyparis obtusa*	15.1	
101	*Chamaecyparis obtusa*	14.1	
102	*Chamaecyparis obtusa*	15	10.6
103	*Chamaecyparis obtusa*	14.5	
104	*Chamaecyparis obtusa*	11.1	
105	*Chamaecyparis obtusa*	14.7	
106	*Chamaecyparis obtusa*	9.1	9.1
107	*Chamaecyparis obtusa*	17.1	13.5
108	*Chamaecyparis obtusa*	19.1	
109	*Chamaecyparis obtusa*	13.4	
110	*Chamaecyparis obtusa*	15.4	11.1
111	*Chamaecyparis obtusa*	20.7	13
112	*Chamaecyparis obtusa*	18.5	14.2

Table 5.10 b-4) Results of description trees: Lake Ijira-4

Date: 26 Feb. 2001

Survey area 1

No.	Species name	DBH (cm)	Height (m)
1	*Eurya japonica*	1.9	
2	*Quercus salicina*	1.6	
3	*Eurya japonica*	1	
4	*Cleyera japonica*	1.2	
5	*Hamamelis japonica*	10.4	
6	*Lyonia elliptica*	3.9	
7	*Quercus serrata*	14.3	12
8	*Ilex pedunculosa*	6.3	5.6
9	*Cleyera japonica*	1.8	
10	*Cleyera japonica*	1.9	
11	*Cleyera japonica*	3.4	
12	*Cleyera japonica*	2.3	
13	*Lyonia elliptica*	6.4	8.3
14	*Cleyera japonica*	2.4	
15	*Cleyera japonica*	0.7	
16	*Cleyera japonica*	2	
17	*Cleyera japonica*	3.4	
18	*Cleyera japonica*	2.2	
19	*Cleyera japonica*	2.3	
20	*Camellia japonica*	0.5	
21	*Cleyera japonica*	1.3	
22	*Cleyera japonica*	3.3	
23	*Cleyera japonica*	2.5	2.3
24	*Eurya japonica*	1.6	
25	*Quercus glauca*	2.6	
26	*Quercus myrsinaefolia*	0.8	
27	*Quercus myrsinaefolia*	2.6	
28	*Lyonia elliptica*	2.4	
29	*Cleyera japonica*	1.5	
30	*Cleyera japonica*	2.2	
31	*Eurya japonica*	2.5	
32	*Eurya japonica*	1.4	
33	*Eurya japonica*	2	
34	*Eurya japonica*	1.6	
35	*Tripetaleia paniculata var. latifolia*	1.9	
36	*Cleyera japonica*	1	
37	*Quercus glauca*	2.9	
38	*Quercus glauca*	2.5	
39	*Quercus myrsinaefolia*	3.6	
40	*Quercus myrsinaefolia*	2.1	

Date: 26 Feb. 2001

Survey area 2

No.	Species name	DBH (cm)	Height (m)
1	*Clethra barbinervis*	13.7	12.2
2	*Clethra barbinervis*	14.6	12.2
3	*Lyonia elliptica*	5	
4	*Clethra barbinervis*	9.9	9.5
5	*Clethra barbinervis*	11.3	9
6	*Ilex pedunculosa*	6.2	
7	*Hamamelis japonica*	8.3	
8	*Hamamelis japonica*	5	
9	*Hamamelis japonica*	8.5	
10	*Hamamelis japonica*	6.2	
11	*Lyonia elliptica*	4.7	
12	*Lyonia elliptica*	4.1	
13	*Clethra barbinervis*	10.2	
14	*Clethra barbinervis*	7.6	
15	*Clethra barbinervis*	8	
16	*Clethra barbinervis*	7	
17	*Quercus salicina*	4	
18	*Clethra barbinervis*	11.8	11.5
19	*Clethra barbinervis*	13.2	12.5
20	*Clethra barbinervis*	9.1	
21	*Clethra barbinervis*	11.7	12.8
22	Pieris japonica	6.1	
23	Pieris japonica	4.2	
24	*Clethra barbinervis*	5.7	
25	*Ilex pedunculosa*	12.7	10.9
26	*Quercus serrata*	21.5	12.4
27	*Clethra barbinervis*	8.1	
28	*Pinus densiflora*	31.2	
29	*Quercus serrata*	26.2	14.5
30	*Eurya japonica*	4.8	
31	*Quercus myrsinaefolia*	5.3	
32	*Ilex pedunculosa*	4.9	
33	*Hamamelis japonica*	7.3	9.7
34	*Pinus densiflora*	23.3	13.3
35	*Hamamelis japonica*	10	10
36	*Hamamelis japonica*	4.3	
37	*Pinus densiflora*	23.2	
38	*Clethra barbinervis*	7.2	
39	*Clethra barbinervis*	8.1	
40	*Eurya japonica*	4.1	

Date: 26 Feb. 2001

Survey area 3

No.	Species name	DBH (cm)	Height (m)
1	*Pinus densiflora*	26.6	12.4
2	*Pinus densiflora*	33.2	16.1
3	*Quercus myrsinaefolia*	20.9	11.2
4	*Pinus densiflora*	24.8	12.5

Table 5.10 b-4) (continued-1)

Survey area 1 (continued)				Survey area 2 (continued)			
41	*Hamamelis japonica*	7.7		41	*Clethra ƀarbinervis*	4.6	
42	*Hamamelis japonica*	6.6		42	*Clethra ƀarbinervis*	4.8	
43	*Parabenzoin trilobum*	3		43	*Clethra ƀarbinervis*	4.8	
44	*Parabenzoin trilobum*	1.1		44	*Eurya japonica*	4.1	
45	*Parabenzoin trilobum*	3.2		45	*Pinus densiflora*	24	16.5
46	*Lyonia ɛlliptica*	2		46	*Camellia japonica*	5.4	6.2
47	*Lyonia ɛlliptica*	2.5		47	*Camellia japonica*	5.2	
48	*Clethra ƀarbinervis*	6.3		48	*Ilex ƥedunculosa*	7.3	
49	*Eurya japonica*	1.3		49	*Lyonia ɛlliptica*	5.5	
50	*Cleyera japonica*	3.2		50	*Ilex ƥedunculosa*	5.8	
51	*Cleyera japonica*	1.8		51	*Ilex ƥedunculosa*	7.8	
52	*Cleyera japonica*	1.8		52	*Hamamelis japonica*	4.9	
53	*Eurya japonica*	1.5		53	*Quercus glauca*	5.7	
54	*Cleyera japonica*	0.8		54	*Lyonia ɛlliptica*	8.2	
55	*Cleyera japonica*	2.3		55	*Quercus glauca*	7	
56	*Cleyera japonica*	2.1		56	*Quercus glauca*	9.6	
57	*Cleyera japonica*	1.1		57	*Quercus glauca*	6.5	
58	*Cleyera japonica*	0.5		58	*Quercus glauca*	9.3	
59	*Pinus densiflora*	22.5	12.5	59	*Lyonia ɛlliptica*	4.5	
60	*Eurya japonica*	3.5	4.6	60	*Quercus myrsinaefolia*	15.1	
61	*Tripetaleia paniculata*	1.8		61	*Quercus glauca*	8.7	
62	*Pinus densiflora*	26.9	11.4	62	*Quercus glauca*	6.9	
63	*Clethra ƀarbinervis*	7.1		63	Pieris japonica	5.6	3.6
64	*Eurya japonica*	3.6		64	*Quercus serrata*	9.2	
65	*Eurya japonica*	1.9		65	*Lyonia ɛlliptica*	7	
66	*Eurya japonica*	2.1		111	*Cleyera japonica*	1.4	
67	*Eurya japonica*	1.5		112	*Cleyera japonica*	1	2.3
68	*Lyonia ɛlliptica*	3.5		113	*Cleyera japonica*	0.7	1.7
69	*Lyonia ɛlliptica*	6.3		114	*Cleyera japonica*	2.2	2.3
70	*Pinus densiflora*	32.2	15.3	115	*Eurya japonica*	3	
71	*Eurya japonica*	1.6		116	*Cleyera japonica*	2.6	
72	*Eurya japonica*	2.9		117	*Cleyera japonica*	1.9	
73	*Eurya japonica*	1.3		118	*Cleyera japonica*	1.1	
74	*Ilex ƥedunculosa*	3.2		119	*Lyonia ɛlliptica*	4.9	
75	*Cleyera japonica*	1.8		120	Rhododendron dilatatum	2.9	
76	*Cleyera japonica*	2.9		121	*Hamamelis japonica*	6.6	
77	*Clethra ƀarbinervis*	11.1		122	*Quercus glauca*	1.9	
78	*Clethra ƀarbinervis*	5.6		123	*Eurya japonica*	2	
79	*Clethra ƀarbinervis*	11		124	*Hamamelis japonica*	2.6	
80	*Clethra ƀarbinervis*	6.3		125	*Hamamelis japonica*	3.5	

Table 5.10 b-4) (continued-2)

Survey area 1 (continued)

81	*Cleyera japonica*	1	
82	*Cleyera japonica*	2.2	
83	*Rhododendron dilatatum*	2.2	
84	*Rhododendron dilatatum*	1.8	
85	*Quercus glauca*	1.4	
86	*Quercus glauca*	5.3	
87	*Quercus glauca*	5.8	
88	*Pinus densiflora*	25.8	16.6
89	*Cleyera japonica*	1	
90	*Quercus serrata*	12.7	15
91	*Rhododendron dilatatum*	2.4	
92	*Rhododendron dilatatum*	2.6	
93	*Rhododendron dilatatum*	1.5	
94	*Quercus glauca*	2.5	
95	*Quercus glauca*	2.5	
96	*Quercus glauca*	1.5	
97	*Quercus glauca*	1.1	
98	*Lyonia elliptica*	4.1	
99	*Eurya japonica*	1.7	
100	*Lyonia elliptica*	9.2	
101	*Lyonia elliptica*	3.1	
102	*Cleyera japonica*	1.8	
103	*Cleyera japonica*	2.3	
104	*Cleyera japonica*	1.4	
105	*Cleyera japonica*	1.5	
106	*Cleyera japonica*	0.8	
107	*Cleyera japonica*	1.3	
108	*Cleyera japonica*	0.7	
109	*Cleyera japonica*	1	
110	*Eurya japonica*	2.6	

Survey area 1 (continued)

126	*Hamamelis japonica*	5.6	
127	*Hamamelis japonica*	7.4	
128	*Hamamelis japonica*	4.6	
129	*Hamamelis japonica*	4.8	
130	*Clethra barbinervis*	2.1	
131	*Hamamelis japonica*	3.1	
132	*Hamamelis japonica*	2.2	
133	*Hamamelis japonica*	1.8	
134	*Hamamelis japonica*	3.4	
135	Rhododendron dilatatum	1.8	
136	*Pinus densiflora*	27.9	17.4
137	*Eurya japonica*	2.4	
138	*Eurya japonica*	3.4	
139	*Clethra barbinervis*	11.7	
140	*Clethra barbinervis*	9.7	
141	*Clethra barbinervis*	4.5	

Table 5.10 c-1) Results of description trees: Mt. Makilling

Date: 26 August 2000

Survey area 1

No.	Species name	DBH (cm)	Height (m)	No.	Species name	DBH (cm)	Height (m)
1	*Celtis luzonica* Warb.	7.3	5.6	41	*Dysoxylum arborescens* (Blume) Miq.	2.5	3
2	*Palaquium foxworthyi* Merr.	4.5	2.44	42	*Alangium meyeri* Merr.	5.7	2.78
3	*Chisocheton pentandrus* (Blanco) Merr. ssp. p*entandrus*	12.2	10.93	43	*Parashorea malaanonan* (Blanco) Merr,	0.5	2.5
4	*Diplodiscus paniculatus* Turcz.	4.5	9.52	44	*Dysoxylum arborescens* (Blume) Miq.	3.5	3
5	*Celtis luzonica* Warb.	3.3	3.7	45	*Celtis luzonica* Warb.	1.5	3.2
6	*Myristica philippinensis* Lam.	4	2.37	46	*Celtis luzonica* Warb.	2.5	3.42
7	*Celtis luzonica* Warb.	8.7	6.5	47	*Dillenia indica* L.	6	4.28
8	*Parashorea malaanonan* (Blanco) Merr,	3.5	3.35	48	*Celtis luzonica* Warb.	2	3.3
9	*Diplodiscus paniculatus* Turcz.	2	2.37	49	*Parashorea malaanonan* (Blanco) Merr,	5	3.61
10	*Parashorea malaanonan* (Blanco) Merr,	1.5	2.19	50	*Celtis luzonica* Warb.	3.5	2.91
11	*Celtis luzonica* Warb.	3.3	2.9	51	*Clausena anisum-olens* (Blanco) Merr.	3	2.89
12	*Dysoxylum arborescens* (Blume) Miq.	1.5	3.34	52	*Diplodiscus paniculatus* Turcz.	2.2	2.89
13	*Diospyrus philippinensis* (Desr.) Gurke	0.5	1.53	53	*Alangium meyeri* Merr.	45	14.21
14	*Casearia fuliginosa* (Blanco) Blanco	15	9.74	54	*Neonauclea bartlingii* (DC) Merr.	12.5	9.75
15	*Celtis luzonica* Warb.	3	3.23	55	*Pisonia umbillifera* (Fast.) Seem.	30.5	9.46
16				56	Coffea arabica *L.*	2	3.5
17	*Dracontomelon dao* (Blanco) Merr.	11.2	12.3	57	Coffea arabica *L.*	2.5	4
18	*Drypetes maquilengensis* (Merr.) Pax and K. Hoffm.	0.5	2.02	58	*Drypetes maquilengensis* (Merr.) Pax and K. Hoffm.	1.5	3
19	*Celtis luzonica* Warb.	3.7	2.72	59	*Neotrewia cumingii* (Muell.-Arg.) Pax & K. Hoffm.	5.5	1.76
20	*Celtis luzonica* Warb.	7.7	6.49	60	Coffea arabica *L.*	2	3.5
21	*Coffea arabica L.*	2	3.35	61	*Coffea* arabica L	0.5	3
22	*Diplodiscus paniculatus* Turcz.	37.2	13.8	62	*Drypetes maquilengensis* (Merr.) Pax and K. Hoffm.	2	3
23	*Celtis luzonica* Warb.	1.5	2	63	*Syzygium nitidum* Benth.	19.2	12.62
24	*Celtis luzonica* Warb.	1.5	2.5	64	*Knema glomerata* (Blanco) Merr.	2	2.5
25	*Celtis luzonica* Warb.	1.5	2.5	65	*Dysoxylum arborescens* (Blume) Miq.	4	3.26
26	*Knema glomerata* (Blanco) Merr.	11.2	6.61	66	*Celtis luzonica* Warb.	1	2.5
27	*Drypetes maquilengensis* (Merr.) Pax and K. Hoffm.	1	2.5	67	*Diplodiscus paniculatus* Turcz.	0.5	2
28	*Neotrewia cumingii* (Muell.-Arg.) Pax & K. Hoffm.	18	Dead	68	*Camelia lanceolata* (Blume) Seem.	6.5	3.55
29	*Strombosia philippinensis* (Baill.) Rolfe	1	2.7	69	*Camelia lanceolata* (Blume) Seem.	4	5.5
30	*Diplodiscus paniculatus* Turcz.	0.5	1.8	70	*Neolitsea vidalii* Merr.	8.2	5.81
31	*Diplodiscus paniculatus* Turcz.	0.5	2.1	71	*Celtis luzonica* Warb.	2	3.2
32	*Celtis luzonica* Warb.	0.5	2.2	72	*Pisonia umbillifera* (Fast.) Seem.	30.5	8.84
33	*Drypetes maquilengensis* (Merr.) Pax and K. Hoffm.	1	2.3	73	*Celtis luzonica* Warb.	3	3.8
34	*Ailanthus integrifolia* Lam.	0.5	2	74	Pseudo pinanga	9	4.17
35	*Drypetes maquilengensis* (Merr.) Pax and K. Hoffm.	1	2.1	75	*Dysoxylum arborescens* (Blume) Miq.	1.5	2.8
36	*Aglaia edulis* (Roxb,) Wall.	1	2.4	76	*Parashorea malaanonan* (Blanco) Merr,	3.5	4
37	*Strombosia philippinensis* (Baill.) Rolfe	0.5	2.4	77	*Diplodiscus paniculatus* Turcz.	2.5	3.7
38	*Celtis luzonica* Warb.	9	6.74	78	Pseudo pinanga	8.5	2.2
39	*Parashorea malaanonan* (Blanco) Merr,	3	2.1	79	*Nephelium ramboutan-ake* (Labill.) Leenh.	9	7.42
40	*Ficus congesta* Roxb.	20	5.22	80	*Dysoxylum arborescens* (Blume) Miq.	2.5	3.5

Table 5.10 c-2) Results of description trees: Mt. Makilling

Survey area 2

No.	Species name	DBH (cm)	Height (m)
81	*Nephelium ramboutan-ake* (Labill.) Leenh	45	9.4
82	*Diplodiscus paniculatus* Turcz.	7.2	6.28
83	*Knema glomerata* (Blanco) Merr.	8	6.29
84	*Ailanthus integrifolia* Lam.	6.3	6.95
85	Psychotria luzoniensis	17	10.55
86	*Chisocheton pentandrus* (Blanco) Merr. ssp. p*entandrus*	24	12.75
87	*Microcos stylocarpa* (Warb.) Burr.	16.5	7.41
88	*Nephelium ramboutan-ake* (Labill.) Leenh.	12	10.08
89	*Parashorea malaanonan* (Blanco) Merr,	5.8	4.37
90	*Nephelium ramboutan-ake* (Labill.) Leenh.	29	7.84
91	*Lagerstroemia speciosa* (L.) Pers.	11.3	0.63
92	*Palaquium foxworthyi* Merr.	5	4.13
93	*Diplodiscus paniculatus* Turcz.	10.5	8.26
94	*Celtis luzonica* Warb.	5	3.69
95	*Alangium meyeri* Merr.	7.7	5.52
96	*Pseudo pinanga*	12	2.87
97	*Parashorea malaanonan* (Blanco) Merr,	5	4.99
98	*Pterocymbium tinctorium* (Blanco) Merr.	7	4.69
99	*Nephelium ramboutan-ake* (Labill.) Leenh.	11.9	9.44
100	*Litsea garciae* Vid.	46.5	16.92
101	*Dendrocnide meyeniana* (Walp.) Chew	7.7	6.5
102	*Celtis luzonica* Warb.	4.9	4.63
103	*Cynometra ramiflora* L.	4.2	4.28
104	*Diplodiscus paniculatus* Turcz.	22	10.73
105	*Leea philippinensis* Merr.	4.1	4.41
106	*Celtis luzonica* Warb.	32	15.86
107	*Celtis luzonica* Warb.	5.5	4.39
108	*Voacanga globosa* (Blanco) Merr.	5	3.45

Survey area 3

No.	Species name	DBH (cm)	Height (m)
109	*Ficus minahassae* (Teijsm & de Vr.) Miq.	45	8.07
110	*Shorea contorta* Vid.	27	20.29
111	*Parashorea malaanonan* (Blanco) Merr,	27	13.63
112	*Canarium luzonicum* (Blume) A. Gray	28	12.38
113	*Pterocymbium tinctorium* (Blanco) Merr.	50	13.92
114	*Dysoxylum arborescens* (Blume) Miq.	24.5	10.9
115	*Shorea contorta* Vid.	37	15.78
116	*Diplodiscus paniculatus* Turcz.	50	14.65
117	*Diplodiscus paniculatus* Turcz.	81	26.58
118	*Parashorea malaanonan* (Blanco) Merr,	22.5	13.57
119	*Calophyllum blancoi* Pl. & Tr.	32	14.11
120	*Parashorea malaanonan* (Blanco) Merr,	47.5	18.48
121	Solenospermum toxicum	110	20.87
122	*Knema glomerata* (Blanco) Merr.	18.3	10.97
123	*Shorea contorta* Vid.	35	16.41
124	*Kingiodendron alternifolium* (Elm.) Merr. & Rolfe	100	14.43
125	*Ardisia pyramidalis* (Cav.) Pers.	21	12.51
126	*Planchonia spectabilis* Merr.	24.5	11.34
127	*Celtis luzonica* Warb.	46	21.14
128	*Celtis luzonica* Warb.	52	19.22
129	*Diplodiscus paniculatus* Turcz.	32	12.49
130	*Macaranga tanarius* (L.) Muell. –Arg.	47	15.4

Table 5.11 a-1) Results of understory vegetation: Lake Ijira-1, 2

Date: 11 October. 2000

Lake Ijira-1

Number of species:	25
Species Name	Dominance
Camellia sinensis	1
Camellia japonica	1
Rhus trichocarpa	0
Aucuba japonica	1
Eurya japonica	2
Heloniopsis orientalis	2
Clethra barbinervis	1
Mitchella undulata	1
Smilax china	0
Quercus serrata	0
Oplismenus undulatifolius	0
Ilex macropoda	0
Illicium anisatum	2
Quercus glauca	1
Cleyera japonica	1
Vaccinium bracteatum	1
Ilex crenata	0
Rhododendron macrosepalum	0
Quercus myrsinaefolia	0
Scizocodon soldanelloides	0
Osmanthus ilicifolius	0
Struthiopteris niponica	0
Styrax japonica	0
Chamaecyparis obtusa Endl.	0
Dennstaedtia scabra	0

Lake Ijira-2

Number of species:	38
Species Name	Dominance
Quercus glauca	2
Camellia japonica	1
Illicium anisatum	2
Eurya japonica	2
Lophatherum gracile	1
Aucuba japonica	1
Rubus buergeri	1
Styrax japonica	0
Paederia scandens var..Mairei	0
Cleyera japonica	1
Vaccinium bracteatum	0
Clerodendoron trichotomum	0
Rhus trichocarpa	0
Phytolacca americana	0
Viola violocea	1
Camellia sinensis	0
Oplismenus undulatifolius	0
Ilex crenata	0
Commelina communis	0
Ilex .pedunculosa	0
Abelia spathulata	0
Cornus kousa	0
Pteridium aquilinum	0
Mallotus japonicus	0
Miscanthus sinensis	0
Callicarpa mollis	0
Sagina japonica	0
Ilex macropoda	0
Viburnum furcatum	0
Wisteria floribunda	0
Struthiopteris niponica	0
Acer palmatum var. matsumurae	0
Dennstaedtia scabra	2
Ardisia japonica	0
Albizzia Julibrissin	0
Crassocephalum crepidioides	0
Quercus myrsinaefolia	0
Prunus spinulosa	0

Table 5.11 a-2) Results of understory vegetation: Lake Ijira-3, 4

Date: 11 October. 2000

Lake Ijira-3		Lake Ijira-4	
Number of species:	15	Number of species:	24
Species Name	Dominance	Species Name	Dominance
Camellia japonica	1	*Cleyera japonica*	3
Eurya japonica	1	*Quercus myrsinaefolia*	0
Pieris japonica	1	*Rhododendron dilatatum*	1
Photinia glabra	0	*Pieris japonica*	0
Quercus serrata	0	*Cymbidium goeringii*	0
Camellia sinensis	1	*Quercus salicina*	0
Quercus glauca	1	*Quercus glauca*	1
Viburnum dilatatum	0	*Eurya japonica*	1
Rubus buergeri	0	*Vaccinium bracteatum*	0
Plagiogyria japonica	0	*Lyonia elliptica*	2
Styrax japonica	0	*Prunus spinulosa*	0
Illicium anisatum	0	*Clethra barbinervis*	1
Aucuba japonica	1	*Ilex pedunculosa*	0
Castanopsis cuspidata var. cuspidata	1	*Parabenzoin trilobum*	0
Quercus myrsinaefolia	0	*Aucuba japonica*	0
		Rhus trichocarpa	0
		Acer crataegifolium	0
		Smilax china	0
		Vaccinium hirtum	0
		Sorbus japonica	0
		Hamamelis japonica	1
		Quercus myrsinaefolia	0
		Tripetaleia paniculata	0
		Quercus serrata	1

Table 5.11 b) Results of understory vegetation: Mt. Makilling

Date: 26 August 2000

Number of species:	23
Species Name	Dominance
Anaxagorea luzoniensis A. Gray	0
Strombosia philippinensis (Baill.) Rolfe	1
Buchanania arborescens (Blume) Blume	0
Nephelium ramboutan-ake (Labill.) Leenh.	0
Pterocymbium tinctorium (Blanco) Merr.	0
Shorea contorta Vid.	1
Neotrewia cumingii (Muell.-Arg.) Pax & K. Hoffm.	0
Lagerstroemia speciosa (L.) Pers.	0
Coffea excelsa	0
Chisocheton pentandrus (Blanco) Merr. ssp. p*entandrus*	0
Homolanthus populneus (Geisel.) Pax	0
Trophis philippinensis (Bur.) Corner	0
Knema glomerata (Blanco) Merr.	1
Calophyllum blancoi Pl. & Tr.	1
Diplodiscus paniculatus Turcz.	2
Celtis luzonica Warb.	2
Palaquium foxworthyi Merr.	0
Garcinia binucao (Blanco) Choisy	0
Planchonia spectabilis Merr.	0
Dysoxylum arborescens (Blume) Miq.	1
Leea philippinensis Merr.	0
Myristica philippinensis Lam.	0
Alangium chinense (Lour.) Harms & Rehd.	0

Table 5.12. Results of observation of tree decline

Country	Name of Plot	Forest type	Decline Species	Decline level (Number of decline trees)	Estimated cause
Japan	Lake Banryu 25	Natural forest (Mixed forest: Pinus sp. and broadleaf trees)	*Pinus densiflora*	Level 4 (1/44)	Pine diebacks
	Lake Banryu 29		*Chamaecyparis obtuse*	Level 4 (1/3)	Suppression by other trees
	Lake Banryu 32		-	Level 0	
	Lake Banryu 38		-	Level 0	
	Lake Banryu 39		*Chamaecyparis obtuse*	Level 4 (1/22) Level 1 (3/22)	Suppression by other trees
	Lake Banryu 47		-	Level 0	
	Lake Banryu 48		-	Level 0	
	Lake Banryu 49		-	Level 0	
	Lake Ijira-1	Man made forest	*Chamaecyparis obtuse* *Pinus densiflora*	Level 1 (3/19)	Suppression by other trees, Pine diebacks
	Lake Ijira-2		*Chamaecyparis obtuse*	Level 1 (5/20)	Suppression by other trees
	Lake Ijira-3		*Chamaecyparis obtuse*	Level 1 (1/20)	Suppression by other trees and/or damage of stem by heavy snow
	Lake Ijira-4		*Pinus densiflora*	Level 3 (4/16)	Pine diebacks
Philippines	Mt. Makilling	Secondary forest *(Mixed forest: Celtis luzonica* Warb. et al.)	-	Level 0	
Thailand	Kao Lam Dam	Secondary forest *(Mixed forest: Xylia xylocarpa*,)	-	Level 0	

Decline scale: Level 0, healthy; Level 1, slightly decline; Level 2, evidently decline; Level 3, severely decline; Level 4, dead. In Lake Banryu, all trees in areas of ca. 300 m^2 were observed.

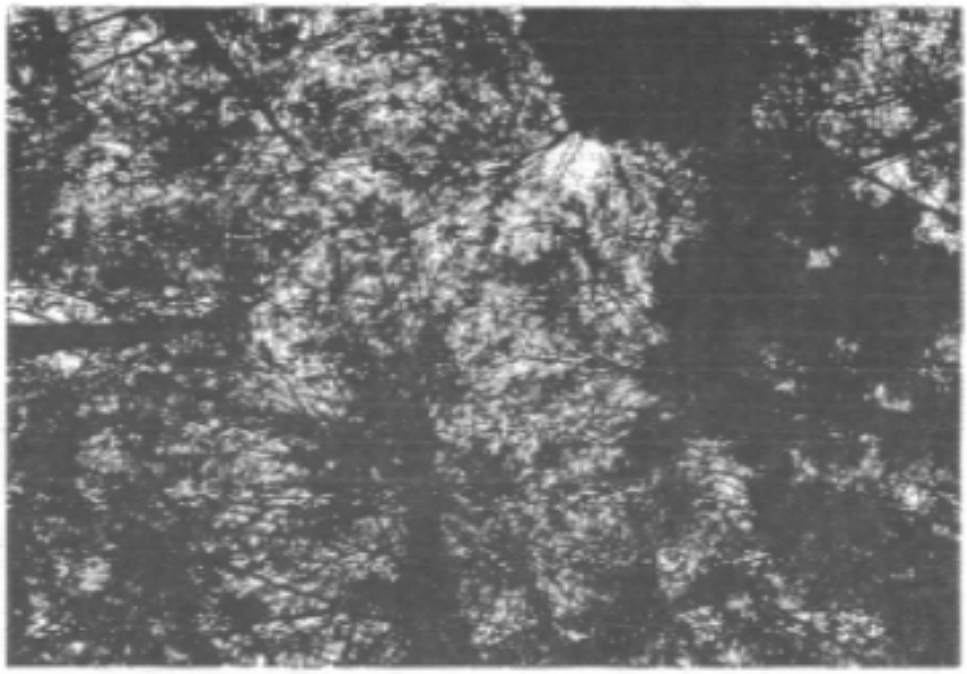
Figure 5.3 a) Photographic record of tree decline

Site name: Lake Ijira-1

Date: 2001/2/7

Surveyor: Tomohiro Ohora

EAST:



WEST:

Figure 5.3 b) Photographic record of tree decline

Site name: Lake Ijira-1

Date: 2001/2/7

Surveyor: Tomohiro Ohora

SOUTH:

NORTH:

Figure 5.3 c) Photographic record of tree decline

Site name: Lake Ijira-2

Date: 2001/2/7

Surveyor: Tomohiro Ohora

EAST:

WEST:

Figure 5.3 d) Photographic record of tree decline

Site name: Lake Ijira-2

Date: 2001/2/7

Surveyor: Tomohiro Ohora

SOUTH:

NORTH:

Figure 5.3 e) Photographic record of tree decline

Site name: Lake Ijira-3

Date: 2001/2/7

Surveyor: Tomohiro Ohora

EAST:

WEST:

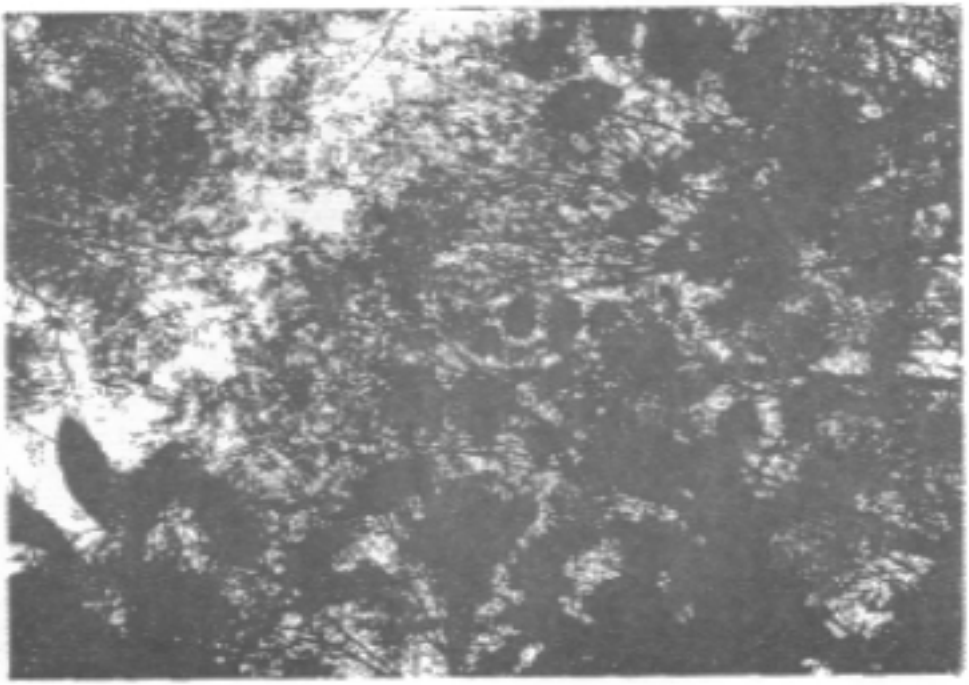


Figure 5.3 f) Photographic record of tree decline

Site name: Lake Ijira-3

Date: 2001/2/7

Surveyor: Tomohiro Ohora

SOUTH:

NORTH:

Figure 5.3 g) Photographic record of tree decline

Site name: Lake Ijira-4

Date: 2001/2/7

Surveyor: Tomohiro Ohora

EAST:

WEST:

Figure 5.3 h) Photographic record of tree decline

Site name: Lake Ijira-4

Date: 2001/2/7

Surveyor: Tomohiro Ohora

SOUTH:

NORTH:

6. Inland Aquatic Environment

6.1 Method

Northern Europe and North America experienced decrease of lake water pH levels in the 1970's compared to the levels of the 1930's and the damages resulting from this decrease, such as decline of fish population. The cause of this pH decline is believed to have been deposition of acidic substances into lakes in excess of their neutralization or buffering capacity. In general, inland bodies of water having 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. The participating countries of preparatory-phase activities of EANET are expected to carry out the monitoring of Water temperature, pH, electric conductivity (EC), alkalinity and concentrations of SO_4^{2-}, NO_3^-, Cl^-, NH_4^+, Na^+, K^+, Ca^{2+}, and Mg^{2+} of targeted lakes/rivers more than four times a year (seasonally), and, transparency, water color ,DOC(if impossible, COD), NO^{2-},PO_4^{3-} more than once a year. While, another items are specified as optional parameters to be monitored.

1) Selection of lakes for monitoring

As described in Table 6.1, 7 countries (China, Indonesia, Japan, Philippines, Russia, Thailand, and Vietnam) carried out inland aquatic environment monitoring. (One country's data which is still in the process of the data verification wasn't included in this report.) These monitoring sites consist of 10 lakes/reservoirs and 3 streams. The Manual for Monitoring Inland Aquatic Environment mentions that the lakes chosen for monitoring should be harmonic type lakes, preferably having a depth of approximately 10m or less, a water residence time of 1 year or less, an area of 1 ha or more, low alkalinity and electric conductivity, minimal anthropogenic water pollution and no coverage of the surface with aquatic organisms. For the monitoring of springs, it is desirable to locate in nature protection areas, and a minimum of human activities such as deforestation, and cultivation should be conducted or planned in the upstream area.

2) Field Operation

Surface water was sampled at one location at the center of the lake. In principle, measurement of pH and electric conductivity was conducted at the site before a precise measurement in the laboratory. Water samples for later analysis were put in a tightly stoppered polyethylene bottle and kept in a cool dark place. The samples were shipped to the laboratory in charge of chemical analysis. The water samples for analysis of chemical components other than alkalinity are filtered at the sampling site with a glass fiber filter. An example of treatment procedure is described in Fig.6.1.

Table 6.1 Outline of Inland Aquatic Environment Monitoring

Country	Name of Lake	Characteristics of sites	Parameter	Interval
China	Chongqing			
	-Nanshan	Rural	Water quality of Nanshan (Yueliang lake)	3times/yr
	-Simianshan	-	Water quality of Simianshan (Taiyang lake)	2times/yr
	Xi'an		-	
	-Dabagou	Remote		-
	Xiamen		Water quality of Xiaoping	
	-Xiaoping	Remote	(Laizhu-keng, Chishui-keng)	
				2times/yr
			Water quality of Zhuxiandong (Zhuxiandong reservoir)	2times/yr
	Zhuhai	Urban		
	-Zhuxiandong			4times/yr
Indonesia	Petenggang lake	Rural	Water quality of Petenggang lake	5times/yr.
Japan	Lake Ijira	Rural/Ecolog.	Water quality of lake Ijira	4times/yr.
	Lake Banryu	Urban/Ecolog.	Water quality of lake Banryu	4times/yr
Malaysia	-	-	-	-
Mongolia	-	-	-	-
Philippines	Lake Mojicap	Rural	Water quality Mojicap	4times/yr.

Republic of Korea	-	-	-	-
Russia	Lake Ordinscoe River Krestvoka	Remote	Water quality of Lake Ordinscoe, River Krestvoka	3times/yr. 3times/yr.
Thailand	Khao Lame Dam	Remote	Water quality of Khao Lame Dam	3times/yr.
Vietnam	Hoabinh Reservoir	Rural	Water quality of Hoabinh Reservoir	4times/yr.

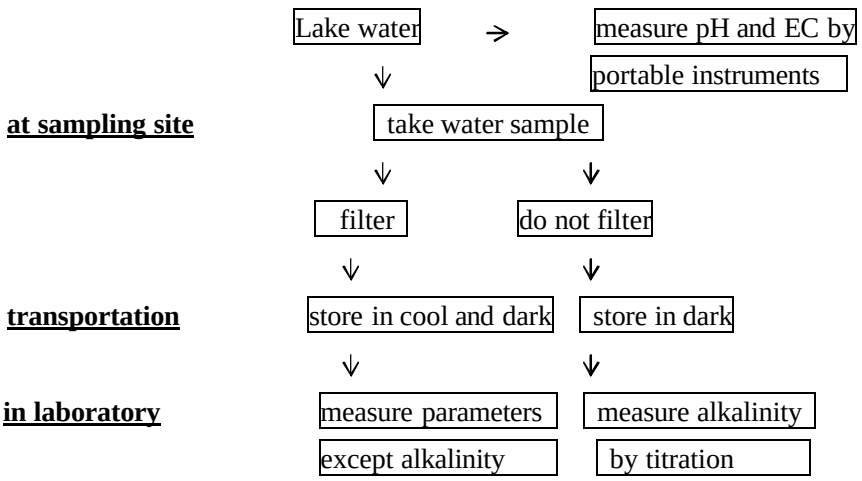


Fig.6.1 Example of treatment procedure of lake water sample

3) Laboratory Operation

Collected samples were analyzed by analytical methods specified in Table 6.2 immediately or after stored in a refrigerator.

Table 6.2 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
Total Al^{3+}	Atomic absorption spectrometry with graphite furnace
Inorganic Al^{3+}	(After filtration with Ultramicrofilter), Atomic absorption spectrometry or (After adding color former), Fluorescent spectrometry
DOC	Combustion- infrared method or wet-oxidation method

6.2 Results of Monitoring

Properties of lakes, pH, EC and concentrations of major ions are summarized in Table 6.3 and Table 6.4.

Table 6.3(1) Properties of lakes

Lake Name: Ijira Lake

Country	Japan
Location	Gifu prefecture
Altitude	110m
Origin	Artificial (dam-made lake)
Area and shape	0.1km^2
Shore line length	1.8km
Lake hydrologic type	Reservoir
Lake trophic type	Oligotrophic or mesotrophic
Water depth	Ave. 5.4m (Max 10.9m)
Water volume	0.00054km^3
Annual water level fluctuation	0-0.74m (Ave. 0.22m)
Precipitation	2,200mm/year (1993-1997)
Solar radiation	Daylight time 173hr/month (1983-1988)
Wind speed	2.1-3.0 (Ave. 2.6) m/s
Wind direction	SE, S(summer), NW,N(winter)
Residence time of water	23 days
Lake utilization	Irrigation, sightseeing and fishing
Watershed area	5.4 km^2
River (flows into)	Ijira River, Koudou River

Table 6.3(2) Properties of lakes

Lake Name: Banryu Lake

Country	Japan
Location	Shimane prefecture
Altitude	25m
Origin	Natural damming lake
Area and shape	0.13km^2
Shore line length	5.7km
Lake hydrologic type	
Lake trophic type	Mesotrophic
Water depth	Ave. 8-8.5m
Water volume	km^3
Annual water level fluctuation	1.5 m
Precipitation	1,600mm/year (1993-1997)*
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	- days
Lake utilization	Irrigation
Watershed area	0.73 km^2
River (flows into)	none

Table 6.3(3) Properties of lakes

Lake Name: Mojicap Lake

Country	Philippines
Location	San Pablo City, Laguna
Altitude	m
Origin	
Area and shape	0.02km^2
Shore line length	km
Lake hydrologic type	
Lake trophic type	
Water depth	25m or less
Water volume	km^3
Annual water level fluctuation	m
Precipitation	
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	- days
Lake utilization	
Watershed area	km^2
River (flows into)	

Table 6.3(4) Properties of lakes

Lake Name: Ordinskoe

Country	Russia
Location	Siberia
Altitude	520 m
Origin	Erosion-glacial
Area and shape	0.358 km2 (length 0.78 km, width 0.46 km)
Shore line length	2.3 km
Lake hydrologic type	drainage
Lake trophic type	eutrophic, hypereutrophic
Water depth	3.5 m and 16 m
Water volume	0.0013 km3
Annual water level fluctuation	
Precipitation	10 -90mm/year (1970-1980)*
Solar radiation	Daylight time 80-250 hr/month*
Wind speed	2.7-4.4 (Ave. 3.2) m/s*
Wind direction	N,NW
Residence time of water	
Lake utilization	Irrigation
Watershed area	
River (flows into)	Umkhur

Table 6.3(5) Properties of lakes

Lake Name: Khao Lam Dam

Country	Thailand
Location	Kanchanaburi Province
Altitude	170m
Origin	Rockfill Dam
Area and shape	388km^2
Shore line length	km
Lake hydrologic type	reservoir
Lake trophic type	
Water depth	m (max: m)
Water volume	8.86 x 10^9 m^3
Annual water level fluctuation	135m- 161m (Ave.155m)
Precipitation	
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	days
Lake utilization	electric power and flood control
Watershed area	3,720 km^2
River (flows into)	Quae Noi River

Table 6.3(6) Properties of lakes

Lake Name: Hao Binh Reservoir

Country	Vietnum
Location	Kunming Province, Lai Chau, Son La and Hao Binh Provinces
Altitude	23m
Origin	Artificial (dam-made lake)
Area and shape	25km^2
Shore line length	16.7km
Lake hydrologic type	reservoir
Lake trophic type	mesotrophic
Water depth	60m (max: 120m)
Water volume	2.5 km^3
Annual water level fluctuation	80m- 120m (Ave.100m)
Precipitation	
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	365 days
Lake utilization	electric power and flood control
Watershed area	13,700km^2
River (flows into)	Da River

Table 6.4(1) Result of Inland Aquatic Environment Monitoring

Duration: 2000.1.-2000.10
Country: China
Lake Name:

Site	Sampling Date	Temp. (ºC)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)	Al^{3+} (mg/l)	Mn^{2+} (mg/l)	COD (mg/l)	Chl-a (μg/l)
Chongqing	2000/3/28	15.0	6.94	15.20		50.76	6.29	6.50		0.00	4.21	3.43	3.56	2.62				
Nanshan	2000/6/27	26.0	7.34	166.00	0.860	49.70	4.10	7.62		0.00	5.46	3.09	18.40	3.14				
-Yueliang lake	2000/9/25	21.0	6.58	15.94	2.360	41.60	5.22	6.18		0.26	4.62	3.07	18.00	3.78				
	mean	20.7	6.85	65.71	1.610	47.35	5.20	6.77		0.09	4.76	3.20	13.32	3.18				
Chongqing	3/24/2000	10.0	7.10	5.22		14.27	2.22	0.56		0.00	0.96	0.50	2.59	0.98				
Simianshan	6/27/2000	22.0	6.82	55.30	1.340	12.30	2.01	0.38		0.32	0.96	0.97	6.90	0.63				
-Taiyang lake	mean	16.0	6.94	30.26	1.340	13.29	2.12	0.47		0.16	0.96	0.74	4.75	0.81				
Xiamen	3/22/2000	15.8	7.49			1.31	1.20	1.15										
Xiaoping	9/20/2000	19.5	7.52			0.87	1.34	1.53										
-Laizhukeng	mean	17.7	7.50			1.09	1.27	1.34										
Xiamen	3/22/2000	14.0	7.10			2.85	2.16	1.80										
Xiaoping	9/20/2000	19.0	7.59			0.71	0.86	2.16										
-Chishuikeng	mean	16.5	7.28			1.78	1.51	1.98										
Zhuhai	2000/1/11		7.20	46.00		16.05	0.28	69.23					37.20	9.40				
Zhuxiandong	2000/4/11	26	7.60	35.00		16.60	1.05	20.50					25.10	7.60				
-Zhuxiandong	2000/7/11		7.50	12.00		14.80	<0.01	28.30					18.50	5.80				
reservoir	2000/10/09	26	7.30	40.00		18.00	<1.0	20.30					39.90	14.70				
	mean	26.0	7.37	31.00		15.82	0.67	39.34					26.93	7.60				

		Anion	Cation	R1	Judge
Chongqing	2000/3/28	1341.6	664.1	-33.8	×
Nanshan	2000/6/27	2175.8	1493.0	-18.6	×
-Yueliang lake	2000/9/25	3484.6	1503.2	-39.7	×
	mean				
Chongqing	3/24/2000	348.7	264.5	-13.7	×
Simianshan	6/27/2000	1639.2	480.6	-54.7	×
-Taiyang lake	mean				
Xiamen	3/22/2000	-	-	-	-
Xiaoping	6/27/2000	-	-	-	-
-Laizhukeng	mean				
Xiamen	3/22/2000	-	-	-	-
Xiaoping	9/20/2000	-	-	-	-
-Chishuikeng	mean				
Zhuhai	2000/1/11	-	-	-	-
Zhuxiandong	2000/4/11	-	-	-	-
-Zhuxiandong	2000/7/11	-	-	-	-
reservoir	2000/10/09	-	-	-	-
	mean				

?calc	R2	Judge
14.4	-2.86	?
22.9	-75.79	×
28.1	27.60	×
4.3	-10.11	×
11.2	-66.35	×
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Table 6.4(2) Result of Inland Aquatic Environment Monitoring

Duration: 2000.6.-2000.10
Country: Indonesia
Lake Name: Patenggang Lake

Site	Sampling Date	Temp. (ºC)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)
Center (Surface)	2000/6/3		7.60	7.60	0.48	5.00	0.04	5.70	0.150	0.28	6.50	1.50	5.20	2.00
	2000/7/5		8.60	8.30	0.52	4.10	0.08	7.20	0.080	0.12	6.50	0.80	6.80	2.20
	2000/8/5		7.60	7.70	0.53	4.20	0.28	5.20	0.120	0.37	8.00	0.80	5.70	2.20
	2000/9/2		7.60	11.60	0.76	5.50	0.30	9.80	0.060	0.40	9.30	0.80	8.80	4.20
	2000/10/5		7.70	8.50	0.68	5.00	0.08	6.80	0.090	0.35	7.10	0.80	6.60	4.50
	mean		7.71	8.80	0.50	4.76	0.16	6.94	0.100	0.30	7.48	0.94	6.62	3.02

		A	C	R1	Judge
Center (Surface)	2000/6/3	745.6	760.3	1.0	o
	2000/7/5	809.8	830.2	1.2	o
	2000/8/5	766.6	854.3	5.4	o
	2000/9/2	1155.8	1231.5	3.2	o
	2000/10/5	977.3	1047.8	3.5	o
	mean				

Λcalc	R2	Judge
8.4	5.2	o
9.2	5.0	o
8.9	7.3	o
13.2	6.6	o
11.1	13.3	x

Table 6.4(3) Result of Inland Aquatic Environment Monitoring

Duration: 2000.8.-2001.1.
Country: Japan
Lake Name: Ijira Lake

Site	Sampling Date	Temp. (ºC)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)	Al^{3+} (mg/l)	COD (mg/l)	Chl-a (µg/l)
Center (Surface)	2000/8/28	29.0	7.5	4.07	0.151	4.93	2.26	2.45	<0.01	0.06	2.68	0.49	3.55	1.54	<0.01	1.6	1.8
	2000/9/28	24.2	6.8	3.95	0.126	4.42	3.36	2.14	<0.01	0.01	2.20	0.31	2.80	1.58	<0.01	1.7	2.3
	2000/11/16	15.5	6.8	4.24	0.148	5.21	2.75	2.48	<0.01	0.04	2.32	0.32	3.14	1.65	<0.01	1.0	2.6
	2001/1/16	5.1	6.6	4.27	0.149	5.51	2.99	2.81	<0.01	0.02	2.25	0.29	3.26	1.62	<0.01	1.1	2.6
	mean	18.5	6.8	4.13	0.144	5.02	2.84	2.47	<0.01	0.03	2.36	0.35	3.19	1.60	<0.01	1.3	2.3
Center (near bottom)	2000/8/28	26.9	6.8	4.44	0.163	5.21	2.40	2.53	<0.01	0.05	2.55	0.46	3.66	1.57	<0.01	1.7	8.8
	2000/9/28	20.0	6.5	4.15	0.138	4.78	3.15	2.56	<0.01	0.05	2.15	0.38	2.87	1.58	<0.01	1.7	3.7
	2000/11/16	14.9	6.8	4.18	0.147	5.16	2.74	2.32	<0.01	0.11	2.28	0.29	3.77	1.66	<0.01	1.7	5.2
	2001/1/16																
	mean																
Ijira River (Input)	2000/8/28	25.4	6.9	4.48	0.155	6.99	2.48	2.55	<0.01	0.03	2.53	0.41	3.29	1.76	<0.01	0.8	
	2000/9/28	19.1	6.7	4.15	0.122	5.59	2.68	2.16	<0.01	0.00	2.22	0.30	2.96	1.58	<0.01	0.8	
	2000/11/16	15.0	6.7	4.16	0.125	6.22	2.69	2.34	<0.01	0.01	2.28	0.29	2.86	1.56	<0.01		
	2001/1/16	5.2	6.6	4.12	0.123	6.12	3.14	2.50	<0.01	0.02	2.15	0.26	2.84	1.70	<0.01	0.4	
	mean	16.2	6.7	4.23	0.132	6.23	2.75	2.39	<0.01	0.02	2.30	0.31	2.99	1.65	<0.01		
Kodo River (Input)	2000/8/28																
	2000/9/28	17.6	6.7	3.59	0.102	4.31	2.70	2.48	<0.01	0.02	2.45	0.29	1.88	1.60	<0.01	0.6	
	2000/11/16	14.1	6.6	3.61	0.109	4.56	2.13	2.34	<0.01	0.02	2.43	0.21	1.87	1.70	<0.01		
	2001/1/16																
	mean																
Ijira River (Output)	2000/8/28																
	2000/9/28	21.8	7.4	4.01	0.137	4.28	3.19	2.10	<0.01	0.03	2.13	0.32	3.17	1.55	<0.01	1.6	
	2000/11/16																
	2001/1/16																
	mean																
Discharge	2000/8/28	23.3	6.5	4.22	0.172	4.60	2.22	2.19	<0.01	0.08	2.20	0.39	3.05	1.58	<0.01	1.6	
	2000/9/28	20.5	6.5	4.06	0.139	4.63	3.12	2.10	<0.01	0.04	2.10	0.33	2.94	1.58	<0.01	1.3	
	2000/11/16	15.1	6.8	4.25	0.148	5.26	2.77	2.20	<0.01	0.02	2.20	0.34	3.13	1.63	<0.01		
	2001/1/16	3.4	7.0	4.46	0.156	5.58	2.89	2.93	<0.01	0.00	2.51	0.32	3.32	1.61	<0.01	1.2	
	mean	15.6	6.7	4.25	0.154	5.02	2.75	2.36	<0.01	0.04	2.25	0.34	3.11	1.60	<0.01		

		Anion	Cation	R1	Judge	? calc	R2	Judge
Center (Surface)	2000/8/28	359.5	436.3	9.7	x	4.7	7.4	o
	2000/9/28	333.0	374.2	5.8	o	4.2	3.4	o
	2000/11/16	371.0	403.9	4.2	o	4.6	4.4	o
	2001/1/16	391.4	402.6	1.4	o	4.8	5.6	o
	mean							
Center (near bottom)	2000/8/28	381.3	437.3	6.8	o	4.9	4.5	o
	2000/9/28	360.9	379.1	2.5	o	4.4	3.4	o
	2000/11/16	363.9	437.5	9.2	x	4.8	6.7	o
	2001/1/16							
	mean							
Ijira River (Input)	2000/8/28	412.9	431.3	2.2	o	5.1	6.4	o
	2000/9/28	342.9	382.0	5.4	o	4.4	2.6	o
	2000/11/16	364.1	378.5	1.9	o	4.5	4.0	o
	2001/1/16	371.6	382.9	1.5	o	4.6	5.4	o
	mean							
Kodo River (Input)	2000/8/28							
	2000/9/28	305.2	340.6	5.5	o	3.9	3.9	o
	2000/11/16	304.7	345.3	6.2	o	3.9	3.6	o
	2001/1/16							
	mean							
Ijira River (Output)	2000/8/28							
	2000/9/28	336.8	388.0	7.1	o	4.3	3.5	o
	2000/11/16							
	2001/1/16							
	mean							
Discharge	2000/8/28	365.2	392.6	3.6	o	4.5	2.7	o
	2000/9/28	344.8	379.2	4.8	o	4.3	3.1	o
	2000/11/16	364.0	395.8	4.2	o	4.5	3.2	o
	2001/1/16	401.8	415.5	1.7	o	4.9	4.7	o
	mean							

Table 6.4(4) Result of Inland Aquatic Environment Monitoring

Duration: 2000.5.-2000.12
Country: Japan
Lake Name: Banryu Lake

Site	Sampling Date	Temp. (ºC)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)	Al^{3+} (mg/l)	Mn^{2+} (mg/l)	COD (mg/l)	Chl-a (μg/l)
NO.2	2000/5/29	24.4	7.09	10.0	0.152	4.59	0.01	21.0	<0.003	<0.02	13.1	1.83	1.25	1.56	0.01	<0.005	4.7	2.8
(center)	2000/7/24	29.1	7.31	10.0	0.157	4.26	0.01	20.5	<0.003	<0.02	12.7	1.58	1.04	1.27	<0.01	<0.005	4.1	3.9
surface	2000/9/25	24.9	7.07	9.5	0.171	3.90	0.00	19.5	<0.003	<0.02	12.3	1.94	1.29	1.87	0.01	<0.005	5.2	7.7
	2000/12/26	8.1	7.25	9.6	0.197	4.20	0.35	19.6	<0.003	0.07	12.4	2.09	1.38	1.73	0.03	0.005	4.0	9.4
	mean	21.6	7.17	9.8	0.169	4.24	0.09	20.2	<0.003	0.02	12.6	1.86	1.24	1.61	0.01	<0.005	4.5	6.0
NO.2	2000/5/29	9.2	6.48	13.2	0.394	3.69	0.01	20.7	<0.003	0.12	13.0	1.91	2.11	2.36	0.01	0.634	5.9	18.1
(center)	2000/7/24	10.6	6.71	13.8	0.520	2.50	0.01	20.4	<0.003	0.10	13.1	1.78	2.48	2.60	0.01	1.200	7.3	36.2
near	2000/9/25	24.9	6.84	18.6	1.040	0.90	0.00	20.9	0.033	0.88	13.8	2.58	5.22	5.12	0.01	2.140	11.2	66.1
bottom	2000/12/26	8.1	7.17	9.5	0.185	4.23	0.35	19.6	<0.003	0.07	12.4	2.07	1.42	1.73	0.01	0.006	4.0	9.4
	mean	13.2	6.73	13.8	0.535	2.83	0.09	20.4	0.008	0.29	13.1	2.09	2.81	2.95	0.01	0.995	7.1	32.5
NO.3	2000/5/29	23.7	7.00	10.1	0.156	4.73	0.01	21.0	<0.003	<0.02	13.1	1.81	1.35	1.59	0.03	0.015	4.5	3.0
surface	2000/7/24	28.9	7.34	9.9	0.170	4.40	0.01	20.4	<0.003	<0.02	12.8	1.58	1.19	1.32	<0.01	<0.005	4.0	4.5
	2000/9/25	24.5	7.08	9.5	0.193	4.13	0.00	18.8	<0.003	0.03	12.1	1.91	1.61	1.90	0.02	0.007	4.8	8.1
	2000/12/26	7.6	7.08	9.5	0.188	4.50	0.37	19.7	<0.003	0.08	12.5	2.10	1.53	1.75	0.02	0.013	3.8	7.2
	mean	21.2	7.11	9.8	0.177	4.44	0.10	20.0	<0.003	0.03	12.6	1.85	1.42	1.64	0.02	0.009	4.3	5.7

		Anion	Cation	R1	Judge
NO.2	2000/5/29	839.7	807.4	-2.0	o
(center)	2000/7/24	824.4	749.2	-4.8	o
surface	2000/9/25	801.9	802.9	0.1	o
	2000/12/26	842.9	807.9	-2.1	o
	mean				
NO.2	2000/5/29	1055.0	920.7	-6.8	o
(center)	2000/7/24	1147.6	958.6	-9.0	x
near	2000/9/25	1648.3	1396.7	-8.3	x
bottom	2000/12/26	831.6	809.4	-1.4	o
	mean				
NO.3	2000/5/29	847.0	814.3	-2.0	o
surface	2000/7/24	837.3	765.2	-4.5	o
	2000/9/25	809.3	813.5	0.3	o
	2000/12/26	843.3	822.2	-1.3	o
	mean				

Λcalc	R2	Judge
10.2	1.0	o
9.8	-1.2	o
9.9	1.9	o
10.1	2.7	o
11.7	-5.8	o
12.2	-6.0	o
16.9	-4.7	o
10.1	3.0	o
10.3	1.0	o
9.9	0.0	o
9.9	2.1	o
10.2	3.8	o

Table 6.4(5) Result of Inland Aquatic Environment Monitoring

Duration: 2000.3-2000.12
Country: Philippines
Lake Name: Mojicap Lake

Site	Sampling Date	Temp. (ºC)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)
Surface	2000/3/2		8.45	34.6	1.930	2.87	6.070	4.43		0.002	14.50	5.12	26.30	16.39
	2000/8/11		7.75	32.0	2.390	3.62	1.767	4.36		0.002	17.70	7.28	24.20	13.99
	2000/9/28		7.65	28.0	2.320	2.92	0.378	4.52		0.002	21.80	7.74	34.80	13.79
	2000/12/15		7.60	27.0	2.260	2.00	0.186	4.50		0.002	9.01	0.39	13.40	0.92
	mean		7.76	30.4	2.225	2.85	2.100	4.45		0.002	15.75	5.13	24.68	11.27

		A	C	R1	Judge
Surface	2000/3/2	2212.7	3421.7	21.5	x
	2000/8/11	2616.9	3314.2	11.8	x
	2000/9/28	2514.4	4016.7	23.0	x
	2000/12/15	2431.5	1146.5	-35.9	x
	mean				

? calc	R2	Judge
29.9	-7.3	o
31.0	-1.7	o
34.5	10.3	x
17.8	-20.5	x

Table 6.4(6) Result of Inland Aquatic Environment Monitoring

Duration: 2000.1.-2000.12
Country: Russian Federation
Lake Name: Lake Ordinscoe

Site	Sampling Date	Temp. (ºC)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)
Lake Ordinscoe	2000/1/29	0.4	8.06	148.0	6.154	361.20	1.22	19.80	0.091	0.19	63.30	15.10	70.9	87.2
No.1(center)	2000/3/4	0.2	7.87	145.6	6.238	372.20	1.31	23.30	0.016	0.18	64.50	15.50	69.7	89.3
surface	2000/5/07	5.9	8.21	137.8	5.650	354.30	0.00	20.00	0.000	0.77	49.50	14.90	74.5	74.0
	mean	2.2	8.02	143.8	6.014	362.57	0.84	21.03	0.036	0.38	59.10	15.17	71.7	83.5
Lake Ordinscoe	1/29/2000	2.6	8.02	146.7	6.199	372.00	1.50	20.40	0.150	0.23	63.40	15.00	70.6	89.9
No.1(center)	3/4/2000	1.9	7.81	148.1	6.299	371.50	1.45	24.50	0.750	0.26	65.20	15.70	70.4	89.9
bottom	mean													
river Krestovka	2000/10/29	1.1	7.03	8.05	0.430	8.68	0.13	0.14	0.009	0.04	2.90	0.29	7.1	2.3
	2000/11/25	0.5	6.96	24.9	1.540	27.04	0.23	1.88	0.030	0.59	10.02	12.00	19.8	7.7
	2000/12/24	0.3	6.81	6.04	0.390	8.88	0.21	0.40	0.018	0.12	3.24	0.50	4.0	2.2
	mean	0.6	6.92	13.0	0.787	14.87	0.19	0.81	0.019	0.25	5.39	4.26	10.3	4.1

		Anion	Cation	R1	Judge	Λcalc	R2	Judge
Lake Ordinscoe	2000/1/29	14252.5	13859.1	-1.4	o	168.0	6.34	o
No.1(center)	2000/3/4	14665.7	14033.8	-2.2	o	171.9	8.28	o
surface	2000/5/07	13590.8	12380.0	-4.7	o	157.0	6.52	o
	mean							
Lake Ordinscoe	1/29/2000	14543.8	14070.2	-1.7	o	171.3	7.74	o
No.1(center)	3/4/2000	14748.2	14158.0	-2.0	o	173.0	7.76	o
bottom	mean							
river Krestovka	2000/10/30	616.7	679.3	4.8	o	7.2	-5.32	o
	2000/11/26	2159.6	2396.8	5.2	o	25.8	1.69	o
	2000/12/24	589.6	540.4	-4.4	o	6.3	2.38	o
	mean							

Table 6.4(7) Result of Inland Aquatic Environment Monitoring

Duration: 2000.5-2000.11
Country: Thailand
Lake Name: Khao Lam Dam

Site	Sampling Date	Temp. (ºC)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)
Station1	2000/5/9	31.5	7.5	13.6	1.200	11.0	<0.01	6.0	<0.01	-	2.0	1.0	15.0	3.0
(Ban Pong Chang)	2000/7/25	29.3	7.5	13.7	1.300	31.0	<0.01	5.0	-	-	2.0	1.0	33.0	7.0
	2000/11/14	26.0	7.2	19.0	1.272	8.0	-	1.8	-	-	2.0	3.0	20.0	4.0
	mean	28.9	7.4	15.4	1.257	16.67	<0.01	4.3	<0.01	-	2.0	1.7	22.7	4.7
Station2	2000/5/9	31.0	7.8	13.7	1.206	11.0	<0.01	6.0	<0.01	-	1.0	1.0	22.0	2.0
(Ban Pang Pueng)	2000/7/25	27.0	7.5	13.5	1.300	8.0	<0.01	7.0	-	0.21	4.0	1.0	21.0	7.0
	2000/11/14	27.0	7.3	17.0	1.290	8.0	<0.01	1.8	-	-	2.0	3.0	19.0	3.0
	mean	28.3	7.5	14.7	1.265	9.00	<0.01	4.9	<0.01	0.21	2.3	1.7	20.7	4.0

		A	C	R1	Judge
Station1	2000/5/9	1598.3	1107.8	-18.1	x
(Ban Pong Chang)	2000/7/25	2086.5	2335.0	5.6	o
	2000/11/14	1489.3	1490.7	0.0	o
	mean				
Station2	2000/5/9	1604.3	1331.4	-9.3	x
(Ban Pang Pueng)	2000/7/25	1664.0	1834.8	4.9	o
	2000/11/14	1507.3	1358.6	-5.2	o
	mean				

Λcalc	R2	Judge
14.88	4.5	o
25.57	30.2	x
16.10	-8.3	o
16.34	8.8	o
19.02	17.0	x
15.45	-4.8	o

Table 6.4(8) Result of Inland Aquatic Environment Monitoring

Duration: 2000. 3.-2000.12.
Country: Vietnam
Lake Name: Hoa Binh Reservoir

Site	Sampling Date	Temp. (ºC)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)
Surface	2000/3/15	21.4	8.33	16.72	1.7	4.10	0.42	1.88		0.28	2.00	0.94	21.86	6.18
	2000/6/15	25.4	7.89	19.60	1.9	3.33	0.38	1.71		0.32	2.50	1.09	22.99	8.92
	2000/9/15	27.4	6.62	15.49	1.4	9.23	0.33	1.54		0.22	1.27	0.68	19.60	5.49
	2000/12/15	23.8	7.32	16.83	1.5	8.21	0.18	1.20		0.11	1.70	1.00	21.86	5.95
	mean	24.5	7.12	17.16	1.6	6.22	0.33	1.58		0.23	1.87	0.93	21.58	6.64

		A	C	R1	Judge
Surface	2000/3/15	1845.2	1725.6	-3.3	o
	2000/6/15	2023.7	2035.1	0.3	o
	2000/9/15	1640.9	1514.6	-4.0	o
	2000/12/15	1707.7	1685.8	-0.6	o
	mean				

Λcalc	R2	Judge
18.7	5.5	o
21.1	3.6	o
16.9	4.3	o
18.1	3.5	o

Table 6.4 (9) Summary of Inland Aquatic Environment Monitoring

Country	City	Site	Temp. (°C)	pH	EC (mS/m)	Alkalinity (meq/l)	SO_4^{2-} (mg/l)	NO_3^- (mg/l)	Cl^- (mg/l)	PO_4^{3-} (mg/l)	NH_4^+ (mg/l)	Na^+ (mg/l)	K^+ (mg/l)	Ca^{2+} (mg/l)	Mg^{2+} (mg/l)	Al^{3+} (mg/l)	Mn^{2+} (mg/l)	COD (mg/l)	Chl-a (μg/l)
China	Chongqing	Nanshan -Yueliang lake	20.7	6.85	65.71	1.610	47.35	5.20	6.77		0.09	4.76	3.20	13.32	3.18				
	Chongqing	Simianshan -Taiyang lake	16.0	6.94	30.26	1.340	13.29	2.12	0.47		0.16	0.96	0.74	4.75	0.81				
	Xiamen	Xiaoping -Laizhukeng	17.7	7.50			1.09	1.27	1.34										
	Xiamen	Xiaoping -Chishuikeng	16.5	7.28			1.78	1.51	1.98										
	Zhuhai	-Zhuxiandong reservoir	26.0	7.37	31.00		15.82	0.67	39.34					26.93	7.60				
Indonesia		Patenggang Lake (Center, surface)	-	7.71	8.80	0.500	4.76	0.16	6.94	0.100	0.30	7.48	0.94	6.62	3.02	-	-	-	-
Japan		Ijira Lake (Center, surface)	18.5	6.80	4.13	0.144	5.02	2.84	2.47	<0.01	0.03	2.36	0.35	3.19	1.60	<0.01	-	1.30	2.30
		Banryu Lake (Center, surface)	21.6	7.17	9.80	0.169	4.24	0.09	20.20	<0.003	0.02	12.60	1.86	1.24	1.61	0.01	<0.005	4.50	6.00
Philippines		Mojicap Lake (Surface)	-	7.76	30.40	2.225	2.85	2.10	4.45	-	0.00	15.75	5.13	24.68	11.27	-	-	-	-
Russia		Lake Ordinscoe (Center,surface)	2.2	8.02	143.80	6.014	362.57	0.84	21.03	0.036	0.38	59.10	15.17	71.70	83.50	-	-	-	-
		River Krestovka	0.6	6.92	13.00	0.787	14.87	0.19	0.81	0.019	0.25	5.39	4.26	10.30	4.10	-	-	-	-
Thailand		Khao Lam Dam (Ban Pong Chang)	28.9	7.38	15.43	1.257	16.67	<0.01	4.27	<0.01	-	2.00	1.67	22.67	4.67	-	-	-	-
		Khao Lam Dam (Ban Pang Pueng)	28.3	7.49	14.73	1.265	9.00	<0.01	4.93	<0.01	0.21	2.33	1.67	20.67	4.00				
Vietnam		Hoa Binh Reservoir (Surface)	24.5	7.12	17.16	1.600	6.22	0.33	1.58	-	0.23	1.87	0.93	21.58	6.64	-	-	-	-

Appendix

Meteorological Condition of Monitoring Sites

Table Meteorological condition in 2000 (Jakarta)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	28.5	28.5	29.4	30.5	30.1	29.3	30.0	29.9	30.7	31.0	29.8	30.2
ture (ºC)	max.daily mean	30.7	30.6	33.1	32.3	31.7	31.1	31.7	31.9	32.3	33.5	32.4	32.2
	min.daily mean	26.0	24.9	25.0	28.2	25.6	25.2	28.1	21.4	26.7	27.4	25.6	24.8
Humidity	monthly mean	76	75	70	68	71	70	67	64	64	65	72	66
(%)	max.daily mean	94	93	91	76	99	90	80	80	77	86	92	91
	min.daily mean	62	57	50	58	62	58	58	52	51	51	61	50
Mean wind speed (m/s)		1.0	0.9	1.0	0.9	0.7	0.9	1.0	1.1	1.3	1.0	1.0	1.2
Most appearance wind direction (bearings)		E &NW	SE	E	E	N &NNE	N &NNE	ENE	E	N	N	N	W
Precipitation amount (mm/month)		201	164	78	150	255	72	74	83	84	89	214	132
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)													

Table Meteorological condition in 2000 (Kototabang)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	21.7	21.8	21.6	21.7	22.3	21.9	21.5	20.7	21.3	21.0	21.4	21.4
ture (ºC)	max.daily mean	23.0	23.5	23.5	23.1	23.4	24.0	22.6	22.3	22.3	22.3	22.6	22.2
	min.daily mean	20.0	19.7	19.6	20.6	20.6	20.0	19.0	18.8	20.2	19.4	19.5	20.6
Humidity	monthly mean	84	--	80	86	84	86	85	88	89	90	92	89
(%)	max.daily mean	94	--	93	94	95	94	96	95	96	97	97	94
	min.daily mean	70	--	67	76	78	78	74	82	77	77	87	85
Mean wind speed (m/s)		3.9	--	2.7	2.2	1.8	2.0	1.7	2.1	3.0	1.2	1.2	1.1
Most appearance wind direction (bearings)		SE	--	WSW	NE	NNW	SW	E &SW	SW &ESE	SE	SSW	S	E
Precipitation amount (mm/month)		179	125	137	179	76	81	163	272	168	216	526	219
Sunshine duration (hours/month)		111	136	149	125	173	108	135	130	93	92	79	111
Solar radiation (MJ/m^2/month)													

Table Meteorological condition in 2000 (Rishiri)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	-4.9	-6.0	-2.4	3.6	10.5	12.9	18.8	21.2	16.9	10.0	1.3	-4.4
ture (ºC)	max.daily mean	-1.0	-2.8	3.5	8.3	14.5	18.0	23.6	24.2	22.0	15.1	10.2	1.3
	min.daily mean	-12.5	-8.9	-7.2	0.2	5.0	8.7	15.2	18.3	12.5	2.6	-6.1	-10.8
Humidity	monthly mean	75	73	71	77	82	86	89	85	79	66	67	72
(%)	max.daily mean	87	91	90	92	94	98	98	91	91	93	89	85
	min.daily mean	62	58	57	52	56	59	72	65	59	45	51	58
Mean wind speed (m/s)		5.8	4.2	5.0	4.1	2.5	2.2	2.1	2.5	3.8	5.6	5.5	6.1
Most appearance wind direction (bearings)		ENE	NNW	NW	E	W	W	E	E	E	WNW	NW	NW
Precipitation amount (mm/month)		69	23	24	35	62	77	102	69	111	90	73	24
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		--	--	--	346	424	374	384	475	342	252	134	80

Table Meteorological condition in 2000 (Tappi)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	0.5	-0.9	1.7	6.7	11.7	15.4	20.9	23.5	20.0	13.6	6.4	0.9
ture (ºC)	max.daily mean	4.6	2.7	8.0	9.5	16.9	19.2	25.3	25.8	24.6	19.4	14.3	6.0
	min.daily mean	-7.5	-4.6	-4.3	3.9	8.3	11.2	17.8	21.5	16.5	7.7	-0.4	-5.8
Humidity	monthly mean	72	71	67	71	88	85	88	79	77	61	65	68
(%)	max.daily mean	90	90	85	93	97	95	96	87	90	79	82	81
	min.daily mean	56	61	51	47	71	59	78	68	59	44	54	60
Mean wind speed (m/s)		7.6	8.4	10.1	8.5	5.1	5.5	4.6	4.5	5.7	6.9	8.0	10.3
Most appearance wind direction (bearings)		WSW	WSW	WSW	WSW	ENE	WSW	SW	ENE	ENE	WSW	WSW	WSW
Precipitation amount (mm/month)		121	27	45	56	81	65	156	21	248	41	99	84
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		102	160	286	410	440	518	422	585	357	347	183	132

Table Meteorological condition in 2000 (Sado-seki)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	4.0	1.3	4.7	10.3	--	19.1	24.2	26.6	22.5	15.9	10.4	5.2
ture (ºC)	max.daily mean	11.9	4.7	13.8	15.6	--	24.4	30.5	30.0	30.2	20.6	17.5	10.5
	min.daily mean	-2.4	-2.7	-1.5	5.3	--	14.0	20.0	24.7	18.0	10.6	4.1	-1.9
Humidity	monthly mean	69	70	65	65	--	78	78	73	71	67	68	67
(%)	max.daily mean	87	84	82	91	--	94	92	82	92	84	93	84
	min.daily mean	51	58	36	41	--	44	54	59	49	53	50	49
Mean wind speed (m/s)		7.9	9.6	8.5	7.3	--	2.9	3.8	3.0	5.0	3.7	5.7	8.0
Most appearance wind direction (bearings)		W	W	W	WSW	--	SW	SW	NE	ENE	ENE	WNW	W
Precipitation amount (mm/month)		85	--	--	46	--	89	96	19	158	101	126	77
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		116	133	301	384	--	501	539	686	386	312	171	115

Table Meteorological condition in 2000 (Happo)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	-6.7	-10.8	-6.5	-0.5	7.4	11.3	15.1	16.0	--	6.1	1.5	-5.4
ture (ºC)	max.daily mean	1.2	-3.6	0.6	3.6	16.3	15.6	18.0	17.7	--	11.5	8.9	0.7
	min.daily mean	-15.6	-15.5	-13.4	-7.1	1.4	6.7	11.9	14.6	--	1.4	-7.8	-13.0
Humidity	monthly mean	78	80	70	69	74	--	--	92	--	85	77	74
(%)	max.daily mean	98	93	96	99	100	--	--	100	--	100	100	95
	min.daily mean	29	49	31	33	35	--	--	71	--	58	31	20
Mean wind speed (m/s)		4.4	6.3	6.7	6.4	2.6	1.8	2.2	1.8	--	2.0	2.7	4.3
Most appearance wind direction (bearings)		NW	NW	NW	S	S	SSE	SSE	SSE	--	SSE	SSE	NW
Precipitation amount (mm/month)		108	139	192	69	73	261	192	234	--	274	200	178
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		294	352	504	574	655	496	457	349	--	210	240	228

Table Meteorological condition in 2000 (Oki)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	5.3	3.3	7.4	11.6	16.1	19.5	24.5	26.4	22.5	16.9	12.1	7.9
ture (ºC)	max.daily mean	13.1	7.4	11.6	14.3	22.4	24.6	30.0	28.7	28.8	20.6	17.0	12.3
	min.daily mean	-0.3	-0.4	2.5	9.0	12.8	16.0	21.1	23.1	18.3	11.8	6.5	2.0
Humidity	monthly mean	73	72	66	71	76	81	83	78	74	74	74	69
(%)	max.daily mean	89	90	87	92	92	94	92	87	94	92	93	82
	min.daily mean	59	59	54	41	48	52	61	66	53	61	64	56
Mean wind speed (m/s)		4.8	4.4	3.9	3.8	2.6	2.6	3.1	2.4	3.9	3.3	3.5	3.9
Most appearance wind direction (bearings)		N	N	N	SSW	S	S	S	NNE	NNE	NNE	NNE	N
Precipitation amount (mm/month)		--	--	--	--	--	--	--	25	203	75	179	72
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		158	206	403	472	560	543	563	667	444	341	216	163

Table Meteorological condition in 2000 (Yusuhara)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	2.7	-0.1	4.9	9.7	15.5	18.4	22.2	22.3	19.1	15.4	10.6	4.4
ture (ºC)	max.daily mean	9.0	4.8	9.6	15.1	20.0	22.7	25.8	24.8	23.2	18.4	17.8	9.9
	min.daily mean	-5.1	-5.0	-1.1	4.8	12.4	13.2	19.4	19.6	14.6	10.6	4.1	-2.0
Humidity	monthly mean	81	71	63	66	72	86	83	85	84	87	83	74
(%)	max.daily mean	98	94	97	97	98	98	98	99	99	97	99	96
	min.daily mean	47	51	35	39	37	63	63	65	63	69	62	30
Mean wind speed (m/s)		2.9	3.8	3.3	2.8	1.9	1.5	2.0	1.6	2.0	1.8	2.2	2.9
Most appearance wind direction (bearings)		NNW	NNW	NNW	NNW	NNW	NNW	NNW	SSE	SSE	NNW	NNW	NNW
Precipitation amount (mm/month)		111	54	196	123	162	372	349	232	786	92	257	167
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		267	384	528	537	597	460	567	590	414	360	268	276

Table Meteorological condition in 2000 (Ogasawara)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	16.7	14.8	16.2	18.9	--	--	25.1	25.2	24.8	24.6	23.2	18.9
ture (ºC)	max.daily mean	19.7	18.3	19.6	22.2	--	--	26.2	26.3	26.3	25.6	25.3	22.5
	min.daily mean	12.9	13.1	12.9	15.2	--	--	23.0	24.2	21.3	23.1	18.5	15.6
Humidity	monthly mean	79	77	76	--	--	--	--	--	91	91	89	82
(%)	max.daily mean	95	97	97	--	--	--	--	--	98	98	98	99
	min.daily mean	61	59	62	--	--	--	--	--	77	78	71	63
Mean wind speed (m/s)		1.4	1.3	1.5	--	--	--	1.5	1.5	1.4	1.0	1.0	1.2
Most appearance wind direction (bearings)		SW	SW	SSW	--	--	--	SSW	NE	NE	NE	SSW & SW	W
Precipitation amount (mm/month)		154	93	96	--	--	--	363	233	203	138	184	224
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		334	319	479	391	--	--	616	554	479	391	319	243

Table Meteorological condition in 2000 (Hedo)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	17.1	15.4	--	19.8	22.4	26.3	27.1	26.9	25.5	25.0	22.6	19.0
ture (ºC)	max.daily mean	21.1	19.1	--	23.0	26.8	28.4	28.9	28.5	27.7	26.7	26.6	21.3
	min.daily mean	12.1	12.5	--	16.6	19.9	20.7	24.6	22.5	23.6	22.7	18.7	16.2
Humidity	monthly mean	69	70	--	76	78	84	83	84	81	83	77	70
(%)	max.daily mean	85	88	--	93	93	91	93	93	94	91	92	89
	min.daily mean	56	53	--	54	65	76	77	78	68	72	57	57
Mean wind speed (m/s)		5.8	5.7	--	4.4	3.8	3.2	4.3	4.6	4.7	4.1	5.8	5.6
Most appearance wind direction (bearings)		N	NNW	--	ESE	E	SSW	E	ESE	ESE	E	N	NE
Precipitation amount (mm/month)		91	99	--	202	89	225	796	207	407	116	379	171
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		274	195	--	433	605	608	622	559	538	459	245	261

Table Meteorological condition in 2000 (Ijira)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	3.8	0.8	4.2	10.8	16.7	20.2	24.7	25.5	21.6	16.2	11.3	4.3
ture (ºC)	max.daily mean	8.7	4.4	8.3	14.3	19.9	23.7	27.2	27.3	25.6	20.1	18.7	8.3
	min.daily mean	-1.9	-1.8	-0.3	6.8	12.1	17.4	22.4	23.8	15.9	11.8	4.6	0.0
Humidity	monthly mean	93	94	92	87	89	91	89	86	88	88	87	89
(%)	max.daily mean	99	99	99	99	99	99	99	98	99	99	99	99
	min.daily mean	76	81	75	72	70	69	76	67	75	69	66	60
Mean wind speed (m/s)		--	0.8	0.8	--	--	0.6	0.8	0.7	0.7	0.6	0.6	0.6
Most appearance wind direction (bearings)		--	W	W	--	--	W	W	W	W	W	W	W
Precipitation amount (mm/month)		99	119	236	256	298	413	246	91	255	141	121	80
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		231	256	370	441	469	404	443	523	352	303	228	207

Table Meteorological condition in 2000 (Banryu)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	5.9	4.2	8.2	12.9	17.2	20.8	26.2	26.4	21.9	16.8	12.2	7.7
ture (ºC)	max.daily mean	13.8	8.0	13.1	16.7	23.0	27.0	29.2	28.2	28.2	21.3	17.5	13.6
	min.daily mean	-0.6	1.3	4.1	9.6	12.5	17.7	22.6	24.4	17.3	12.6	7.6	3.0
Humidity	monthly mean	77	66	65	66	75	84	76	78	81	84	78	69
(%)	max.daily mean	94	83	93	91	95	93	85	93	95	94	95	84
	min.daily mean	59	48	40	40	58	49	61	69	61	69	60	58
Mean wind speed (m/s)		3.1	3.9	3.7	3.2	2.5	2.3	2.6	2.4	2.7	2.5	3.0	3.3
Most appearance wind direction (bearings)		S	S	S	S	S	--	S	S	S	S	S	S
Precipitation amount (mm/month)		158	50	137	33	109	184	51	174	322	121	133	47
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		180	239	421	475	518	464	615	623	420	329	229	190

Table Meteorological condition in 2000 (Petaling Jaya)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	26.6	27.2	27.6	27.9	29.2	28.3	28.7	28.2	28.1	27.8	27.3	27.8
ture (ºC)	max.daily mean	28.2	29.6	30.3	29.8	31.1	29.6	30.3	30.2	29.8	29.4	29.2	29.5
	min.daily mean	24.6	25.3	25.1	26.1	26.6	25.9	26.3	26.1	26.5	25.4	25.8	25.7
Humidity	monthly mean	81	78	79	77	74	77	75	76	78	76	82	80
(%)	max.daily mean	95	89	87	88	85	88	85	87	88	86	88	89
	min.daily mean	60	61	69	64	65	70	63	63	65	68	65	71
Mean wind speed (m/s)		0.4	0.4	0.4	0.2	0.2	0.3	0.2	0.2	0.6	0.6	0.6	0.6
Most appearance wind direction (bearings)		NE	W	W	W	W	SE	S	WSW	S	WSW	WSW	SW
Precipitation amount (mm/month)		425	292	299	292	87	172	79	310	260	212	545	404
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)													

Table Meteorological condition in 2000 (Tanah Rata)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	17.1	17.4	17.9	18.3	18.5	17.9	18.0	17.6	17.9	17.6	18.0	17.9
ture (ºC)	max.daily mean	18.2	19.0	19.3	19.5	19.6	19.3	19.0	19.1	19.1	19.5	18.7	18.7
	min.daily mean	15.6	15.4	16.5	17.2	17.5	16.2	16.4	15.4	16.6	16.5	17.0	17.0
Humidity	monthly mean	88	90	92	93	91	90	88	91	92	93	93	92
(%)	max.daily mean	97	97	97	97	97	98	99	97	98	100	98	96
	min.daily mean	73	59	84	84	81	80	70	80	81	84	86	84
Mean wind speed (m/s)		3.2	1.9	1.5	1.2	1.4	1.7	2.0	1.6	1.2	2.6	1.5	1.2
Most appearance wind direction (bearings)		ENE	ENE &E	W	W	W	W	W	W	W	WNW	W	W
Precipitation amount (mm/month)		213	190	435	514	224	216	131	176	221	173	312	322
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)													

Table Meteorological condition in 2000 (Los Banos)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	25.7	26.1	27.2	29.0	28.6	28.5	27.1	28.0	27.7	27.1	27.0	26.6
ture (ºC)	max.daily mean	29.6	29.6	30.9	34.1	33.0	32.9	31.0	32.4	31.8	30.9	30.6	29.7
	min.daily mean	21.7	22.6	23.5	24.0	24.2	24.2	23.3	23.6	23.7	23.2	23.4	23.4
Humidity	monthly mean	84	86	84	81	84	84	86	79	80	86	86	87
(%)	max.daily mean												
	min.daily mean												
Mean wind speed (m/s)		2.8	2.1	2.6	3.0	2.2	1.6	3.8	2.7	3.7	2.9	3.3	2.9
Most appearance wind direction (bearings)		NE	NE	NE	NE	NE	NE	NE	E	NE &SW	E	ENE	NE
Precipitation amount (mm/month)		78	70	129	50	139	237	382	178	200	621	311	293
Sunshine duration (hours/month)		170	129	170	260	183	182	119	179	163	136	139	135
Solar radiation (MJ/m^2/month)		409	412	613	734	592	631	556	631	605	486	427	435

Table Meteorological condition in 2000 (Cheju)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	5.9	4.3	9.0	12.3	16.0	20.5	25.4	26.8	21.9	18.1	12.5	8.6
ture (ºC)	max.daily mean	8.3	6.8	12.5	16.0	19.2	23.1	27.8	29.9	24.9	21.1	15.6	11.7
	min.daily mean	3.4	2.0	6.1	9.2	13.3	18.3	23.3	24.3	19.6	15.3	9.8	5.4
Humidity	monthly mean	70	63	65	71	79	85	86	79	77	70	67	62
(%)	max.daily mean												
	min.daily mean												
Mean wind speed (m/s)		10.7	10.2	8.5	7.5	5.5	4.8	5.5	5.7	6.1	6.0	7.5	8.7
Most appearance wind direction (bearings)		N	N	N	N	SSE	SSE	SSE	SSE	NNW	N	N	N
Precipitation amount (mm/month)		58	7	37	29	68	122	94	229	198	71	90	11
Sunshine duration (hours/month)		63	149	206	217	216	147	212	245	169	164	157	140
Solar radiation (MJ/m^2/month)		121	349	515	606	639	477	615	633	472	397	316	259

Table Meteorological condition in 2000 (Kanghwa)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	-3.6	-3.2	4.2	9.7	14.7	20.7	24.3	24.6	19.3	12.8	4.9	-0.8
ture (ºC)	max.daily mean	0.7	1.7	9.8	14.9	19.7	25.7	28.6	28.8	24.0	18.5	10.3	4.2
	min.daily mean	-7.8	-8.2	-1.3	4.5	10.6	16.6	21.1	21.5	15.3	7.6	-0.5	-5.7
Humidity	monthly mean	67	61	57	58	72	72	78	79	70	66	61	64
(%)	max.daily mean												
	min.daily mean												
Mean wind speed (m/s)		2.0	2.0	2.6	2.7	2.0	1.5	1.9	1.7	1.9	1.1	1.1	1.0
Most appearance wind direction (bearings)		WSW	WSW	WSW	W	SW	W	SW	S	NE	N	WSW	SSW
Precipitation amount (mm/month)		40	2	3	42	73	56	82	519	211	32	21	38
Sunshine duration (hours/month)		163	192	232	224	185	197	165	--	--	--	140	170
Solar radiation (MJ/m^2/month)		--	--	--	--	--	--	--	--	--	--	--	--

Table Meteorological condition in 2000 (Mondy)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	-22.3	-15.5	-6.7	1.5	9.1	15.8	14.6	13.8	7.1	-0.2	-14.8	-16.7
ture (ºC)	max.daily mean	-12.5	-7.2	1.7	10.0	17.8	24.8	21.2	21.7	17.1	6.3	-6.3	-9.1
	min.daily mean	-30.2	-23.4	-15.5	-7.1	-0.1	6.8	9.2	6.6	-1.9	-5.0		-23.1
Humidity	monthly mean	59	70	72	58	62	63	69	74	67	70	69	63
(%)	max.daily mean												
	min.daily mean												
Mean wind speed (m/s)		1.5	2.2	2.8	3.3	2.4	2.2	1.9	2.0	1.6	2.0	1.6	1.6
Most appearance wind direction (bearings)		W	NW	W &NW	W	W &NW	E &W	E &NW	E	E &NW	E &NW	W	W &NW
Precipitation amount (mm/month)		2	1	3	11	30	85	157	94	6	7	5	1
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)													

Note: nearest meteorological station data (Mondy station)

Table Meteorological condition in 2000 (Listvyanka)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	-20.4	-18.6	-5.1	1.7	10.2	15.0	18.5	15.7	11.2	-1.8	-13.1	-14.6
ture (ºC)	max.daily mean	-7.4	-0.2	13.2	20.0	27.0	30.0	29.0	30.0	21.0	11.0	0.0	-6.0
	min.daily mean	-35.4	-25.9	-21.6	-12.0	-2.0	5.0	10.0	6.0	3.0	-17.0	-26.0	-32.0
Humidity	monthly mean	79	53	53	65	65	68	77	83	71	67	69	76
(%)	max.daily mean	92	92	98	100	100	100	100	100	100	85	100	100
	min.daily mean	40	40	21	36	30	40	44	50	43	30	37	42
Mean wind speed (m/s)		5.0	3.7	3.6	3.8	1.8	0.7	1.1	2.1	2.0	1.3	3.7	3.5
Most appearance wind direction (bearings)		NNW	SSE	NNW	NW	NE	NNW	NNW	SSE &NN	NNW	NNW	NNW	NNW
Precipitation amount (mm/month)		9	11	8	19	14	39	129	128	28	41	5	26
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		--	--	310	510	635	690	587	472	410	232	145	91

Table Meteorological condition in 2000 (Irkutsk)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera- ture (ºC)	monthly mean	-23.4	-14.6	-6.8	3.1	10.2	16.3	19.1	15.8	8.2	-1.0	-10.5	-14.6
	max.daily mean	-18.6	-8.5	-0.6	7.8	17.4	24.0	25.6	20.7	16.4	7.4	-2.1	-4.1
	min.daily mean	-32.7	-24.3	-15.2	-5.2	3.2	7.5	12.3	11.2	0.8	-9.8	-27.1	-29.8
Humidity (%)	monthly mean	71	73	69	62	59	68	75	80	78	77	82	85
	max.daily mean	82	82	86	76	81	86	95	93	88	98	96	95
	min.daily mean	62	63	59	44	42	43	61	68	64	65	76	75
Mean wind speed (m/s)		1.9	2.0	2.6	3.1	2.9	2.4	2.0	2.2	2.2	2.2	2.6	2.0
Most appearance wind direction (bearings)		SE &NW	SE &NW	SE &NW	SE &NW	SE &NW	SE &NW	SE &W	SE &W	SE &NW	SE &NW	NW	NW
Precipitation amount (mm/month)													
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)													

Note: nearest meteorological station data (Irkutsk station)

Table Meteorological condition in 2000 (Bangkok)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera- ture (ºC)	monthly mean	28.9	29.1	29.8	28.6	28.7	27.9	27.9	27.9	27.2	27.2	26.3	27.1
	max.daily mean	30.8	32.5	33.5	32.2	30.7	29.7	30.0	29.9	28.4	29.2	28.7	29.3
	min.daily mean	24.8	24.5	27.2	25.0	27.0	26.0	25.7	25.2	25.6	25.9	23.2	23.8
Humidity (%)	monthly mean	80	79	78	89	88	90	90	89	84	86	69	66
	max.daily mean	97	92	98	100	96	99	99	100	97	93	85	72
	min.daily mean	68	65	60	76	80	83	80	72	70	77	61	54
Mean wind speed (m/s)		0.7	0.9	0.9	1.0	1.1	0.9	1.2	1.3	1.0	0.8	1.0	1.0
Most appearance wind direction (bearings)		SSE	SSE	SSE	SSE	S	SSE	SW	SW	S	WNW	NNW	NNW
Precipitation amount (mm/month)		0	0	4	306	174	190	84	241	239	334	0	0
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)		323	296	285	250	310	246	284	300	264	241	339	406

Note: nearest meteorological station data (Chatuchak station)

Table Meteorological condition in 2000 (Samutprakarn)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera- ture (ºC)	monthly mean												
	max.daily mean												
	min.daily mean												
Humidity (%)	monthly mean												
	max.daily mean												
	min.daily mean												
Mean wind speed (m/s)		1.0	1.0	0.7	0.6	0.6	0.6	1.0	0.9	0.7	0.5	1.0	0.8
Most appearance wind direction (bearings)		NE	NE	S	S	SW	SW	SW	SW	SW	SW	NE	NE
Precipitation amount (mm/month)		0	12	34	335	234	225	169	230	230	235	3	2
Sunshine duration (hours/month)		247	244	236	177	207	110	133	160	127	129	227	248
Solar radiation (MJ/m^2/month)													

Note: nearest meteorological station data (Bangna station)

Table Meteorological condition in 2000 (Patumthani)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera- ture (ºC)	monthly mean												
	max.daily mean												
	min.daily mean												
Humidity (%)	monthly mean												
	max.daily mean												
	min.daily mean												
Mean wind speed (m/s)		1.5	1.8	2.3	1.7	1.7	2.1	3.3	2.8	1.9	1.0	2.1	1.4
Most appearance wind direction (bearings)		NE	SE	SE	SE	SW	SW	SW	SW	SW	NE	NE	N
Precipitation amount (mm/month)		0	38	3	370	118	225	84	209	212	193	3	5
Sunshine duration (hours/month)		202	199	196	145	196	113	105	150	114	152	228	241
Solar radiation (MJ/m^2/month)													

Note: nearest meteorological station data (Patumthani station)

Table Meteorological condition in 2000 (Khao Lam)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera- ture (ºC)	monthly mean	25.1	25.6	27.7	28.5	27.4	26.9	26.5	26.7	26.5	27.1	24.8	25.3
	max.daily mean	28.0	29.5	30.6	31.0	29.0	29.0	29.1	29.2	28.1	28.3	27.2	27.5
	min.daily mean	22.3	21.2	25.3	25.6	25.2	24.9	25.0	25.0	25.0	25.3	21.5	21.8
Humidity (%)	monthly mean	74	71	66	77	84	86	87	85	86	85	80	77
	max.daily mean	86	85	83	89	94	93	93	94	94	90	84	81
	min.daily mean	64	63	52	64	75	75	76	74	79	80	74	74
Mean wind speed (m/s)		0.3	0.2	0.6	0.3	0.3	0.0	0.3	0.3	0.3	0.1	0.4	0.2
Most appearance wind direction (bearings)		SSE	NNW & SE	NW	NW	NW	--	WNW	W	W	SSE	SE	ESE
Precipitation amount (mm/month)		0	37	56	146	223	271	195	177	220	297	2	0
Sunshine duration (hours/month)													
Solar radiation (MJ/m^2/month)													

Note: nearest meteorological station data (Thong Phaphum station)

Table Meteorological condition in 2000 (Hanoi)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	18.4	16.2	20.3	25.2	27.5	28.6	29.7	29.2	27.7	25.4	21.8	20.6
ture (ºC)	max.daily mean	24.2	21.8	25.2	28.6	31.5	31.2	31.5	31.1	30.0	29.2	24.5	24.2
	min.daily mean	11.2	11.3	10.9	21.4	21.1	23.9	26.7	26.4	25.9	18.8	17.6	16.1
Humidity	monthly mean	78	81	86	84	80	80	80	82	78	82	71	71
(%)	max.daily mean	92	59	98	93	94	88	93	92	93	96	95	84
	min.daily mean	52	97	68	68	65	72	66	72	61	62	53	53
Mean wind speed (m/s)		3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Most appearance wind direction (bearings)		SE	NE	SE	SE	SE	SE	SE	SE	N	N	NE	SE
Precipitation amount (mm/month)		3	33	35	152	105	187	260	194	48	261	2	0
Sunshine duration (hours/month)		59	29	44	89	130	141	193	157	141	142	173	103
Solar radiation (MJ/m^2/month)													

Table Meteorological condition in 2000 (Hoa Binh)

Month / Items		1	2	3	4	5	6	7	8	9	10	11	12
Tempera-	monthly mean	18.5	16.3	20.7	25.2	27.1	27.9	28.8	28.5	26.6	24.8	20.8	20.0
ture (ºC)	max.daily mean	24.7	22.8	24.7	29.2	31.1	30.9	31.7	30.7	29.9	27.5	24.4	25.6
	min.daily mean	10.7	11.1	11.1	21.7	21.4	22.5	26.5	26.9	24.1	19.4	15.9	15.5
Humidity	monthly mean	80	85	86	84	82	82	82	84	83	86	77	78
(%)	max.daily mean	90	96	95	95	95	90	91	94	95	96	94	88
	min.daily mean	41	71	71	73	72	76	67	75	71	70	58	60
Mean wind speed (m/s)		3.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0	3.0	3.0	2.0
Most appearance wind direction (bearings)		N	N	N	N	N	N	N	N	N	N	N	N
Precipitation amount (mm/month)		1	32	11	188	422	230	330	141	347	197	2	1
Sunshine duration (hours/month)		106	50	68	109	143	151	215	193	160	161	183	128
Solar radiation (MJ/m^2/month)													