Annex 1

Regional atmospheric circulation and precipitation patterns in East Asia

The EANET region is a wide area extending from 10° S (degrees south) to 55° N (degrees north). The meteorological features in this region are climatically summarized as follows:

1. Atmospheric circulation over the East Asian region

There is circulation between equatorial and mid latitude called "Hadley circulation", with ascending motion in the equatorial region, and descending motion in the mid latitudes of about 30° N. In the area with descending motion, the high-pressure belt is formed. In the higher latitude side of the high pressure belt, southwesterly winds prevail, while northeasterly winds, called trade winds is dominant in the lower latitude side. Inter tropical convergence zone (ITCZ) is formed as an axis along with the trade winds spouting from high-pressure belts in both hemispheres converge. It is a convergence zone of large-scale circulation, and it becomes a low-pressure zone. In the ITCZ, heat and water vapor fluxes due to the high sea surface temperature are conspicuous, these heat and water vapor are transported by upward flow originated by convergence. The cumulus clouds are locally formed by the active convection. Therefore, there is a large amount of precipitation in the ITCZ throughout a year.

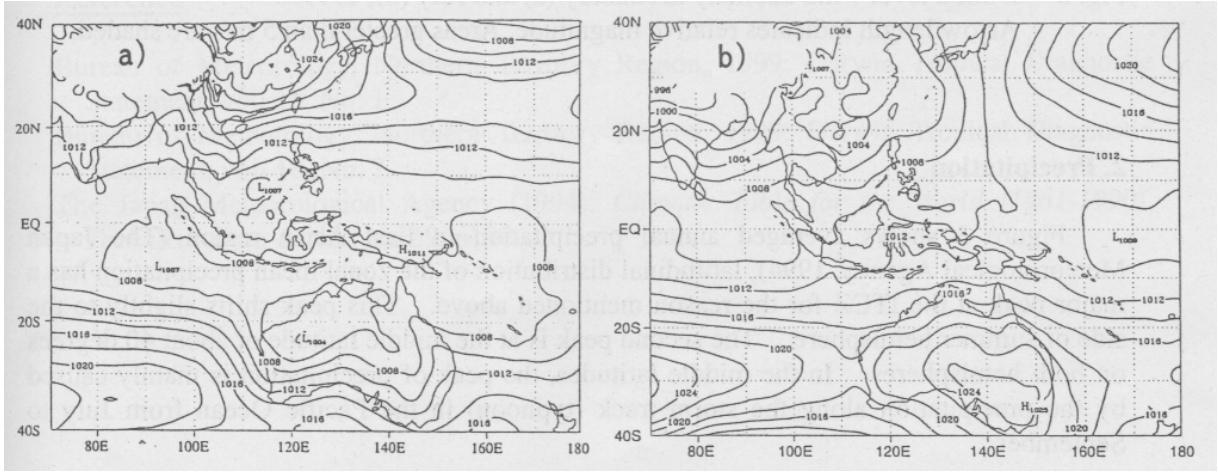

Fig. 1 Mean MSL (mean sea level) pressure in January (a) and July (b), 1999.

In the East Asian region, the anticyclone persists in the Pacific Ocean in the warm season, weak southerly winds prevail over Japan and Korean Peninsula. On the other hand, migratory anticyclone frequently passes across the East Asian Continent during winter seasons, and strong northwesterly winds prevail. The meteorological characteristics in other seasons in this region are complicated.

Figures 1 show mean MSL (mean sea level) pressure distribution for January (a) and July (b) in 1999 (Bureau of Meteorology, 1999). Typical high pressure systems are seen at the Asian continent (a) and Pacific Ocean (b). Figures 2 show 850hPa level wind anomaly for January (a) and July (b) in 1999, which are derived from the Australian global model GASP, and the EC climatology (Bureau of Meteorology, 1999).

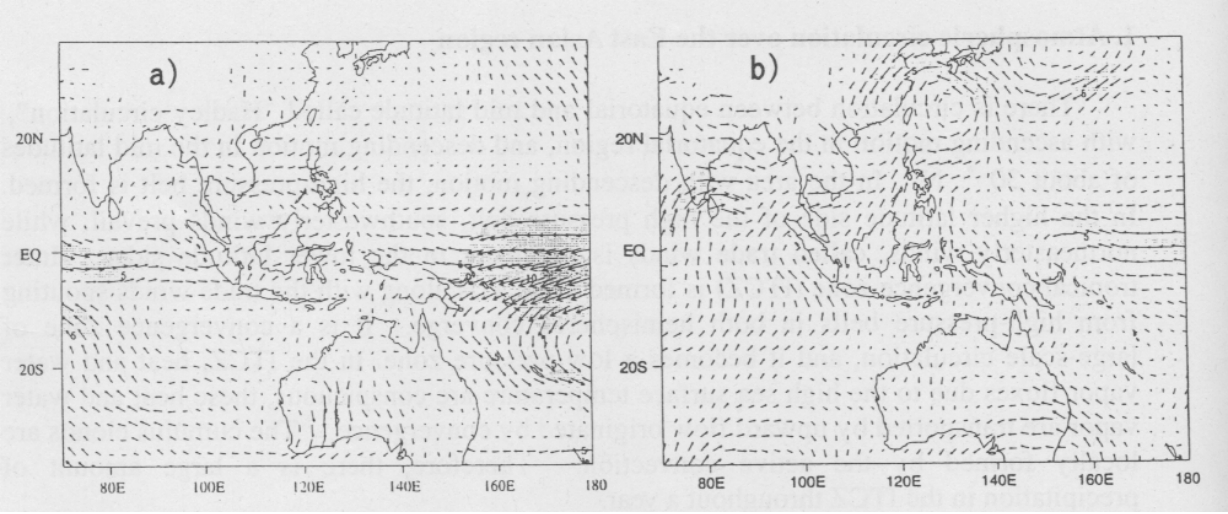

Fig. 2 850hPa level wind anomaly in January (a) and July (b), 1999.
Arrow length indicates relative magnitude. Areas greater than 5 m/s are shaded.

2. Precipitation

Figure 3 shows averaged annual precipitation in East Asian region (The Japan Meteorological Agency, 1994), latitudinal distribution of the zonal mean precipitation has a major peak at the ITCZ for the reason mentioned above. This peak shifts slightly to the side of summer hemisphere. The second peak is at the middle latitude of about 40 degrees on both hemispheres. In the middle latitudes, the peak of precipitation is mainly caused by the precipitation along the storm track (typhoon) in the Pacific Ocean from July to September.

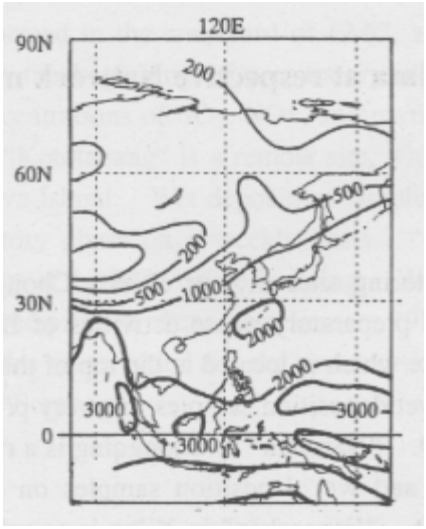

Fig. 3 Thirty-year (1961-1990) averaged annual precipitation, in millimeters, in East Asian region.

In the Northeast Asian region, the period from June to July is a rainy season, so-calld "Baiu" which is caused by a stationary front system. This front system is formed by the encounter of two air masses. One is moved by the cold northeasterly winds from the Okhotsk high pressure and the other is moved by warm and moist southwesterly winds from the Pacific high pressure. This region has also a short rainy season in autumn caused by a stationary front system along the southern coast of Japan.

Reference

Bureau of Meteorology, Northern Territory Region, 1999: Darwin Tropical Diagnostic Statement, vol. 18, No. 1.

Bureau of Meteorology, Northern Territory Region, 1999: Darwin Tropical Diagnostic Statement, vol. 18, No. 7.

The Japan Meteorological Agency (1994): *Climatic Table for the World (1961-1990)*, *Technical Data Series*, No.59, p198.

Annex 2

Monitoring data at respective Network monitoring sites

China

In China, nine monitoring sites in four cities - Chongqing, Xi'an, Xiamen, and Zhuhai - participate the preparatory phase activities of EANET. "Guanyinqiao" in Chongqing is an urban site which is located at the top of the Chongqing Environmental Monitoring Center, and wet deposition samples on every precipitation event have been collected from April 1999. "Nanshan" in Chongqing is a rural site which is located at southern mountain area, and wet deposition samples on a weekly basis have been collected from April 1999. "Jiancezhan" in Xi'an is an urban site which is located at the top of the Xi'an Environmental Monitoring Center, and wet deposition samples on every precipitation event have been collected from April 1999. "Weishuiyuan" in Xi'an is a rural site which is located at the top of resort hotel near a lake , and wet deposition samples on every precipitation event have been collected from April 1999. "Dabagou" in Xi'an is a remote site which is located at the top of a resort hotel in a mountain area, and wet deposition samples on every precipitation event have been collected from April 1999. "Hongwen" in Xiamen is an urban site which is located at the top of a building, and wet deposition samples on a daily basis have been collected from April 1999. "Xiaoping" in Xiamen is a remote site which is located in mountain area, and wet deposition samples on a daily basis have been collected from April 1999. "Jiancezhan" in Zhuhai is an urban site which is located at the top of the Zhuhai Environmental Monitoring Center, and wet deposition samples on a daily basis have been collected from May 1999. Atmospheric concentration of SO_2 was measured by an automatic monitor. "Zhuxian Cavern" in Zhuhai is an urban site which is located at the top of the Water-works Bureau near a reservoir, and a rain collector was installed December 1999 and collection of wet deposition sample was started thereafter. According to the national monitoring plan, both soil and vegetation monitoring and inland aquatic environment monitoring are carried out at four sites in respective cities namely "Nanshan" in Chongqing, "Dabagou" in Xi'an, "Xiaoping" in Xiamen, and "Zhuxian Cavern" in Zhuhai. However, monitoring data of these sites are not yet submitted to INC.

Indonesia

In Indonesia, monitoring is carried out at four sites. "Jakarta" is an urban site which is located at the top of the BMG office building, and wet deposition samples have been collected from the beginning of preparatory phase on a weekly basis. "Serpong"

is a rural site which is located in the courtyard of EMC, and wet deposition samples have been collected from the beginning of preparatory phase on every precipitation event. Atmospheric concentrations of SO_2, NOx, and particulate matter are measured by automatic monitors. "Kototabang" is a remote site, which is one of BMG's GAW station located in West Java Island. Wet deposition samples have been collected from the beginning of preparatory phase on a weekly basis. "Bandung" is an urban site which is located at the top of LAPAN office building. Wet deposition samples have been collected on every precipitation event from January 1999. Because of a situation of tropical country, biocides were added for the preservation of precipitation samples except for the samples of "Serpong".

Japan

In Japan, monitoring is carried out at ten sites. "Rishiri" is a remote site which is located in eastern island near Hokkaido island, and wet deposition samples have been collected from the beginning of preparatory phase on a daily basis. Atmospheric concentrations of SO_2, NOx, and O_3 are measured by automatic monitor. "Tappi" is a remote site which is located at a northern cape of the main island of Japan, and wet deposition samples have been collected from the beginning of preparatory phase on a daily basis. Atmospheric concentrations of SO_2, NOx, and O_3 are measured by automatic monitor. "Ogasawara" is a remote site which is located in an island in pacific ocean, and wet deposition samples have been collected from the beginning of preparatory phase on a monthly basis (from May 1999 on a daily basis). Atmospheric concentrations of SO_2, NOx, and O_3 are measured by automatic monitor. "Sado/Sado-seki" is a remote site, which is located in an island near Niigata, and wet deposition samples have been collected from the beginning of preparatory phase on a biweekly basis (From April 1999, monitoring has been conducted on a daily basis at new site in a same island apart from pollution source). Atmospheric concentrations of SO_2, NOx, O_3, and PM_{10} are measured by automatic monitors. "Happo" is a remote site which is located in a ridge of mountain in main island of Japan, and wet deposition samples have been collected from the beginning of preparatory phase on a daily basis. Atmospheric concentrations of SO_2, NOx, and O_3 are measured by automatic monitors. "Oki" is a remote site which is in an island south of "Sado/Sado-seki" site, and wet deposition samples have been collected from the beginning of preparatory phase on a daily basis. Atmospheric concentration of SO_2, NOx, O_3, and PM_{10} are measured by automatic monitors. "Ashizuri/Yusuhara" is a remote site, which is located in Shikoku island, and wet deposition samples have been collected from the beginning of preparatory phase on a daily basis. "Kunigami" is a remote site, which is located in the northern side of Okinawa island, and wet deposition sample have been collected from the beginning of preparatory phase on a daily basis. "Lake Ijira" is a rural and

ecological site which is located beside the Lake Ijira in middle of main island of Japan, and wet deposition samples have been collected on a weekly basis from June 1999. "Lake Banryu" is an urban and ecological site which is located beside the Lake Banryu in western seacoast of main island of Japan, and wet deposition samples have been collected on a weekly basis from May 1999. Both at Lake Ijira and Lake Banryu, monitoring for soil and vegetation and inland aquatic monitoring were carried out in the vicinities of wet and dry deposition monitoring sites.

Malaysia

In Malaysia, monitoring is carried out in two sites. "Petaling Jaya" is an urban site which is located at the top of MMS office building near Kuala Lunpur, and wet deposition samples have been collected from the beginning of preparatory phase on a weekly basis. Atmospheric concentrations of SO_2, NO_2, and HNO_3 are measured by passive samplers, and particulate matter concentration is measured by low volume sampler. "Tanah Rata" is a remote site which is located at highland in the middle of Malaysian Peninsula, and wet deposition sample have been collected from the beginning of preparatory phase on a weekly basis. Atmospheric concentrations of SO_2, NO_2, HNO_3, HCl and so on are measured by filter packs and passive samplers. Because of a situation of tropical country, biocides were added for the preservation of precipitation samples.

Mongolia

In Mongolia, monitoring is carried out in two sites. "Ulaanbaatar" is an urban site which is located at the top of the office building of National Agency for Meteorology, Hydrology and Environment Monitoring, and wet deposition sample have been collected on a daily basis from August 1998. Atmospheric concentrations of SO_2, HNO_3, HCl and so on are measured by filter packs on a weekly basis. "Terelj" is a remote site which is located at eastern plain of Ulaanbaatar, and wet deposition samples have been collected on a daily basis from September 1998. Atmospheric concentrations of SO_2, HNO_3, HCl and so on are measured by filter packs on a biweekly basis. Because of low temperature in Mongoloia, wet and dry deposition monitoring is stopped during winter season except filter packs at "Terelj" where air controlled shelter can be used for the operation of equipment.

Philippines

In Philippines, monitoring is carried out at two sites. "Metro Manila" is an urban site which is located at the Manila Observatory in Ateneo, and wet deposition

sample have been collected on a weekly basis from April 1999. "Los Banos" is a rural site which is located at the observatory in the campus of UP(University of the Philippines) Los Banos, and wet deposition sample have been collected on a weekly basis from April 1999. Both "Metro Manila" and "Los Banos" site belong to the Environmental Management Bureau. Soil monitoring was carried out at two sites both located in Los Banos, Laguna, namely: Agrometeorological station and the Makiling forest while vegetation monitoring will be carried out in the Makiling forest and UP Quezon Land Grant. Monitoring for inland aquatic environment was carried out at the Lake Mojikap in San Pablo, Laguna.

Republic of Korea

In Republic of Korea, monitoring is carried out in two sites. "Kanghwa" is an rural site which is located in western side of the Korean Peninsula, and wet deposition samples have been collected on a weekly basis from March 1999. "Kosan" is a remote site, which is located in an island in the East China Sea, and wet deposition samples have been collected on a weekly basis from April 1999.

Russia

In Russia, monitoring is carried out at one site. "Mondy" is a remote site which is located mountain area near Irkutuk, and wet deposition sample have been collected on a daily basis from May 1999. Atmospheric concentration of SO_2, HNO_3, HCl and so on are measured by filter packs on a weekly basis. Soil and vegetation monitoring was carried out in two forest area within the radius of 50km of "Mondy". Monitoring for inland aquatic environment was carried out at the Lake Ilchir, Lake Okinskoe, and two rivers.

Thailand

In Thailand, monitoring is carried out at four sites. "Bangkok" is an urban site which is located at the top of OEPP building, and wet deposition samples have been collected on a daily basis from April 1999. Atmospheric concentrations of SO_2, NOx, and O_3 are measured by automatic monitors. "Samutprakarn" is an urban site which is located at the top of MD building, and wet deposition samples have been collected as same as at "Bangkok". However, because of a problem on chemical analysis, monitoring data from "Samutprakarn" did not submit to INC. Atmospheric concentrations of SO_2, NOx, and O_3 are measured by automatic monitors. "Patumthani" is a rural site which is located at the yard of ERTC, and wet deposition samples have been collected on a daily basis from March 1999. "Khao Lam" is a

remote site which is located at middle western Thailand near Myanmar border, and wet deposition samples have been collected on a daily basis from April 1999. Atmospheric concentrations of SO_2, NOx, and O_3 are measured by automatic monitors installed on a mobile station. Both monitoring on soil and vegetation and inland aquatic environment monitoring were carried out around Khao Lam dam.

Vietnam

In Vietnam, monitoring is carried out at two sites. "Hoa Binh" is a rural site which is located at a basin of northern part of Vietnam, and wet deposition samples have been collected on a daily basis from August 1999. "Hanoi" is an urban site which is located in the yard of HMS, and wet deposition samples have been collected on a daily basis from August 1999. Both at "Hoa Binh" and "Hanoi", atmospheric concentrations of SO_2, HNO_3, HCl, and so on are measured by filter packs. Soil and vegetation monitoring was carried out at two forest reserves within the radius of 50km of "Hoa Binh", and monitoring for inland aquatic environment was carried out at the Hoa Binh reservoir.

Annex 3

Selected monitoring data during the preparatory phase

-Wet deposition monitoring:

Precipitation amounts
Concentration of nss-SO_4^{2-}, NO_3^-, NH_4^+, nss-Ca^{2+}
pH
Deposition amounts of nss-SO_4^{2-}, NO_3^-, NH_4^+, nss-Ca^{2+}

-Dry deposition monitoring (Air concentration monitoring):

Concentration of SO_2
Concentration of particulate components

-Soil and vegetation monitoring:

Soil chemical properties
Results of survey of tree decline

-Inland aquatic environment:

Properties of lakes
Summary of inland aquatic environment monitoring

Table 1.1(a) Monthly precipitation amounts unit: mm

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongquing												
	-Guanyinqiao				--	--	--	--	--	--	--	--	--
	-Nanshan				--	--	--	--	--	--	--	--	--
	Xi'an												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Weishuiyuan				--	--	--	--	--	--	--	--	--
	-Dabagou				--	--	--	--	--	--	--	--	--
	Xiamen												
	-Hongwen				--	--	--	--	--	--	--	--	--
	-Xiaoping				--	--	--	--	--	--	--	--	--
	Zhuhai												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--
Indonesia	Jakarta				124.6	95.2	206.2	162.6	67.4	97.9	160.7	43.7	25.8
	Serpong												
	Kototabang				231.2	130.8	133.8	131.4	375.1	147.5	237.6	152.8	136.3
	Bandung				--	--	--	--	--	--	--	--	--
Japan	Rishiri				31.6	38.6	33.9	79.0	11.5	68.5	106.0	159.5	27.5
	Tappi				103.6	175.6	218.0	73.5	242.0	239.5	267.0	137.0	45.6
	Sado/(Sado-seki)				185.0	246.5	86.0	59.0	180.5	237.5	243.5	194.5	113.5
	Happo				215.6	303.3	345.5	394.6	696.2	248.7	189.5	255.7	106.0
	Oki				122.3	150.9	160.5	143.7	196.0	109.6	127.4	99.0	112.1
	Ashizuri				210.0	404.5	599.2	265.0	52.9	576.5	632.5	66.0	20.5
	Ogasawara				44.0	179.0	139.0	202.5	563.0	41.5	108.5	179.0	93.5
	Kunigami				268.5	189.1	686.8	219.0	132.9	517.7	464.0	436.0	219.0
	Ijira				--	--	--	--	--	--	--	--	--
	Banryu				--	--	--	--	--	--	--	--	--
Republic of Korea	Kanghwa				--	--	--	--	--	--	--	--	--
	Kosan				--	--	--	--	--	--	--	--	--
Malaysia	Petaling Jaya				233.9	210.6	189.7	117.1	444.4	102.9	191.4	256.6	146.0
	Tanah Rata				--	--	--	--	--	--	--	--	--
Mongolia	Ulaanbaatar				--	--	--	--	57.3	36.8	1.7	--	--
	Terelj				--	--	--	--	--	31.0	--	--	--
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--
	Los Banos				--	--	--	--	--	--	--	--	--
Russia	Mondy				--	--	--	--	--	--	--	--	--
Thailand	Bangkok				--	--	--	--	--	--	--	--	--
	Samutprakarn				--	--	--	--	--	--	--	--	--
	Patumthani				--	--	--	--	--	--	--	--	--
	Khao Lam				--	--	--	--	--	--	--	--	--
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--
	Hoa Binh				--	--	--	--	--	--	--	--	--

Table 1.1(b) Monthly precipitation amounts unit: mm

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongquing												
	-Guanyinqiao	--	--	--	117.6	156.1	162.6	224.2	199.2	95.6			
	-Nanshan	--	--	--	214.0	170.7	167.5	208.3	227.8	151.2			
	Xi'an												
	-Jiancezhan	--	--	--	46.5	102.0	62.2	122.7	78.3	46.5	64.9		
	-Weishuiyuan	--	--	--	31.0	131.5	46.8	125.0	44.0	6.4	65.8		
	-Dabagou	--	--	--	74.0	131.5	76.7	207.5	26.2	75.9	116.7		
	Xiamen												
	-Hongwen	--	--	--	96.0	255.0	99.0	121.0	146.0	149.0			
	-Xiaoping	--	--	--	24.0	299.0	165.0	142.1	268.0	169.6			
	Zhuhai												
	-Jiancezhan	--	--	--	--	120.0	93.5	43.4	185.7	99.6	--	22.2	12.7
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--
Indonesia	Jakarta												
	Serpong	119.8	72.6	99.9	72.2	259.5	102.7	140.2	49.4	63.7	132.2	50.9	
	Kototabang												
	Bandung												
Japan	Rishiri	30.5	50.5	23.5	37.5	67.5	66.5	190.0	316.0	106.5			
	Tappi	30.5	39.1	49.8	29.7	128.6	57.0	128.0	59.5	183.1			
	Sado/(Sado-seki)	102.5	74.5	102.0	52.0	72.3	149.7	229.9	149.5	234.6			
	Happo	145.6	137.9	103.5	57.9	171.6	344.0	178.0	230.5	310.0			
	Oki	47.3	84.0	132.9	83.4	107.5	204.0	136.0	142.5	225.5			
	Ashizuri	34.0	115.8	225.0	214.9	247.5	264.0	392.0	220.5	405.0			
	Ogasawara	38.0	24.5	183.0	335.0	237.5	101.0	123.3	94.7	204.5			
	Kunigami	219.8	48.7	343.5	210.0	152.1	148.8	182.0	377.5	505.5			
	Ijira	--	--	--	--	--	294.5	353.0	258.0	764.0			
	Banryu	--	--	--	--	143.0	244.0	371.0	109.5	176.5			
Republic	Kanghwa	--	--	54.5	119.0	63.5	65.0	872.0	32.0	196.0	74.5		
of Korea	Kosan	--	--	--	63.6	52.9	199.4	628.9	723.6	508.0	58.2	7.9	
Malaysia	Petaling Jaya	143.3	222.2	388.8	174.9	411.1	38.9	203.5	145.3				
	Tanah Rata	113.1	128.9	374.4	349.0	83.3	104.9	215.6	396.6	242.6	326.4	114.5	293.5
Mongolia	Ulaanbaatar	--	--	--	--	2.3	63.4	49.9	47.8	61.3	6.9		
	Terelj	--	--	--	--	6.2	64.9	83.7	73.3	48.2	17.0		
Philippines	Metro Manila	--	--	--	12.7	92.6	--	25.5	97.9	175.5	84.5	91.3	
	Los Banos	--	--	--	9.5	89.1	23.9	104.0	137.0	121.3	194.4	29.4	
Russia	Mondy	--	--	--	--	2.0	47.0	121.1	31.5	--	--	--	--
Thailand	Bangkok	--	--	--	145.1	329.2	194.7	115.0	154.9	115.7	49.2		
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--
	Patumthani	--	--	19.4	153.6	254.5	123.7	173.4	102.6	159.2	64.5		
	Khao Lam	--	--	--	13.8	40.9	41.5	84.9	23.9	7.8	255.4	53.0	
Vietnam	Hanoi	--	--	--	--	--	--	--	97.1	170.9	184.8	81.0	73.5
	Hoa Binh	--	--	--	--	--	--	--	81.1	270.7	202.3	102.8	104.2

Table 1.2(a) Monthly weighted averages of nss-SO_4^{2-} concentration unit: μmol/L

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao				--	--	--	--	--	--	--	--	--	--		--		e
	-Nanshan				--	--	--	--	--	--	--	--	--	--		--		w
	Xi'an																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		e
	-Weishuiyuan				--	--	--	--	--	--	--	--	--	--		--		e
	-Dabagou				--	--	--	--	--	--	--	--	--	--		--		e
	Xiamen																	
	-Hongwen				--	--	--	--	--	--	--	--	--	--		--		d
	-Xiaoping				--	--	--	--	--	--	--	--	--	--		--		d
	Zhuhai																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		d
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta				18.3	17.1	4.9	11.1	8.4	6.3	9.7	28.9	94.9	132	12	1.9	5	w
	Serpong																	e
	Kototabang				4.7	3.9	3.0	2.9	2.0	2.7	2.3	2.0	<1.0	9.3	10	<1.0	10	w
	Bandung				--	--	--	--	--	--	--	--	--	--		--		e
Japan	Rishiri				56.0	14.5	6.1	11.3	9.3	6.2	13.3	8.4	27.0	133	4	<1.0	5	d
	Tappi				8.3	5.7	2.6	16.0	3.9	3.4	2.4	24.9	19.9	146	4	<1.0	6	d
	Sado/(Sado-seki)				4.9	4.0	8.2	13.4	10.0	2.0	4.8	11.8	24.0	24.3	12	<1.0	9	*
	Happo				3.8	2.9	2.8	6.3	6.0	1.7	3.8	21.5	22.5	92.7	12	<1.0	7	d
	Oki				9.1	4.5	9.0	17.3	11.0	4.3	6.9	15.4	11.7	86.1	10	<1.0	9	d
	Ashizuri				15.8	8.2	6.8	8.0	12.8	10.7	8.4	9.6	19.6	111	5	2.0	6	d
	Ogasawara				15.6	1.5	1.6	5.5	10.6	1.6	1.7	2.9	8.4	15.6	4	1.5	5	*
	Kunigami				4.6	3.9	4.9	6.0	7.5	3.3	3.4	8.6	9.3	128	9	<1.0	9	d
	Ijira				--	--	--	--	--	--	--	--	--	--		--		w
	Banryu				--	--	--	--	--	--	--	--	--	--		--		w
Republic	Kanghwa				--	--	--	--	--	--	--	--	--	--		--		e
of Korea	Kosan				--	--	--	--	--	--	--	--	--	--		--		e
Malaysia	Petaling Jaya				56.3	21.0	23.7	30.1	19.1	21.8	15.3	14.2	16.3	95.8	4	8.5	11	w
	Tanah Rata				--	--	--	--	--	--	--	--	--	--		--		w
Mongolia	Ulaanbaatar				--	--	--	--	13.2	24.1	32.4	--	--	43.9	8	8.0	8	d
	Terelj				--	--	--	--	--	10.4	--	--	--	12.8	9	9.3	9	d
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--	--		--		w
	Los Banos				--	--	--	--	--	--	--	--	--	--		--		w
Russia	Mondy				--	--	--	--	--	--	--	--	--	--		--		d
Thailand	Bangkok				--	--	--	--	--	--	--	--	--	--		--		d
	Samutprakarn				--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani				--	--	--	--	--	--	--	--	--	--		--		d
	Khao Lam				--	--	--	--	--	--	--	--	--	--		--		d
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--	--		--		w
	Hoa Binh				--	--	--	--	--	--	--	--	--	--		--		w

Table 1.2(b) Monthly weighted averages of nss-SO_4^{2-} concentration unit: µmol/L

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao	--	--	--	149	166	197	80.3	87.0	80.4				1520	4	24.4	4	e
	-Nanshan	--	--	--	113	158	123	59.5	68.8	46.6				611	5	23.3	9	w
	Xi'an																	
	-Jiancezhan	--	--	--	313	139	180	105	184	345	185			1240	4	61.2	7	e
	-Weishuiyuan	--	--	--	163	149	212	11.5	225	521	350			1000	5	7.9	7	e
	-Dabagou	--	--	--	69.6	60.4	148	86.4	247	117	187			5700	10	18.1	4	e
	Xiamen																	
	-Hongwen	--	--	--	26.9	30.2	24.5	10.7	13.0	16.0				74.7	5	5.2	5	d
	-Xiaoping	--	--	--	15.5	18.2	26.0	12.3	14.6	21.7				63.7	7	6.4	8	d
	Zhuhai																	
	-Jiancezhan	--	--	--	--	17.1	21.8	204	25.2	--	--	101	69.1	428	11	<1.0	6	d
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta																	w
	Serpong	<1.0	1.4	9.1	13.0	11.2	45.2	29.2	49.1	5.7	29.7	22.5		123	6	<1.0	1	e
	Kototabang																	w
	Bandung																	e
Japan	Rishiri	15.6	--	--	24.1	15.8	22.4	11.4	6.1	8.0				163	4	<1.0	7	d
	Tappi	23.4	52.0	28.1	22.8	12.3	15.6	7.9	5.0	3.6				111	1	<1.0	6	d
	Sado/(Sado-seki)	28.9	31.5	13.8	11.0	11.3	13.6	4.7	5.6	4.4				141	5	1.1	5	*
	Happo	9.4	9.4	17.5	10.6	20.3	4.0	4.6	3.0	2.2				246	5	<1.0	8	d
	Oki	27.9	23.7	7.5	17.9	6.9	4.9	2.4	4.9	3.4				144	4	<1.0	2	d
	Ashizuri	26.5	17.6	16.4	11.4	--	--	<1.0	2.3	3.0				92.3	2	<1.0	7	d
	Ogasawara	1.0	3.3	13.5	3.4	1.4	2.3	2.2	2.1	1.2				13.5	3	<1.0	9	*
	Kunigami	25.9	36.1	11.9	7.1	7.1	4.5	4.6	4.7	1.5				146	3	<1.0	5	d
	Ijira	--	--	--	--	--	8.6	16.3	13.5	8.0				61.8	7	5.6	8	w
	Banryu	--	--	--	--	5.1	6.5	4.6	4.8	5.1				13.5	6	1.4	5	w
Republic	Kanghwa	--	--	5.6	32.4	44.3	--	3.4	42.3	5.2	17.8			54.8	5	1.1	7	w
of Korea	Kosan	--	--	--	3.4	13.2	15.4	4.6	2.2	5.3	12.5	36.3		36.3	11	1.3	8	w
Malaysia	Petaling Jaya	18.5	25.2	20.8	16.6	15.7	29.2	23.3	20.0					83.6	1	9.0	5	w
	Tanah Rata	1.5	2.8	2.6	2.4	3.5	6.4	2.9	5.8	4.8	<1.0	1.9	1.2	10.1	1	<1.0	6	w
Mongolia	Ulaanbaatar	--	--	--	--	49.0	17.6	13.4	16.7	17.9	26.0			512	8	5.2	9	d
	Terelj	--	--	--	--	19.7	9.1	14.7	10.5	10.5	5.2			105	7	<1.0	6	d
Philippines	Metro Manila	--	--	--	114	29.8	--	14.7	11.7	9.2	25.0	9.9		114	4	9.1	9	w
	Los Banos	--	--	--	72.8	8.9	10.3	10.2	6.7	9.7	6.0	5.3		72.8	4	2.3	10	w
Russia	Mondy	--	--	--	--	16.5	3.7	5.6	6.7	--	--	--	--	17.6	8	<1.0	8	d
Thailand	Bangkok	--	--	--	15.2	20.8	17.1	16.9	17.2	16.7	22.5			75.4	10	4.6	7	d
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani	--	--	58.5	17.7	17.2	20.6	18.5	24.9	24.3	21.7			100	7	2.5	4	d
	Khao Lam	--	--	--	10.7	3.5	<1.0	2.3	1.2	4.0	2.0	1.5		20.7	10	<1.0	5	d
Vietnam	Hanoi	--	--	--	--	--	--	--	5.3	14.5	31.6	10.5	7.2	42.0	10	4.0	8	w
	Hoa Binh	--	--	--	--	--	--	--	5.3	4.4	26.0	26.4	7.5	29.2	10	1.9	9	w

Table 1.3(a) Monthly weighted averages of NO_3^- concentration unit: µmol/L

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao				--	--	--	--	--	--	--	--	--	--		--		e
	-Nanshan				--	--	--	--	--	--	--	--	--	--		--		w
	Xi'an																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		e
	-Weishuiyuan				--	--	--	--	--	--	--	--	--	--		--		e
	-Dabagou				--	--	--	--	--	--	--	--	--	--		--		e
	Xiamen																	
	-Hongwen				--	--	--	--	--	--	--	--	--	--		--		d
	-Xiaoping				--	--	--	--	--	--	--	--	--	--		--		d
	Zhuhai																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		d
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta				23.1	14.1	11.3	17.6	9.3	6.8	14.7	16.3	61.0	186	12	3.1	7	w
	Serpong																	e
	Kototabang				2.4	3.7	2.8	2.4	2.5	2.6	1.8	1.2	1.0	7.0	5	<1.0	4	w
	Bandung				--	--	--	--	--	--	--	--	--	--		--		e
Japan	Rishiri				71.2	21.0	17.5	8.6	14.6	10.7	3.3	5.7	24.5	167	4	<1.0	8	d
	Tappi				12.6	10.2	5.4	19.3	6.0	6.2	4.8	18.3	24.7	287	4	<1.0	12	d
	Sado/(Sado-seki)				10.1	5.5	19.7	16.0	11.3	4.8	6.9	9.3	17.1	35.3	6	2.9	9	*
	Happo				6.3	5.2	5.9	7.0	6.0	3.0	5.2	11.6	17.5	116	12	1.3	6	d
	Oki				13.1	7.0	14.0	17.3	12.4	8.6	11.2	19.2	16.7	128	12	<1.0	12	d
	Ashizuri				10.6	5.3	7.1	6.4	10.4	9.3	8.6	13.0	26.7	161	6	<1.0	4	d
	Ogasawara				8.2	1.9	2.3	3.7	3.7	4.7	4.0	2.9	4.7	8.2	4	1.9	5	*
	Kunigami				5.6	5.5	5.6	10.4	11.0	3.0	3.3	5.4	6.6	190	10	<1.0	7	d
	Ijira				--	--	--	--	--	--	--	--	--	--		--		w
	Banryu				--	--	--	--	--	--	--	--	--	--		--		w
Republic	Kanghwa				--	--	--	--	--	--	--	--	--	--		--		e
of Korea	Kosan				--	--	--	--	--	--	--	--	--	--		--		e
Malaysia	Petaling Jaya				49.5	24.4	30.8	29.5	19.7	22.2	20.7	12.2	16.9	232	7	3.6	10	w
	Tanah Rata				--	--	--	--	--	--	--	--	--	--		--		w
Mongolia	Ulaanbaatar				--	--	--	--	12.8	13.8	22.5	--	--	32.9	8	7.1	8	d
	Terelj				--	--	--	--	--	8.6	--	--	--	11.0	9	7.7	9	d
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--	--		--		w
	Los Banos				--	--	--	--	--	--	--	--	--	--		--		w
Russia	Mondy				--	--	--	--	--	--	--	--	--	--		--		d
Thailand	Bangkok				--	--	--	--	--	--	--	--	--	--		--		d
	Samutprakarn				--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani				--	--	--	--	--	--	--	--	--	--		--		d
	Khao Lam				--	--	--	--	--	--	--	--	--	--		--		d
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--	--		--		w
	Hoa Binh				--	--	--	--	--	--	--	--	--	--		--		w

Table 1.3(b) Monthly weighted averages of NO_3^- concentration unit: µmol/L

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao	--	--	--	39.5	39.8	50.3	23.0	19.4	13.8				721	4	6.1	9	e
	-Nanshan	--	--	--	35.5	44.4	37.3	21.9	22.9	9.3				148	5	4.0	9	w
	Xi'an																	
	-Jiancezhan	--	--	--	72.1	42.7	85.2	28.4	49.3	71.5	102			307	4	5.2	7	e
	-Weishuiyuan	--	--	--	39.9	147	46.2	2.7	53.8	97.9	58.8			538	5	<1.0	7	e
	-Dabagou	--	--	--	35.3	12.7	49.0	27.9	111	23.3	30.9			185	6	2.5	5	e
	Xiamen																	
	-Hongwen	--	--	--	20.1	16.7	19.1	8.3	11.9	14.3				48.5	6	5.5	8	d
	-Xiaoping	--	--	--	16.2	17.5	17.1	9.9	12.0	13.2				37.6	6	6.0	5	d
	Zhuhai																	
	-Jiancezhan	--	--	--	--	17.3	10.8	17.9	30.1	35.0	--	104	65.8	507	11	<1.0	7	d
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta																	w
	Serpong	<1.0	<1.0	30.8	24.1	16.9	44.4	32.8	45.3	26.0	38.1	29.1		176	3	<1.0	1	e
	Kototabang																	w
	Bandung																	e
Japan	Rishiri	6.2	--	--	31.7	15.7	26.6	12.0	9.1	9.5				156	4	1.1	1	d
	Tappi	21.5	47.3	38.8	54.4	16.4	15.2	14.4	8.5	5.9				155	3	2.3	3	d
	Sado/(Sado-seki)	34.7	30.6	19.1	9.0	20.0	19.7	9.0	7.5	8.1				184	5	3.0	9	*
	Happo	6.0	6.1	14.5	10.7	18.9	6.4	7.7	5.8	4.5				215	5	1.6	2	d
	Oki	37.9	33.1	9.5	22.3	10.7	9.1	4.4	7.5	7.9				165	1	2.1	9	d
	Ashizuri	59.3	9.8	16.0	13.8	--	--	1.9	2.9	3.4				122	2	<1.0	8	d
	Ogasawara	2.7	2.6	3.1	3.7	2.0	2.5	1.3	<1.0	<1.0				16.1	5	<1.0	7	*
	Kunigami	9.4	26.2	15.8	10.4	7.2	7.1	6.3	4.8	<1.0				192	3	<1.0	8	d
	Ijira	--	--	--	--	--	15.0	36.0	24.5	13.2				123	7	6.0	9	w
	Banryu	--	--	--	--	6.0	8.4	3.6	9.1	6.0				17.7	9	1.6	7	w
Republic	Kanghwa	--	--	6.5	27.4	32.5	--	9.1	81.0	13.0	31.3			110	7	3.6	9	w
of Korea	Kosan	--	--	--	5.1	5.2	17.4	2.8	4.4	7.1	66.7	42.5		66.7	10	1.0	5	w
Malaysia	Petaling Jaya	13.6	18.3	12.9	8.6	9.5	17.3	18.4	25.8					77.2	1	<1.0	4	w
	Tanah Rata	2.1	4.5	3.7	3.3	5.8	8.8	3.9	8.3	5.1	<1.0	1.8	<1.0	21.1	6	<1.0	10	w
Mongolia	Ulaanbaatar	--	--	--	--	40.3	17.1	14.9	15.2	12.9	11.1			271	8	4.7	9	d
	Terelj	--	--	--	--	18.1	10.2	17.6	11.2	10.1	7.3			112	5	<1.0	10	d
Philippines	Metro Manila	--	--	--	7.1	6.9	--	<1.0	3.4	3.7	2.5	2.2		9.5	5	<1.0	8	w
	Los Banos	--	--	--	1.9	95.3	3.0	23.9	101	1.6	13.8	2.7		144	5	1.0	9	w
Russia	Mondy	--	--	--	--	56.6	6.0	4.5	5.7	--	--	--	--	56.6	5	1.0	7	d
Thailand	Bangkok	--	--	--	6.8	9.9	18.3	17.7	16.8	26.0	27.8			112	10	2.9	5	d
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani	--	--	49.9	28.5	15.5	14.4	11.6	23.6	19.8	27.6			89.5	4	4.4	4	d
	Khao Lam	--	--	--	27.8	3.9	1.8	5.1	1.2	4.5	3.1	2.3		36.3	4	<1.0	6	d
Vietnam	Hanoi	--	--	--	--	--	--	--	10.1	9.9	11.2	8.2	10.0	12.6	8	8.1	11	w
	Hoa Binh	--	--	--	--	--	--	--	10.4	10.2	10.6	11.2	10.9	11.8	10	9.4	9	w

Table 1.4(a) Monthly weighted averages of NH_4^+ concentration unit: μmol/L

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao				--	--	--	--	--	--	--	--	--	--		--		e
	-Nanshan				--	--	--	--	--	--	--	--	--	--		--		w
	Xi'an																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		e
	-Weishuiyuan				--	--	--	--	--	--	--	--	--	--		--		e
	-Dabagou				--	--	--	--	--	--	--	--	--	--		--		e
	Xiamen																	
	-Hongwen				--	--	--	--	--	--	--	--	--	--		--		d
	-Xiaoping				--	--	--	--	--	--	--	--	--	--		--		d
	Zhuhai																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		d
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta				16.4	53.4	43.4	35.8	39.8	25.8	69.4	39.3	33.3	126	8	10.5	7	w
	Serpong																	e
	Kototabang				<1.0	<1.0	2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.9	6	<1.0	8	w
	Bandung				--	--	--	--	--	--	--	--	--	--		--		e
Japan	Rishiri				167	29.0	23.9	15.3	17.5	12.4	11.9	13.9	24.2	324	4	2.8	12	d
	Tappi				10.4	8.7	3.8	27.4	4.6	5.5	3.4	25.4	15.9	183	6	<1.0	9	d
	Sado/(Sado-seki)				5.9	5.8	16.1	16.9	13.4	2.7	5.2	14.4	26.9	38.0	12	2.2	9	*
	Happo				2.1	1.9	3.2	9.7	8.0	<1.0	3.0	20.7	20.7	197	6	<1.0	4	d
	Oki				8.1	5.2	10.3	27.2	15.5	13.8	9.0	19.3	14.5	214	8	<1.0	12	d
	Ashizuri				11.2	4.0	4.1	4.8	9.6	3.4	3.9	5.7	11.8	123	6	<1.0	5	d
	Ogasawara				2.8	4.4	2.8	6.1	1.1	6.1	6.1	40.5	48.8	48.8	12	1.1	8	*
	Kunigami				5.5	3.9	5.4	9.4	11.6	4.9	3.3	9.9	8.4	314	9	<1.0	6	d
	Ijira				--	--	--	--	--	--	--	--	--	--		--		w
	Banryu				--	--	--	--	--	--	--	--	--	--		--		w
Republic of Korea	Kanghwa				--	--	--	--	--	--	--	--	--	--		--		e
	Kosan				--	--	--	--	--	--	--	--	--	--		--		e
Malaysia	Petaling Jaya				54.9	4.7	21.4	21.9	10.6	9.2	10.4	20.6	5.8	171	4	1.8	10	w
	Tanah Rata				--	--	--	--	--	--	--	--	--	--		--		w
Mongolia	Ulaanbaatar				--	--	--	--	66.9	57.6	70.8	--	--	141	8	23.8	8	d
	Terelj				--	--	--	--	--	57.8	--	--	--	64.9	9	43.8	9	d
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--	--		--		w
	Los Banos				--	--	--	--	--	--	--	--	--	--		--		w
Russia	Mondy				--	--	--	--	--	--	--	--	--	--		--		d
Thailand	Bangkok				--	--	--	--	--	--	--	--	--	--		--		d
	Samutprakarn				--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani				--	--	--	--	--	--	--	--	--	--		--		d
	Khao Lam				--	--	--	--	--	--	--	--	--	--		--		d
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--	--		--		w
	Hoa Binh				--	--	--	--	--	--	--	--	--	--		--		w

Table 1.4(b) Monthly weighted averages of NH_4^+ concentration unit: μmol/L

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao	--	--	--	121	210	216	74.3	59.8	68.2				861	4	18.1	4	e
	-Nanshan	--	--	--	113	138	79.8	50.5	57.5	42.8				255	5	4.4	7	w
	Xi'an																	
	-Jiancezhan	--	--	--	294	271	279	501	333	487	302			2320	7	160	4	e
	-Weishuiyuan	--	--	--	111	201	391	6.3	282	655	323			655	9	3.9	7	e
	-Dabagou	--	--	--	88.4	180	157	237	667	147	150			832	8	37.3	5	e
	Xiamen																	
	-Hongwen	--	--	--	46.4	42.1	39.5	20.0	32.7	33.1				155	5	6.7	5	d
	-Xiaoping	--	--	--	35.9	37.0	49.1	23.2	52.2	15.5				132	8	2.9	5	d
	Zhuhai																	
	-Jiancezhan	--	--	--	--	9.6	3.1	19.5	39.5	133	--	95.6	149	151	11	1.3	6	d
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta																	w
	Serpong	55.5	18.4	13.5	45.3	28.9	63.1	27.6	79.1	6.0	26.1	24.5		212	6	4.4	3	e
	Kototabang																	w
	Bandung																	e
Japan	Rishiri	23.3	--	--	38.6	26.4	39.7	17.7	8.2	13.4				264	4	1.6	9	d
	Tappi	15.8	67.7	28.6	37.8	14.5	23.3	7.1	4.9	2.9				161	2	<1.0	9	d
	Sado/(Sado-seki)	33.6	45.2	11.3	12.3	12.1	14.8	4.5	7.4	4.2				93.2	5	<1.0	4	*
	Happo	5.1	4.8	22.3	11.9	38.1	7.6	5.1	3.9	2.7				380	5	<1.0	1	d
	Oki	45.1	56.8	17.8	29.4	7.9	7.7	3.8	5.1	3.8				236	4	<1.0	7	d
	Ashizuri	29.1	10.2	14.6	12.0	--	--	<1.0	2.0	1.3				110	2	<1.0	7	d
	Ogasawara	5.5	7.2	5.0	2.8	<1.0	1.7	1.0	<1.0	<1.0				10.8	6	<1.0	5	*
	Kunigami	25.4	37.7	19.0	14.8	11.8	8.3	7.5	6.1	1.8				252	4	<1.0	8	d
	Ijira	--	--	--	--	--	6.1	18.6	17.9	11.1				92.0	7	6.1	6	w
	Banryu	--	--	--	--	9.1	17.0	14.8	5.3	5.3				21.7	6	2.8	7	w
Republic	Kanghwa	--	--	12.9	150	100	--	9.0	41.9	8.2	35.9			150	4	1.9	7	w
of Korea	Kosan	--	--	--	25.7	13.8	29.9	37.9	2.6	13.5	13.2	31.7		60.9	7	2.1	8	w
Malaysia	Petaling Jaya	4.2	12.3	8.0	2.9	5.0	10.7	14.9	13.6					38.9	7	<1.0	1	w
	Tanah Rata	5.2	6.5	8.0	9.8	10.6	19.4	12.9	13.6	4.2	<1.0	<1.0	<1.0	47.1	6	<1.0	12	w
Mongolia	Ulaanbaatar	--	--	--	--	99.6	72.1	44.8	34.5	47.7	44.3			375	7	17.2	8	d
	Terelj	--	--	--	--	62.9	30.9	45.3	20.4	27.9	11.6			299	5	<1.0	7	d
Philippines	Metro Manila	--	--	--	66.5	45.3	--	8.7	20.3	119	63.2	112		180	9	4.2	8	w
	Los Banos	--	--	--	34.9	14.3	16.6	9.4	27.5	34.1	5.2	4.0		62.1	4	2.2	10	w
Russia	Mondy	--	--	--	--	89.8	15.4	14.6	14.6	--	--	--	--	89.8	5	<1.0	7	d
Thailand	Bangkok	--	--	--	34.0	42.2	59.8	49.6	40.5	40.4	34.2			139	4	13.9	9	d
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani	--	--	68.1	37.9	17.8	34.6	30.9	38.7	40.5	42.9			134	7	<1.0	8	d
	Khao Lam	--	--	--	57.0	8.8	9.4	12.9	4.8	9.1	4.3	2.8		72.6	4	1.0	6	d
Vietnam	Hanoi	--	--	--	--	--	--	--	9.3	8.5	3.2	1.3	8.1	11.7	9	1.0	11	w
	Hoa Binh	--	--	--	--	--	--	--	5.5	4.4	2.3	4.0	8.2	10.6	9	1.0	9	w

Table 1.5(a) Monthly weighted averages of nss-Ca^{2+} concentration unit: µmol/L

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao				--	--	--	--	--	--	--	--	--	--		--		e
	-Nanshan				--	--	--	--	--	--	--	--	--	--		--		w
	Xi'an																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		e
	-Weishuiyuan				--	--	--	--	--	--	--	--	--	--		--		e
	-Dabagou				--	--	--	--	--	--	--	--	--	--		--		e
	Xiamen																	
	-Hongwen				--	--	--	--	--	--	--	--	--	--		--		d
	-Xiaoping				--	--	--	--	--	--	--	--	--	--		--		d
	Zhuhai																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		d
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta				4.5	15.7	25.2	14.7	7.7	5.5	7.6	65.6	23.7	200	11	2.0	9	w
	Serpong																	e
	Kototabang				0.3	0.7	1.4	0.6	0.3	0.5	0.4	0.4	0.4	3.1	6	<0.2	4	w
	Bandung				--	--	--	--	--	--	--	--	--	--		--		e
Japan	Rishiri				286	6.2	2.4	0.7	2.3	1.8	1.2	2.2	10.1	527	4	<0.2	11	d
	Tappi				2.7	3.3	0.8	0.6	0.6	0.7	0.3	7.2	7.1	164	4	<0.2	4	d
	Sado/(Sado-seki)				2.4	1.2	2.5	1.8	0.9	1.4	2.3	3.5	5.4	7.6	12	0.8	8	*
	Happo				1.9	0.9	0.5	0.4	0.4	0.3	0.5	6.8	6.9	87.6	11	<0.2	6	d
	Oki				5.1	1.3	1.9	1.6	1.1	0.4	1.8	4.7	4.3	65.4	10	<0.2	8	d
	Ashizuri				5.7	1.4	1.2	0.9	4.5	0.9	0.3	0.3	8.5	69.5	12	<0.2	4	d
	Ogasawara				3.6	2.0	4.8	1.5	<0.2	4.9	4.1	2.8	6.4	6.4	12	<0.2	8	*
	Kunigami				2.3	1.0	0.3	1.5	0.8	0.4	0.6	0.9	2.8	41.8	10	<0.2	4	d
	Ijira				--	--	--	--	--	--	--	--	--	--		--		w
	Banryu				--	--	--	--	--	--	--	--	--	--		--		w
Republic	Kanghwa				--	--	--	--	--	--	--	--	--	--		--		e
of Korea	Kosan				--	--	--	--	--	--	--	--	--	--		--		e
Malaysia	Petaling Jaya				11.0	7.4	4.8	6.0	2.6	4.0	3.8	3.3	4.4	43.3	7	0.8	11	w
	Tanah Rata				--	--	--	--	--	--	--	--	--	--		--		w
Mongolia	Ulaanbaatar				--	--	--	--	20.2	30.1	57.7	--	--	72.9	10	17.0	8	d
	Terelj				--	--	--	--	--	27.8	--	--	--	29.7	9	26.5	9	d
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--	--		--		w
	Los Banos				--	--	--	--	--	--	--	--	--	--		--		w
Russia	Mondy				--	--	--	--	--	--	--	--	--	--		--		d
Thailand	Bangkok				--	--	--	--	--	--	--	--	--	--		--		d
	Samutprakarn				--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani				--	--	--	--	--	--	--	--	--	--		--		d
	Khao Lam				--	--	--	--	--	--	--	--	--	--		--		d
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--	--		--		w
	Hoa Binh				--	--	--	--	--	--	--	--	--	--		--		w

Table 1.5(b) Monthly weighted averages of nss-Ca^{2+} concentration unit: µmol/L

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao	--	--	--	73.6	75.6	192	35.0	56.2	58.3				1940	6	8.6	7	e
	-Nanshan	--	--	--	33.0	41.8	39.0	21.0	33.2	23.7				106	9	10.5	7	w
	Xi'an																	
	-Jiancezhan	--	--	--	352	185	208	123	185	352	170			1660	4	49.7	7	e
	-Weishuiyuan	--	--	--	523	223	282	6.4	222	306	201			1440	5	4.1	7	e
	-Dabagou	--	--	--	161	159	163	137	193	36.0	55.9			468	5	0.3	9	e
	Xiamen																	
	-Hongwen	--	--	--	14.5	7.8	6.2	0.8	0.8	1.7				25.0	4	<0.2	7	d
	-Xiaoping	--	--	--	2.4	10.8	19.9	0.7	0.4	6.1				54.4	6	<0.2	8	d
	Zhuhai																	
	-Jiancezhan	--	--	--	--	42.6	184	182	27.1	46.9	--	180	102	825	11	3.2	8	d
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta																	w
	Serpong	6.8	9.3	19.2	20.6	8.9	8.6	2.3	15.7	12.0	7.1	4.2		48.5	6	<0.2	6	e
	Kototabang																	w
	Bandung																	e
Japan	Rishiri	4.6	--	--	9.7	3.7	4.1	1.1	0.4	1.8				78.1	4	<0.2	1	d
	Tappi	22.1	23.8	18.6	16.8	6.0	2.4	0.3	0.4	0.3				160	1	<0.2	2	d
	Sado/(Sado-seki)	7.2	10.6	7.6	7.1	11.9	1.2	0.4	0.3	0.7				163	5	<0.2	6	*
	Happo	1.9	2.5	16.0	5.2	4.9	0.5	0.6	0.4	0.2				146	5	<0.2	5	d
	Oki	11.6	15.6	3.5	12.5	3.7	0.9	0.4	0.5	0.7				103	4	<0.2	8	d
	Ashizuri	2.2	0.8	5.1	5.8	--	--	1.6	1.7	0.2				197	3	<0.2	2	d
	Ogasawara	2.7	1.8	6.6	1.4	1.4	1.0	2.1	9.5	1.8				27.9	8	<0.2	7	*
	Kunigami	2.4	6.3	4.7	1.3	1.6	1.1	0.3	0.3	0.3				90.5	2	<0.2	1	d
	Ijira	--	--	--	--	--	8.0	6.9	6.6	4.7				10.4	8	3.0	9	w
	Banryu	--	--	--	--	0.6	0.3	<0.2	0.3	0.2				1.2	7	<0.2	7	w
Republic	Kanghwa	--	--	3.0	18.8	7.4	--	4.2	26.4	4.3	7.5			34.5	7	3.0	3	w
of Korea	Kosan	--	--	--	2.9	2.7	<0.2	2.3	3.1	3.4	60.9	64.4		64.4	11	<0.2	5	w
Malaysia	Petaling Jaya	3.0	4.7	3.9	3.8	1.9	5.2	3.0	6.1					19.4	1	0.8	4	w
	Tanah Rata	1.3	1.6	0.8	1.0	1.1	3.5	2.8	2.9	1.3	0.3	1.0	0.4	7.8	6	<0.2	12	w
Mongolia	Ulaanbaatar	--	--	--	--	115	28.4	20.0	23.5	20.3	49.5			969	8	3.8	6	d
	Terelj	--	--	--	--	19.5	8.7	19.5	22.1	8.1	7.7			295	8	<0.2	6	d
Philippines	Metro Manila	--	--	--	17.3	18.5	--	2.3	2.9	6.1	37.1	4.2		37.1	10	1.6	8	w
	Los Banos	--	--	--	2.1	4.7	<0.2	1.6	1.1	4.0	10.8	5.7		20.0	5	<0.2	5	w
Russia	Mondy	--	--	--	--	24.3	4.2	2.2	7.2	--	--	--	--	24.3	5	0.5	7	d
Thailand	Bangkok	--	--	--	11.6	14.5	15.0	11.1	11.5	10.0	15.8			128	6	<0.2	7	d
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani	--	--	30.0	7.6	4.8	12.6	13.3	12.1	7.6	11.4			99.9	7	0.7	9	d
	Khao Lam	--	--	--	7.1	4.7	1.4	1.6	<0.2	0.6	1.2	1.1		22.0	5	<0.2	5	d
Vietnam	Hanoi	--	--	--	--	--	--	--	21.1	21.4	33.4	8.6	13.8	45.7	10	7.8	11	w
	Hoa Binh	--	--	--	--	--	--	--	7.8	13.1	27.3	42.7	14.4	42.7	11	0.7	9	w

Table 1.6(a) Monthly weighted averages of pH

pH units

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao				--	--	--	--	--	--	--	--	--	--		--		e
	-Nanshan				--	--	--	--	--	--	--	--	--	--		--		w
	Xi'an																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		e
	-Weishuiyuan				--	--	--	--	--	--	--	--	--	--		--		e
	-Dabagou				--	--	--	--	--	--	--	--	--	--		--		e
	Xiamen																	
	-Hongwen				--	--	--	--	--	--	--	--	--	--		--		d
	-Xiaoping				--	--	--	--	--	--	--	--	--	--		--		d
	Zhuhai																	
	-Jiancezhan				--	--	--	--	--	--	--	--	--	--		--		d
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta				4.38	4.11	5.76	3.92	3.96	4.12	4.20	4.28	5.27	6.99	5	3.40	5	w
	Serpong																	e
	Kototabang				4.96	4.86	5.15	4.99	5.05	5.01	5.01	5.14	5.37	5.48	12	4.36	10	w
	Bandung				--	--	--	--	--	--	--	--	--	--		--		e
Japan	Rishiri				6.33	5.33	4.66	4.99	4.89	4.91	4.99	4.90	4.61	7.41	4	4.43	12	d
	Tappi				4.88	5.07	5.02	4.68	5.00	4.99	5.10	4.58	4.57	5.90	11	4.06	8	d
	Sado/(Sado-seki)				5.00	5.25	4.81	4.74	4.76	5.10	4.95	4.78	4.47	5.44	5	4.45	12	*
	Happo				5.19	5.23	5.06	4.94	4.96	5.26	5.02	4.63	4.55	6.21	11	4.04	12	d
	Oki				5.00	5.22	4.76	4.71	4.94	4.99	5.00	4.63	4.78	6.64	8	4.02	6	d
	Ashizuri				4.57	4.70	4.78	4.76	4.64	4.72	4.73	4.51	4.43	5.30	6	3.66	6	d
	Ogasawara				4.90	5.60	5.20	5.50	5.70	5.40	5.40	4.90	4.80	5.70	8	4.80	12	*
	Kunigami				5.40	5.19	5.04	5.00	4.97	5.37	5.31	4.99	4.96	6.52	10	4.19	11	d
	Ijira				--	--	--	--	--	--	--	--	--	--		--		w
	Banryu				--	--	--	--	--	--	--	--	--	--		--		w
Republic	Kanghwa				--	--	--	--	--	--	--	--	--	--		--		e
of Korea	Kosan				--	--	--	--	--	--	--	--	--	--		--		e
Malaysia	Petaling Jaya				4.00	4.29	4.24	4.20	4.32	4.23	4.45	4.93	4.41	5.52	11	3.58	7	w
	Tanah Rata				--	--	--	--	--	--	--	--	--	--		--		w
Mongolia	Ulaanbaatar				--	--	--	--	5.49	5.57	6.64	--	--	7.03	8	4.85	8	d
	Terelj				--	--	--	--	--	6.34	--	--	--	6.53	9	6.24	9	d
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--	--		--		w
	Los Banos				--	--	--	--	--	--	--	--	--	--		--		w
Russia	Mondy				--	--	--	--	--	--	--	--	--	--		--		d
Thailand	Bangkok				--	--	--	--	--	--	--	--	--	--		--		d
	Samutprakarn				--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani				--	--	--	--	--	--	--	--	--	--		--		d
	Khao Lam				--	--	--	--	--	--	--	--	--	--		--		d
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--	--		--		w
	Hoa Binh				--	--	--	--	--	--	--	--	--	--		--		w

Table 1.6(b) Monthly weighted averages of pH

pH units

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Max	M	Min	M	F
China	Chongqing																	
	-Guanyinqiao	--	--	--	5.21	4.65	4.27	4.16	4.80	4.81				6.84	8	3.79	7	e
	-Nanshan	--	--	--	4.48	4.51	4.03	3.55	4.43	4.92				5.61	9	3.42	7	w
	Xi'an																	
	-Jiancezhan	--	--	--	6.16	6.95	6.24	5.98	6.81	6.28	5.83			7.42	4	5.06	7	e
	-Weishuiyuan	--	--	--	6.97	6.91	6.73	6.95	6.96	6.60	6.64			7.56	10	6.21	10	e
	-Dabagou	--	--	--	7.24	7.11	7.11	6.56	6.73	6.10	5.78			7.59	5	5.46	9	e
	Xiamen																	
	-Hongwen	--	--	--	4.90	4.72	5.08	5.32	5.22	4.96				6.12	8	4.25	5	d
	-Xiaoping	--	--	--	4.76	4.90	4.83	4.93	5.36	5.02				8.95	6	4.35	7	d
	Zhuhai																	
	-Jiancezhan	--	--	--	--	5.25	6.06	6.03	5.34	5.19	--	6.08	6.65	7.16	6	4.52	8	d
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
Indonesia	Jakarta																	w
	Serpong	4.69	4.39	4.24	4.65	4.04	4.30	4.48	4.05	4.72	4.17	4.48		6.55	6	3.79	1	e
	Kototabang																	w
	Bandung																	e
Japan	Rishiri	--	--	--	4.65	4.82	4.68	4.79	4.82	4.95				5.46	5	4.03	7	d
	Tappi	4.84	4.80	4.82	4.72	4.99	4.83	4.72	4.96	5.06				6.70	1	3.88	6	d
	Sado/(Sado-seki)	4.35	4.59	4.87	5.28	5.17	4.54	4.84	4.87	4.94				6.28	5	3.79	6	*
	Happo	4.77	4.77	5.21	4.90	4.77	5.12	4.90	5.03	5.18				6.32	3	3.98	6	d
	Oki	4.74	4.84	5.22	4.85	4.78	4.84	5.14	4.93	4.92				6.81	4	3.80	4	d
	Ashizuri	4.09	4.47	4.59	5.08	--	--	5.36	5.16	4.99				6.48	3	3.92	2	d
	Ogasawara	5.00	5.00	4.90	5.43	5.39	5.23	5.21	5.62	5.45				6.26	8	4.72	6	*
	Kunigami	4.46	4.44	4.89	5.19	5.34	5.32	5.26	5.40	5.50				6.36	9	3.84	1	d
	Ijira	--	--	--	--	--	4.70	4.34	4.57	4.87				5.94	8	3.83	7	w
	Banryu	--	--	--	--	4.91	4.94	5.00	4.80	4.89				5.08	6	4.37	7	w
Republic	Kanghwa	--	--	6.05	6.57	5.46	--	5.22	4.50	5.29	4.59			6.57	4	4.44	7	w
of Korea	Kosan	--	--	--	6.05	6.08	5.28	5.45	5.32	5.15	6.76	5.00		6.76	10	5.00	11	w
Malaysia	Petaling Jaya	4.26	4.20	4.28	4.34	4.37	4.19	4.30	4.31					4.93	7	3.96	7	w
	Tanah Rata	4.94	5.04	4.96	4.95	4.71	4.80	5.04	4.98	4.75	5.00	4.99	4.86	5.56	7	4.42	6	w
Mongolia	Ulaanbaatar	--	--	--	--	6.83	6.09	5.88	6.00	5.90	6.67			7.55	6	5.49	6	d
	Terelj	--	--	--	--	6.73	5.60	5.48	5.61	5.14	5.92			7.84	8	4.73	7	d
Philippines	Metro Manila	--	--	--	6.29	4.59	--	5.02	4.97	6.42	6.20	6.88		7.07	11	4.44	5	w
	Los Banos	--	--	--	5.22	3.65	4.65	4.25	3.28	4.91	5.57	4.15		8.02	11	2.95	8	w
Russia	Mondy	--	--	--	--	5.68	5.11	5.09	5.46	--	--	--	--	6.14	8	4.70	7	d
Thailand	Bangkok	--	--	--	4.81	5.47	5.54	5.18	5.70	4.81	5.01			6.69	6	4.33	9	d
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--	--		--		d
	Patumthani	--	--	4.46	4.49	4.72	5.39	5.17	4.85	4.62	4.79			6.02	7	4.02	4	d
	Khao Lam	--	--	--	5.68	6.00	5.66	5.87	5.74	5.57	5.48	5.32		6.31	5	5.03	10	d
Vietnam	Hanoi	--	--	--	--	--	--	--	6.30	5.87	5.25	5.18	5.26	6.95	9	5.04	10	w
	Hoa Binh	--	--	--	--	--	--	--	5.57	5.48	5.07	5.70	5.16	6.09	9	4.73	10	w

Table 1.7(a) Monthly nss-SO_4^{2-} deposition amounts unit: mmol/m^2/month

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao				--	--	--	--	--	--	--	--	--
	-Nanshan				--	--	--	--	--	--	--	--	--
	Xi'an												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Weishuiyuan				--	--	--	--	--	--	--	--	--
	-Dabagou				--	--	--	--	--	--	--	--	--
	Xiamen												
	-Hongwen				--	--	--	--	--	--	--	--	--
	-Xiaoping				--	--	--	--	--	--	--	--	--
	Zhuhai												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--
Indonesia	Jakarta				2.28	1.62	1.01	1.81	0.57	0.62	1.57	1.26	2.45
	Serpong												
	Kototabang				1.10	0.50	0.40	0.38	0.77	0.39	0.55	0.31	0.12
	Bandung												
Japan	Rishiri				1.77	0.56	0.21	0.89	0.11	0.42	1.41	1.34	0.74
	Tappi				0.86	1.01	0.56	1.18	0.93	0.82	0.64	3.41	0.91
	Sado/(Sado-seki)				0.91	1.00	0.71	0.79	1.80	0.47	1.18	2.30	2.72
	Happo				0.82	0.87	0.97	2.47	4.15	0.42	0.72	5.50	2.39
	Oki				1.11	0.69	1.44	2.48	2.15	0.47	0.88	1.52	1.32
	Ashizuri				3.31	3.30	4.10	2.12	0.68	6.15	5.30	0.64	0.40
	Ogasawara				0.69	0.27	0.23	1.12	5.97	0.07	0.18	0.51	0.78
	Kunigami				1.24	0.74	3.39	1.31	0.99	1.69	1.55	3.75	2.05
	Ijira				--	--	--	--	--	--	--	--	--
	Banryu				--	--	--	--	--	--	--	--	--
Republic of Korea	Kanghwa				--	--	--	--	--	--	--	--	--
	Kosan				--	--	--	--	--	--	--	--	--
Malaysia	Petaling Jaya				13.2	4.41	4.50	3.53	8.48	2.24	2.93	3.63	2.38
	Tanah Rata				--	--	--	--	--	--	--	--	--
Mongolia	Ulaanbaatar				--	--	--	--	0.76	0.89	0.06	--	--
	Terelj				--	--	--	--	--	0.32	--	--	--
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--
	Los Banos				--	--	--	--	--	--	--	--	--
Russia	Mondy				--	--	--	--	--	--	--	--	--
Thailand	Bangkok				--	--	--	--	--	--	--	--	--
	Samutprakarn				--	--	--	--	--	--	--	--	--
	Patumthani				--	--	--	--	--	--	--	--	--
	Khao Lam				--	--	--	--	--	--	--	--	--
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--
	Hoa Binh				--	--	--	--	--	--	--	--	--

Table 1.7(b) Monthly nss-SO_4^{2-} deposition amounts unit: mmol/m^2/month

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	--	--	--	17.6	25.9	32.0	18.0	17.3	7.69			
	-Nanshan	--	--	--	24.2	27.0	20.5	12.4	15.7	7.04			
	Xi'an												
	-Jiancezhan	--	--	--	14.6	14.2	11.2	12.9	14.4	16.1	12.0		
	-Weishuiyuan	--	--	--	5.04	19.5	9.92	1.44	9.90	3.34	23.0		
	-Dabagou	--	--	--	5.15	7.94	11.4	17.9	6.46	8.86	21.8		
	Xiamen												
	-Hongwen	--	--	--	2.58	7.71	2.43	1.29	1.89	2.39			
	-Xiaoping	--	--	--	0.37	5.44	4.29	1.74	3.91	3.69			
	Zhuhai												
	-Jiancezhan	--	--	--	--	2.05	2.04	8.84	4.68	--	--	2.24	0.88
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--
Indonesia	Jakarta												
	Serpong	0.06	0.10	0.90	0.94	2.91	4.65	4.09	2.43	0.36	3.92	1.15	
	Kototabang												
	Bandung												
Japan	Rishiri	0.48	--	--	0.90	1.06	1.49	2.17	1.93	0.85			
	Tappi	0.71	2.03	1.40	0.68	1.58	0.89	1.02	0.30	0.66			
	Sado/(Sado-seki)	2.96	2.34	1.40	0.57	0.81	2.04	1.09	0.84	1.03			
	Happo	1.37	1.30	1.81	0.61	3.48	1.37	0.82	0.70	0.67			
	Oki	1.32	1.99	1.00	1.49	0.74	0.99	0.32	0.69	0.77			
	Ashizuri	0.90	2.04	3.70	2.45	--	--	0.33	0.50	1.21			
	Ogasawara	0.04	0.08	2.47	1.15	0.33	0.23	0.27	0.20	0.25			
	Kunigami	5.70	1.76	4.09	1.49	1.07	0.67	0.84	1.78	0.77			
	Ijira	--	--	--	--	--	2.53	5.77	3.47	6.14			
	Banryu	--	--	--	--	0.72	1.58	1.69	0.52	0.90			
Republic	Kanghwa	--	--	0.30	3.86	2.81	--	2.97	1.36	1.01	1.33		
of Korea	Kosan	--	--	--	0.21	0.70	3.07	2.91	1.60	2.67	0.73	0.29	
Malaysia	Petaling Jaya	2.65	5.60	8.09	2.91	6.45	1.14	4.74	2.90				
	Tanah Rata	0.17	0.36	0.98	0.85	0.29	0.67	0.63	2.32	1.16	0.28	0.22	0.34
Mongolia	Ulaanbaatar	--	--	--	--	0.11	1.12	0.67	0.80	1.10	0.18		
	Terelj	--	--	--	--	0.12	0.59	1.23	0.77	0.51	0.09		
Philippines	Metro Manila	--	--	--	1.45	2.76	--	0.37	1.15	1.61	2.11	0.90	
	Los Banos	--	--	--	0.69	0.79	0.25	1.06	0.92	1.18	1.17	0.16	
Russia	Mondy	--	--	--	--	0.03	0.17	0.67	0.21	--	--	--	--
Thailand	Bangkok	--	--	--	2.21	6.86	3.33	1.94	2.67	1.93	1.11		
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--
	Patumthani	--	--	1.13	2.72	4.39	2.54	3.22	2.55	3.86	1.40		
	Khao Lam	--	--	--	0.15	0.14	0.02	0.20	0.03	0.03	0.51	0.08	
Vietnam	Hanoi	--	--	--	--	--	--	--	0.51	2.48	5.83	0.85	0.53
	Hoa Binh	--	--	--	--	--	--	--	0.43	1.18	5.26	2.71	0.78

Table 1.8(a) Monthly NO_3^- deposition amounts unit: mmol/m^2/month

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao				--	--	--	--	--	--	--	--	--
	-Nanshan				--	--	--	--	--	--	--	--	--
	Xi'an												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Weishuiyuan				--	--	--	--	--	--	--	--	--
	-Dabagou				--	--	--	--	--	--	--	--	--
	Xiamen												
	-Hongwen				--	--	--	--	--	--	--	--	--
	-Xiaoping				--	--	--	--	--	--	--	--	--
	Zhuhai												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--
Indonesia	Jakarta				2.88	1.35	2.33	2.86	0.63	0.67	2.36	0.71	1.57
	Serpong												
	Kototabang				0.56	0.49	0.37	0.31	0.94	0.38	0.42	0.19	0.14
	Bandung												
Japan	Rishiri				2.25	0.81	0.59	0.68	0.17	0.74	0.35	0.90	0.67
	Tappi				1.30	1.79	1.17	1.41	1.46	1.49	1.29	2.50	1.13
	Sado/(Sado-seki)				1.86	1.37	1.69	0.94	2.03	1.15	1.68	1.81	1.95
	Happo				1.36	1.59	2.05	2.77	4.17	0.74	0.98	2.96	1.86
	Oki				1.60	1.06	2.25	2.49	2.43	0.94	1.43	1.90	1.87
	Ashizuri				2.23	2.15	4.27	1.70	0.55	5.37	5.43	0.86	0.55
	Ogasawara				0.36	0.34	0.32	0.75	2.08	0.20	0.43	0.52	0.44
	Kunigami				1.50	1.04	3.83	2.27	1.46	1.55	1.54	2.38	1.44
	Ijira				--	--	--	--	--	--	--	--	--
	Banryu				--	--	--	--	--	--	--	--	--
Republic of Korea	Kanghwa				--	--	--	--	--	--	--	--	--
	Kosan				--	--	--	--	--	--	--	--	--
Malaysia	Petaling Jaya				11.6	5.15	5.84	3.46	8.78	2.28	3.96	3.12	2.47
	Tanah Rata				--	--	--	--	--	--	--	--	--
Mongolia	Ulaanbaatar				--	--	--	--	0.73	0.51	0.04	--	--
	Terelj				--	--	--	--	--	0.27	--	--	--
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--
	Los Banos				--	--	--	--	--	--	--	--	--
Russia	Mondy				--	--	--	--	--	--	--	--	--
Thailand	Bangkok				--	--	--	--	--	--	--	--	--
	Samutprakarn				--	--	--	--	--	--	--	--	--
	Patumthani				--	--	--	--	--	--	--	--	--
	Khao Lam				--	--	--	--	--	--	--	--	--
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--
	Hoa Binh				--	--	--	--	--	--	--	--	--

Table 1.8(b) Monthly NO_3^- deposition amounts unit: mmol/m^2/month

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	--	--	--	4.64	6.22	8.17	5.16	3.86	1.32			
	-Nanshan	--	--	--	7.61	7.57	6.25	4.57	5.22	1.40			
	Xi'an												
	-Jiancezhan	--	--	--	3.35	4.36	5.30	3.49	3.86	3.32	6.64		
	-Weishuiyuan	--	--	--	1.24	19.3	2.16	0.34	2.37	0.63	3.87		
	-Dabagou	--	--	--	2.61	1.67	3.76	5.79	2.90	1.77	3.61		
	Xiamen												
	-Hongwen	--	--	--	1.93	4.26	1.89	1.00	1.74	2.14			
	-Xiaoping	--	--	--	0.39	5.23	2.83	1.41	3.22	2.24			
	Zhuhai												
	-Jiancezhan	--	--	--	--	2.08	1.01	0.78	5.59	3.49	--	2.31	0.84
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--
Indonesia	Jakarta												
	Serpong	0.11	0.07	3.07	1.74	4.39	4.56	4.59	2.24	1.66	5.03	1.48	
	Kototabang												
	Bandung												
Japan	Rishiri	0.19	--	--	1.19	1.06	1.77	2.29	2.89	1.02			
	Tappi	0.66	1.85	1.93	1.62	2.10	0.87	1.84	0.50	1.07			
	Sado/(Sado-seki)	3.56	2.28	1.94	0.47	1.44	2.95	2.06	1.12	1.90			
	Happo	0.88	0.84	1.50	0.62	3.25	2.22	1.37	1.33	1.39			
	Oki	1.79	2.78	1.26	1.86	1.16	1.85	0.60	1.07	1.78			
	Ashizuri	2.02	1.13	3.61	2.96	--	--	0.75	0.65	1.36			
	Ogasawara	0.10	0.06	0.57	1.24	0.48	0.26	0.16	0.05	0.16			
	Kunigami	2.06	1.27	5.41	2.19	1.10	1.06	1.14	1.83	0.45			
	Ijira	--	--	--	--	--	4.42	12.7	6.31	10.1			
	Banryu	--	--	--	--	0.85	2.06	1.35	0.99	1.05			
Republic	Kanghwa	--	--	0.35	3.26	2.06	--	7.96	2.59	2.55	2.33		
of Korea	Kosan	--	--	--	0.32	0.28	3.47	1.79	3.16	3.58	3.88	0.34	
Malaysia	Petaling Jaya	1.95	4.07	5.01	1.50	3.90	0.67	3.74	3.75				
	Tanah Rata	0.24	0.57	1.37	1.16	0.48	0.93	0.84	3.28	1.24	0.12	0.21	0.11
Mongolia	Ulaanbaatar	--	--	--	--	0.09	1.08	0.74	0.73	0.79	0.08		
	Terelj	--	--	--	--	0.11	0.66	1.47	0.82	0.48	0.12		
Philippines	Metro Manila	--	--	--	0.09	0.64	--	0.02	0.33	0.64	0.21	0.20	
	Los Banos	--	--	--	0.02	8.49	0.07	2.48	13.9	0.20	2.68	0.08	
Russia	Mondy	--	--	--	--	0.11	0.28	0.54	0.18	--	--	--	--
Thailand	Bangkok	--	--	--	0.99	3.26	3.57	2.04	2.60	3.01	1.37		
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--
	Patumthani	--	--	0.97	4.38	3.94	1.78	2.01	2.42	3.15	1.78		
	Khao Lam	--	--	--	0.38	0.16	0.08	0.43	0.03	0.04	0.79	0.12	
Vietnam	Hanoi	--	--	--	--	--	--	--	0.98	1.69	2.07	0.67	0.74
	Hoa Binh	--	--	--	--	--	--	--	0.84	2.76	2.15	1.15	1.13

Table 1.9(a) Monthly NH_4^+ deposition amounts unit: mmol/m^2/month

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao				--	--	--	--	--	--	--	--	--
	-Nanshan				--	--	--	--	--	--	--	--	--
	Xi'an												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Weishuiyuan				--	--	--	--	--	--	--	--	--
	-Dabagou				--	--	--	--	--	--	--	--	--
	Xiamen												
	-Hongwen				--	--	--	--	--	--	--	--	--
	-Xiaoping				--	--	--	--	--	--	--	--	--
	Zhuhai												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--
Indonesia	Jakarta				2.05	5.08	8.95	5.82	2.68	2.52	11.2	1.72	0.86
	Serpong												
	Kototabang				0.11	0.06	0.27	0.08	0.15	0.04	0.07	0.04	0.03
	Bandung												
Japan	Rishiri				5.28	1.12	0.81	1.21	0.20	0.85	1.26	2.22	0.67
	Tappi				1.07	1.53	0.82	2.01	1.12	1.31	0.90	3.48	0.73
	Sado/(Sado-seki)				1.09	1.42	1.39	1.00	2.42	0.65	1.27	2.81	3.05
	Happo				0.44	0.56	1.12	3.85	5.55	0.21	0.57	5.30	2.19
	Oki				0.99	0.79	1.65	3.90	3.03	1.52	1.15	1.91	1.63
	Ashizuri				2.36	1.61	2.48	1.26	0.51	1.94	2.48	0.37	0.24
	Ogasawara				0.12	0.79	0.39	1.24	0.62	0.25	0.66	7.25	4.56
	Kunigami				1.48	0.73	3.69	2.06	1.54	2.54	1.54	4.34	1.85
	Ijira				--	--	--	--	--	--	--	--	--
	Banryu				--	--	--	--	--	--	--	--	--
Republic	Kanghwa				--	--	--	--	--	--	--	--	--
of Korea	Kosan				--	--	--	--	--	--	--	--	--
Malaysia	Petaling Jaya				12.8	1.00	4.06	2.56	4.69	0.95	1.99	5.27	0.84
	Tanah Rata				--	--	--	--	--	--	--	--	--
Mongolia	Ulaanbaatar				--	--	--	--	3.83	2.12	0.12	--	--
	Terelj				--	--	--	--	--	1.79	--	--	--
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--
	Los Banos				--	--	--	--	--	--	--	--	--
Russia	Mondy				--	--	--	--	--	--	--	--	--
Thailand	Bangkok				--	--	--	--	--	--	--	--	--
	Samutprakarn				--	--	--	--	--	--	--	--	--
	Patumthani				--	--	--	--	--	--	--	--	--
	Khao Lam				--	--	--	--	--	--	--	--	--
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--
	Hoa Binh				--	--	--	--	--	--	--	--	--

Table 1.9(b) Monthly NH_4^+ deposition amounts unit: mmol/m^2/month

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	--	--	--	14.3	32.7	35.2	16.7	11.9	6.52			
	-Nanshan	--	--	--	24.1	23.6	13.4	10.5	13.1	6.48			
	Xi'an												
	-Jiancezhan	--	--	--	13.6	27.6	17.4	61.5	26.1	22.7	19.6		
	-Weishuiyuan	--	--	--	3.43	26.4	18.3	0.79	12.4	4.19	21.3		
	-Dabagou	--	--	--	6.54	23.7	12.0	49.1	17.5	11.1	17.5		
	Xiamen												
	-Hongwen	--	--	--	4.45	10.7	3.91	2.42	4.77	4.93			
	-Xiaoping	--	--	--	0.86	11.1	8.11	3.30	14.0	2.64			
	Zhuhai												
	-Jiancezhan	--	--	--	--	1.15	0.29	0.85	7.33	13.2	--	2.12	1.90
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--
Indonesia	Jakarta												
	Serpong	6.65	1.34	1.35	3.27	7.51	6.49	3.88	3.91	0.38	3.45	1.24	
	Kototabang												
	Bandung												
Japan	Rishiri	0.71	--	--	1.45	1.78	2.64	3.37	2.60	1.43			
	Tappi	0.48	2.65	1.42	1.12	1.87	1.33	0.91	0.29	0.53			
	Sado/(Sado-seki)	3.44	3.36	1.16	0.64	0.87	2.22	1.03	1.11	0.97			
	Happo	0.74	0.66	2.30	0.69	6.54	2.62	0.91	0.90	0.83			
	Oki	2.13	4.77	2.37	2.45	0.85	1.58	0.52	0.73	0.87			
	Ashizuri	0.99	1.18	3.28	2.58	--	--	0.36	0.45	0.53			
	Ogasawara	0.21	0.18	0.92	0.94	0.17	0.17	0.12	0.03	0.05			
	Kunigami	5.57	1.83	6.52	3.10	1.80	1.23	1.37	2.31	0.89			
	Ijira	--	--	--	--	--	1.80	6.55	4.61	8.45			
	Banryu	--	--	--	--	1.30	4.15	5.48	0.58	0.94			
Republic	Kanghwa	--	--	0.70	17.9	6.33	--	7.85	1.34	1.60	2.67		
of Korea	Kosan	--	--	--	1.63	0.73	5.95	23.8	1.88	6.86	0.77	0.25	
Malaysia	Petaling Jaya	0.59	2.73	3.09	0.50	2.06	0.42	3.03	1.98				
	Tanah Rata	0.59	0.84	2.99	3.43	0.88	2.04	2.78	5.38	1.02	0.31	0.10	0.11
Mongolia	Ulaanbaatar	--	--	--	--	0.23	4.57	2.23	1.65	2.92	0.31		
	Terelj	--	--	--	--	0.39	2.00	3.79	1.49	1.35	0.20		
Philippines	Metro Manila	--	--	--	0.84	4.19	--	0.22	1.98	20.9	5.34	10.2	
	Los Banos	--	--	--	0.33	1.27	0.40	0.98	3.77	4.14	1.01	0.12	
Russia	Mondy	--	--	--	--	0.18	0.72	1.77	0.46	--	--	--	--
Thailand	Bangkok	--	--	--	4.93	13.9	11.6	5.70	6.27	4.68	1.68		
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--
	Patumthani	--	--	1.32	5.82	4.54	4.28	5.36	3.97	6.45	2.77		
	Khao Lam	--	--	--	0.79	0.36	0.39	1.10	0.11	0.07	1.11	0.15	
Vietnam	Hanoi	--	--	--	--	--	--	--	0.91	1.46	0.59	0.11	0.59
	Hoa Binh	--	--	--	--	--	--	--	0.45	1.20	0.46	0.41	0.86

Table 1.10(a) Monthly nss-Ca^{2+} deposition amounts unit: mmol/m^2/month

Country	Name of sites	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao				--	--	--	--	--	--	--	--	--
	-Nanshan				--	--	--	--	--	--	--	--	--
	Xi'an												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Weishuiyuan				--	--	--	--	--	--	--	--	--
	-Dabagou				--	--	--	--	--	--	--	--	--
	Xiamen												
	-Hongwen				--	--	--	--	--	--	--	--	--
	-Xiaoping				--	--	--	--	--	--	--	--	--
	Zhuhai												
	-Jiancezhan				--	--	--	--	--	--	--	--	--
	-Zhuxian Cavern				--	--	--	--	--	--	--	--	--
Indonesia	Jakarta				0.57	1.49	5.20	2.40	0.52	0.53	1.23	2.87	0.61
	Serpong												
	Kototabang				0.08	0.09	0.18	0.07	0.13	0.07	0.09	0.07	0.06
	Bandung												
Japan	Rishiri				9.03	0.24	0.08	0.06	0.03	0.12	0.13	0.35	0.28
	Tappi				0.28	0.58	0.18	0.05	0.15	0.18	0.08	0.99	0.33
	Sado/(Sado-seki)				0.45	0.28	0.22	0.11	0.17	0.32	0.56	0.68	0.61
	Happo				0.41	0.27	0.17	0.17	0.27	0.07	0.10	1.74	0.73
	Oki				0.62	0.20	0.30	0.23	0.21	0.05	0.23	0.47	0.48
	Ashizuri				1.19	0.58	0.70	0.23	0.24	0.51	0.16	0.02	0.18
	Ogasawara				0.16	0.35	0.67	0.30	0.00	0.20	0.45	0.51	0.59
	Kunigami				0.62	0.18	0.23	0.32	0.11	0.19	0.30	0.40	0.61
	Ijira				--	--	--	--	--	--	--	--	--
	Banryu				--	--	--	--	--	--	--	--	--
Republic of Korea	Kanghwa				--	--	--	--	--	--	--	--	--
	Kosan				--	--	--	--	--	--	--	--	--
Malaysia	Petaling Jaya				2.57	1.56	0.92	0.70	1.14	0.42	0.73	0.85	0.64
	Tanah Rata				--	--	--	--	--	--	--	--	--
Mongolia	Ulaanbaatar				--	--	--	--	1.16	1.11	0.10	--	--
	Terelj				--	--	--	--	--	0.86	--	--	--
Philippines	Metro Manila				--	--	--	--	--	--	--	--	--
	Los Banos				--	--	--	--	--	--	--	--	--
Russia	Mondy				--	--	--	--	--	--	--	--	--
Thailand	Bangkok				--	--	--	--	--	--	--	--	--
	Samutprakarn				--	--	--	--	--	--	--	--	--
	Patumthani				--	--	--	--	--	--	--	--	--
	Khao Lam				--	--	--	--	--	--	--	--	--
Vietnam	Hanoi				--	--	--	--	--	--	--	--	--
	Hoa Binh				--	--	--	--	--	--	--	--	--

Table 1.10(b) Monthly nss-Ca^{2+} deposition amounts unit: mmol/m^2/month

Country	Name of sites	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
China	Chongqing												
	-Guanyinqiao	--	--	--	8.66	11.8	31.3	7.85	11.2	5.57			
	-Nanshan	--	--	--	7.07	7.13	6.53	4.38	7.56	3.58			
	Xi'an												
	-Jiancezhan	--	--	--	16.4	18.8	12.9	15.1	14.5	16.4	11.1		
	-Weishuiyuan	--	--	--	16.2	29.3	13.2	0.80	9.77	1.96	13.2		
	-Dabagou	--	--	--	11.9	20.9	12.5	28.4	5.05	2.73	6.52		
	Xiamen												
	-Hongwen	--	--	--	1.40	1.99	0.62	0.10	0.12	0.25			
	-Xiaoping	--	--	--	0.06	3.22	3.28	0.10	0.10	1.03			
	Zhuhai												
	-Jiancezhan	--	--	--	--	5.11	17.2	7.92	5.04	4.67	--	3.99	1.29
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--	--	--
Indonesia	Jakarta												
	Serpong	0.81	0.67	1.92	1.49	2.31	0.88	0.32	0.78	0.76	0.94	0.21	
	Kototabang												
	Bandung												
Japan	Rishiri	0.14	--	--	0.36	0.25	0.27	0.21	0.12	0.19			
	Tappi	0.67	0.93	0.93	0.50	0.78	0.13	0.04	0.02	0.05			
	Sado/(Sado-seki)	0.74	0.79	0.78	0.37	0.86	0.18	0.10	0.04	0.16			
	Happo	0.27	0.34	1.65	0.30	0.84	0.18	0.11	0.08	0.07			
	Oki	0.55	1.31	0.46	1.04	0.40	0.19	0.06	0.07	0.15			
	Ashizuri	0.07	0.09	1.14	1.25	--	--	0.62	0.37	0.07			
	Ogasawara	0.10	0.04	1.21	0.47	0.34	0.10	0.25	0.90	0.38			
	Kunigami	0.52	0.31	1.60	0.27	0.24	0.16	0.06	0.10	0.15			
	Ijira	--	--	--	--	--	2.36	2.44	1.70	3.56			
	Banryu	--	--	--	--	0.08	0.07	0.03	0.03	0.04			
Republic	Kanghwa	--	--	0.16	2.24	0.47	--	3.62	0.85	0.84	0.56		
of Korea	Kosan	--	--	--	0.19	0.14	0.00	1.47	2.23	1.75	3.54	0.51	
Malaysia	Petaling Jaya	0.42	1.05	1.52	0.66	0.79	0.20	0.61	0.89				
	Tanah Rata	0.14	0.20	0.29	0.35	0.09	0.37	0.60	1.14	0.32	0.11	0.11	0.13
Mongolia	Ulaanbaatar	--	--	--	--	0.26	1.80	1.00	1.12	1.24	0.34		
	Terelj	--	--	--	--	0.12	0.57	1.63	1.62	0.39	0.13		
Philippines	Metro Manila	--	--	--	0.22	1.71	--	0.06	0.28	1.07	3.14	0.38	
	Los Banos	--	--	--	0.02	0.42	0.00	0.17	0.15	0.49	2.11	0.17	
Russia	Mondy	--	--	--	--	0.05	0.20	0.27	0.23	--	--	--	--
Thailand	Bangkok	--	--	--	1.69	4.76	2.92	1.28	1.78	1.16	0.78		
	Samutprakarn	--	--	--	--	--	--	--	--	--	--	--	--
	Patumthani	--	--	0.58	1.16	1.23	1.56	2.30	1.24	1.21	0.74		
	Khao Lam	--	--	--	0.10	0.19	0.06	0.14	0.00	0.00	0.31	0.06	
Vietnam	Hanoi	--	--	--	--	--	--	--	2.05	3.66	6.17	0.69	1.01
	Hoa Binh	--	--	--	--	--	--	--	0.63	3.55	5.53	4.39	1.50

Table 1.11 Results of ion balance and conductivity balance check

Country	Name of sites	Sample(N)	R1(N)	R1(AA)	%	R2(N)	R2(AA)	%	R1&R2(N)	R1&R2(AA)	%
China	Chongqing										
	-Guanyinqiao	58	58	29	50	58	38	66	58	24	41
	-Nanshan	21	20	9	45	20	9	45	20	4	20
	Xi'an										
	-Jiancezhan	32	32	3	9	32	21	66	32	2	6
	-Weishuiyuan	22	22	4	18	22	8	36	22	0	0
	-Dabagou	32	32	2	6	32	18	56	32	1	3
	Xiamen										
	-Hongwen	39	39	26	67	39	35	90	39	23	59
	-Xiaoping	49	49	26	53	49	40	82	49	19	39
	Zhuhai										
	-Jiancezhan	26	12	2	17	12	3	25	12	2	17
	-Zhuxian Cavern	--	--	--	--	--	--	--	--	--	--
Indonesia	Jakarta	34	34	2	6	34	11	32	34	0	0
	Serpong	50	37	3	8	37	16	43	37	2	5
	Kototabang	121	121	112	93	0	0	--	0	0	--
	Bandung										
Japan	Rishiri	134	104	93	89	104	95	91	104	86	83
	Tappi	229	178	172	97	178	178	100	178	172	97
	Sado/(Sado-seki)	98	80	78	98	80	79	99	80	78	98
	Happo	344	267	253	95	267	267	100	267	253	95
	Oki	250	224	209	93	224	223	100	224	209	93
	Ashizuri	188	187	182	97	187	187	100	187	182	97
	Ogasawara	66	58	47	81	58	54	93	58	47	81
	Kunigami	315	264	234	89	264	249	94	264	229	87
	Ijira	14	14	11	79	14	14	100	14	11	79
	Banryu	17	17	14	82	17	17	100	17	14	82
Republic	Kanghwa	16	16	10	63	16	14	88	16	9	56
of Korea	Kosan	15	15	9	60	15	12	80	15	7	47
Malaysia	Petaling Jaya	66	64	37	58	35	34	97	35	30	86
	Tanah Rata	52	51	7	14	17	17	100	17	4	24
Mongolia	Ulaanbaatar	65	61	1	2	61	39	64	61	1	2
	Terelj	67	58	11	19	57	47	82	57	11	19
Philippines	Metro Manila	12	12	0	0	12	1	8	12	0	0
	Los Banos	20	13	2	15	13	1	8	13	0	0
Russia	Mondy	21	21	16	76	21	12	57	21	7	33
Thailand	Bangkok	63	63	11	17	62	39	63	62	8	13
	Samutprakarn										
	Patumthani	63	63	39	62	63	46	73	63	32	51
	Khao Lam	40	37	13	35	36	18	50	36	7	19
Vietnam	Hanoi	16	15	12	80	15	15	100	15	12	80
	Hoa Binh	16	15	14	93	15	15	100	15	14	93

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

Table 2.1 SO_2 (1)

unit: ppb

		Japan									
		Rishiri					Tappi				
		UVF (hourly)					UVF (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
1998	April	<0.1	60	10	3.9	<0.1					
	May	<0.1	97	33	1.9	<0.1					
	June	0.1	96	53	2.8	<0.1					
	July	<0.1	96	37	3.7	<0.1					
	August	<0.1	98	35	8.3	<0.1					
	September	<0.1	97	23	2.0	<0.1					
	October	<0.1	68	18	2.1	<0.1					
	November	<0.1	28	4	0.6	<0.1					
	December	0.4	84	68	7.6	<0.1					
1999	January		0	0							
	February	0.2	38	32	0.8	<0.1					
	March	0.2	81	72	5.1	<0.1					
	April	0.1	97	68	4.3	<0.1					
	May	<0.1	97	32	0.8	<0.1	0.3	59	53	3.4	<0.1
	June	0.1	85	44	9.5	<0.1	0.2	76	56	2.7	<0.1
	July		0	0			0.3	100	94	6.2	<0.1
	August		0	0			0.4	99	93	5.9	<0.1
	September	<0.1	40	19	6.8	<0.1	0.3	100	94	1.8	<0.1

		Japan									
		Sado-seki					Happo				
		UVF (hourly)					UVF (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
1998	April						2.1	10	10	4.7	1.1
	May						1.3	97	90	4.6	<0.1
	June						<0.1	88	31	2.1	<0.1
	July						<0.1	97	38	1.7	<0.1
	August						<0.1	96	24	1.5	<0.1
	September							0	0		
	October							0	0		
	November							0	0		
	December							0	0		
1999	January						0.2	64	46	3.0	<0.1
	February						0.4	97	92	4.4	<0.1
	March						0.2	97	65	4.8	<0.1
	April		0	0			0.1	71	42	5.7	<0.1
	May	0.3	96	80	8.0	<0.1	0.2	56	34	3.6	<0.1
	June	<0.1	96	40	6.7	<0.1	0.1	89	51	5.3	<0.1
	July	0.5	63	57	2.2	<0.1	0.1	96	52	1.2	
	August	<0.1	35	11	1.8	<0.1	0.1	97	53	1.2	<0.1
	September	0.1	97	60	1.3	<0.1	0.1	97	55	2.8	<0.1

median : monthly median value calculated from hourly data
% : percentage of period of available data during the month (including data under detection limit)
%* : percentage of period of available data during the month (not including data under detection limit)
Max : maximum
Min : minimum
UVF : ultraviolet fluorescent method

Table 2.2 SO_2 (2)

unit: ppb

		Japan									
		Ogasawara					Oki				
		UVF (hourly)					UVF (hourly)				
		median	%	%*	Max	Min	median	%	%*	Max	Min
1998	April						0.2	98	58	2.6	<0.1
	May						0.2	96	75	2.5	<0.1
	June						0.1	88	32	3.5	<0.1
	July						0.1	98	64	1.2	<0.1
	August						0.2	28	16	4.4	<0.1
	September	<0.1	36	0	0.5	<0.1	0.1	77	48	1.5	<0.1
	October	<0.1	96	3	3.7	<0.1	0.2	98	65	3.3	<0.1
	November	<0.1	97	0	<0.1	<0.1	0.3	96	85	3.9	<0.1
	December	<0.1	40	2	5.6	<0.1	0.3	98	85	5.7	<0.1
1999	January	<0.1	69	34	0.8	<0.1	0.3	98	92	4.7	<0.1
	February	<0.1	70	28	2.0	<0.1	0.5	99	87	5.8	<0.1
	March	<0.1	96	9	5.6	<0.1	0.2	96	67	3.4	<0.1
	April	<0.1	97	9	1.6	<0.1	0.2	98	78	3.2	<0.1
	May	<0.1	96	2	6.7	<0.1	0.4	98	76	12.3	<0.1
	June	<0.1	97	2	6.6	<0.1	0.3	50	38	3.8	<0.1
	July	<0.1	98	0	0.4	<0.1	0.2	51	38	2.9	<0.1
	August	<0.1	97	10	0.6	<0.1	0.1	99	61	1.8	<0.1
	September	<0.1	97	9	6.3	<0.1	0.2	98	64	1.7	<0.1

		Japan				
		Ijira				
		UVF (hourly)				
		median	%	%*	Max	Min
1998	April					
	May					
	June					
	July					
	August					
	September					
	October					
	November					
	December					
1999	January					
	February					
	March					
	April					
	May					
	June	0.5	87	84	4.0	<0.1
	July	0.2	98	71	5.3	<0.1
	August	<0.1	97	46	4.5	<0.1
	September	<0.1	98	49	3.6	<0.1

median : monthly median value calculated from hourly data
% : percentage of period of available data during the month (including data under detection limit)
%* : percentage of period of available data during the month (not including data under detection limit)
Max : maximum
Min : minimum
UVF : ultraviolet fluorescent method

Table 2.3 SO_2 (3)

unit: ppb

		China				**Indonesia**			
		Zhuhai(Jiancezhan)*				Serpong			
		Automatic (daily)				Automatic (hourly)			
		mean	%	Max	Min	mean	%	Max	Min
1998	April					3.0		11	0
	May					4.4		21	1
	June					2.8		12	0
	July					3.3		10	0
	August					10.0		64	0
	September					3.0		11	0
	October					6.7		45	1
	November					2.8		15	0
	December					-			
1999	January					-			
	February					-			
	March	2.9	81	8.5	<1.1	-			
	April	5.9	87	17.2	<1.1	5.9		26	0
	May	3.7	87	8.1	<1.1	8.8		51	0
	June	5.7	83	16.1	<1.1	8.9		51	0
	July	6.9	71	21.0	<1.1	8.7		44	1
	August	10.5	84	22.1	<1.1	10.0		42	0
	September	11.2	80	29.1	<1.1	8.6		51	0

		Thailand				**Thailand**			
		Bangkok				Samutprakarn			
		Automatic (hourly)				Automatic (hourly)			
		mean	%	Max	Min	mean	%	Max	Min
1998	April								
	May								
	June								
	July								
	August								
	September								
	October								
	November	3	92	12	0		0		
	December	2	59	14	0		0		
1999	January		0				0		
	February	4	66	28	0	2	33	38	0
	March	3	94	31	0	2	64	35	0
	April	1	94	8	0	0	70	9	0
	May	1	99	9	0		0		
	June	2	95	12	0		0		
	July	2	85	9	0		0		
	August	3	85	37	1	2	92	22	0
	September	2	82	12	1	2	93	19	0

mean : monthly arithmetic averages
% : percentage of period of available data during the month
Max : maximum
Min : minimum
* : Max & Min in Zhuhai(Jiancezhan) are daily mean values

Table 2.4 SO_2 (4)

unit: ppb

		Malaysia				**Mongolia**			
		Tanah Rata				Terelj			
		Filter Packs (weekly)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
1998	April								
	May								
	June								
	July								
	August								
	September					0.1	47	-	-
	October					-		-	-
	November					0.3	50	-	-
	December					0.1	58	-	-
1999	January					-		-	-
	February					0.5	68	-	-
	March					-		-	-
	April					-		-	-
	May					0.0	42	-	-
	June					0.5	48	-	-
	July					0.1	100	0.1	0.1
	August	0.1	100	0.1	0.1	0.1	100	0.1	0.1
	September	0.1	100	0.1	0.0	0.0	65	-	-
	October	0.0	100	0.0	0.0	-		-	-
	November	0.1	100	0.1	0.0	-		-	-
	December	0.0	100	0.0	0.0	-		-	-

mean : monthly arithmetic averages
% : percentage of period of available data during the month
Max : maximum
Min : minimum

Table 2.5 SO_2 (5)

unit: ppb

		Mongolia				**Russia**			
		Ulaanbaatar				Mondy			
		Filter Packs (weekly)				Filter Packs (biweekly)			
		mean	%	Max	Min	mean	%	Max	Min
1998	April								
	May								
	June								
	July								
	August	1.3	82	1.8	1.0				
	September	1.2	100	1.8	0.6				
	October	2.2	22	-	-	0.3	50	-	-
	November	-		-	-	0.2	100	0.2	0.1
	December	-		-	-	0.1	100	0.1	0.0
1999	January	-		-	-	0.1	100	0.1	0.1
	February	-		-	-	0.1	100	0.1	0.1
	March	-		-	-	0.1	100	0.1	0.1
	April	-		-	-	0.0	100	0.1	0.0
	May	1.5	62	2.2	1.0	0.0	100	0.0	0.0
	June	1.2	100	2.7	0.2	0.0	100	0.0	0.0
	July	0.9	100	1.0	0.7	0.0	48	-	-
	August	0.9	100	1.5	0.4	0.1	100	0.1	0.0
	September	1.0	100	1.4	0.6	0.0	50	-	-
	October	-		-	-	0.6	52	-	-
	November	-		-	-	0.7	100	0.8	0.5
	December	-		-	-	0.0	100	0.1	0.0

mean : monthly arithmetic averages
% : percentage of period of available data during the month
Max : maximum
Min : minimum

Table 2.6 SO_2 (6)

unit: ppb

		Vietnam				**Vietnam**			
		Hanoi				Hoa Binh			
		Filter Packs (weekly)				Filter Packs (weekly)			
		mean	%	Max	Min	mean	%	Max	Min
1998	April								
	May								
	June								
	July								
	August								
	September								
	October								
	November								
	December								
1999	January								
	February								
	March								
	April								
	May								
	June								
	July								
	August	1.1	47	1.6	0.7	1.1	47	1.1	1.1
	September	1.7	100	2.3	1.0	1.6	100	2.3	0.7
	October	0.7	100	1.0	0.4	1.1	100	1.8	0.7
	November	0.5	100	0.6	0.5	1.0	100	1.6	0.6
	December	0.7	100	0.8	0.6	1.3	100	1.4	1.2

mean : monthly arithmetic averages
% : percentage of period of available data during the month
Max : maximum
Min : minimum

Table 2.7 Particulate component (1)

unit: μg/m^3

		Malaysia								
		Tanah Rata								
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
1998	April									
	May									
	June									
	July									
	August									
	September									
	October									
	November									
	December									
1999	January									
	February									
	March									
	April									
	May									
	June									
	July									
	August	1.9	0.2	0.0	0.5	0.1	0.1	0.0	0.0	100
	September	1.4	0.2	0.1	0.4	0.1	0.1	0.0	0.0	100
	October	0.5	0.1	0.0	0.1	0.0	0.1	0.0	0.0	100
	November	0.7	0.2	0.0	0.2	0.1	0.1	0.0	0.0	100
	December	0.7	0.1	0.0	0.2	0.1	0.1	0.0	0.0	100

mean : monthly arithmetic averages
% : percentage of period of available data during the month

Table 2.8 Particulate component (2)

unit: μg/m^3

		Malaysia								
		Petaling Jaya		Low volume sampler (weekly)						
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
1998	April	0.7	0.2	0.1	0.2	0.2	0.1	0.1	0.0	23
	May	2.6	0.1	0.0	0.8	0.1	0.2	0.2	0.0	76
	June	2.7	0.2	0.0	0.8	0.1	0.2	0.2	0.0	100
	July	3.2	0.2	0.0	1.0	0.1	0.2	0.2	0.0	100
	August	5.3	1.0	0.1	1.2	0.4	0.4	0.8	0.1	100
	September	5.8	0.5	0.1	1.6	0.3	0.4	0.5	0.1	100
	October	4.4	0.7	0.1	1.2	0.4	0.4	0.6	0.1	40
	November									-
	December									-
1999	January									-
	February									-
	March									-
	April									-
	May									-
	June									-
	July									-
	August									-
	September									-
	October									-
	November									-
	December									-

mean : monthly arithmetic averages
% : percentage of period of available data during the month

Table 2.9 Particulate component (3)

unit: $\mu g/m^3$

		Mongolia								
		Ulaanbaatar		Filter packs (biweekly)						
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
1998	April									
	May									
	June									
	July									
	August	2.0	0.7	1.4	0.4	1.8	1.5	2.4	0.2	82
	September	2.9	1.0	0.6	0.3	1.5	1.2	3.4	0.2	100
	October	1.7	0.8	0.4	0.0	1.3	1.0	2.8	0.2	22
	November									-
	December									-
1999	January									-
	February									-
	March									-
	April									-
	May	1.3	0.7	0.2	0.0	0.2	0.2	1.8	0.1	62
	June	1.4	0.7	0.5	0.0	0.3	0.3	2.2	0.2	100
	July	0.9	0.5	0.9	0.1	0.2	0.5	2.1	0.1	100
	August	1.5	0.7	0.3	0.2	0.2	0.4	2.6	0.2	100
	September	2.3	2.2	0.9	0.3	0.6	0.7	5.4	0.3	100
	October									-
	November									-
	December									-

mean : monthly arithmetic averages
% : percentage of period of available data during the month

Table 2.10 Particulate component (4)

unit: μg/m^3

		Mongolia								
		Terelj			Filter packs (biweekly)					
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
1998	April									
	May									
	June									
	July									
	August									
	September	0.0	0.0	0.2	0.3	1.5	1.7	0.4	0.1	47
	October									-
	November	0.0	0.0	0.4	0.4	2.8	3.0	1.3	0.1	50
	December	0.0	0.0	0.1	0.1	1.4	1.6	0.1	0.0	58
1999	January									-
	February	0.0	0.0	0.4	0.0	0.2	0.2	0.1	0.0	68
	March									-
	April									-
	May	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	42
	June	0.2	0.1	0.4	0.0	0.1	0.3	0.2	0.0	48
	July	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	100
	August	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	100
	September	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	65
	October									-
	November									-
	December									-

mean : monthly arithmetic averages
% : percentage of period of available data during the month

Table 2.11 Particulate component (5)

unit: μg/m^3

		Russia								
		Mondy			Filter packs (biweekly)					
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
1998	April									
	May									
	June									
	July									
	August									
	September									
	October	0.7	0.1	0.0	0.2	0.0	0.1	0.2	0.1	50
	November	0.5	0.0	0.0	0.3	0.0	0.0	0.0	0.0	100
	December	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	100
1999	January	0.6	0.0	0.1	0.2	0.0	0.1	0.1	0.0	100
	February	0.9	0.0	1.0	0.3	0.0	1.8	0.2	0.0	100
	March	1.9	0.0	0.1	0.3	0.2	0.2	0.2	0.0	100
	April	0.9	0.0	0.1	0.2	0.3	0.2	0.3	0.0	100
	May	0.9	0.0	0.0	0.2	0.0	0.1	0.2	0.0	100
	June	0.4	0.0	0.0	0.1	0.1	0.1	0.1	0.0	100
	July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48
	August	0.5	0.0	0.1	0.1	0.0	0.0	0.1	0.0	100
	September	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50
	October	0.4	0.0	0.0	0.1	0.0	0.0	0.1	0.0	52
	November	1.6	0.1	0.0	0.4	0.0	0.0	0.3	0.0	100
	December	1.7	0.0	0.0	0.4	0.0	0.0	0.2	0.0	100

mean : monthly arithmetic averages
% : percentage of period of available data during the month

Table 2.12 Particulate component (6)

unit: μg/m^3

		Vietnam								
		Hanoi			Filter packs (weekly)					
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
1998	April									
	May									
	June									
	July									
	August									
	September									
	October									
	November									
	December									
1999	January									
	February									
	March									
	April									
	May									
	June									
	July									
	August	0.4	0.0	0.0	0.2	0.1	0.0	0.1	0.0	47
	September	0.7	0.1	0.0	0.3	0.1	0.0	0.9	0.0	100
	October	0.5	0.0	0.0	0.3	0.0	0.0	0.4	0.0	100
	November	0.8	0.2	0.0	0.3	0.1	0.0	0.6	0.0	100
	December	1.2	0.2	0.1	0.7	0.1	0.0	1.2	0.0	100

mean : monthly arithmetic averages
% : percentage of period of available data during the month

Table 2.13 Particulate component (7)

unit: μg/m^3

		Vietnam								
		Hoa Binh	Filter packs (weekly)							
		SO_4^{2-}	NO_3^-	Cl^-	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	%
1998	April									
	May									
	June									
	July									
	August									
	September									
	October									
	November									
	December									
1999	January									
	February									
	March									
	April									
	May									
	June									
	July									
	August	0.3	0.0	0.0	0.2	0.1	0.0	0.2	0.0	47
	September	3.0	0.2	0.0	0.9	0.1	0.1	1.3	0.0	100
	October	2.1	0.1	0.0	0.7	0.1	0.0	0.9	0.0	100
	November	2.5	0.2	0.0	0.9	0.1	0.0	1.5	0.0	100
	December	2.5	0.5	0.0	0.7	0.1	0.0	1.1	0.0	100

mean : monthly arithmetic averages
% : percentage of period of available data during the month

Table 3.1 Soil Chemical Properties (Japan-1)

Location	Soil type	Plot	Subplot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC (cmol(+)kg^{-1})	BS (%)	Sulfate (SO_4 mgg^{-1})	Available P (P_2O_5 mgg^{-1})	T-C (%)	T-N (%)
					H_2O	KCl	Na	K	Mg	Ca	Al						
Lake Banryu	Cambisol	Banryu 25	1	Uppermost layer	4.4	3.6	0.2	0.4	0.6	0.9	4.8	12.4	16.5	0.043	0.007	3.36	0.153
			2		4.1	3.6	0.3	0.3	0.6	0.2	5.7	16.0	8.7	0.078	0.006	4.99	0.156
			3		4.5	3.7	0.3	0.5	0.6	0.8	4.4	11.8	18.9	0.099	0.008	3.49	0.160
			4		5.6	4.5	0.3	1.3	2.1	5.3	0.3	14.4	62.5	0.039	0.015	4.80	0.238
			5		6.4	5.3	0.3	1.3	1.9	13.9	0.0	20.5	84.8	0.047	0.034	8.14	0.367
			Mean		5.0	4.1	0.3	0.8	1.2	4.2	3.0	15.0	38.3	0.06	0.01	4.96	0.215
			SD		1.0	0.8	0.0	0.5	0.8	5.8	2.7	3.5	33.5	0.03	0.01	1.93	0.09
			CV		19.3	18.1	16.0	65.5	66.4	137.0	88.2	23.2	87.4	42.74	83.05	38.89	42.91
		Banryu 29	1	Uppermost layer	5.0	4.3	0.2	0.2	0.5	0.4	2.9	8.7	15.8	0.060	0.017	2.57	0.136
			2		4.6	4.1	0.3	0.3	0.5	0.5	4.8	13.9	11.4	0.071	0.014	5.26	0.230
			3		4.7	4.1	0.2	0.2	0.5	0.3	4.1	9.8	12.3	0.056	0.011	3.44	0.155
			4		4.6	3.9	0.3	0.3	0.8	0.7	3.6	10.3	20.6	0.064	0.007	3.84	0.185
			5		4.7	3.9	0.2	0.2	0.6	0.3	3.6	8.6	14.7	0.047	0.006	2.17	0.092
			Mean		4.7	4.1	0.2	0.2	0.6	0.4	3.8	10.3	15.0	0.06	0.01	3.46	0.160
			SD		0.2	0.2	0.1	0.1	0.1	0.2	0.7	2.2	3.6	0.01	0.00	1.21	0.05
			CV		3.5	4.1	22.8	22.8	22.5	38.0	18.5	21.0	24.2	15.04	41.37	34.97	32.48
		Banryu 39	1	Uppermost layer	4.5	3.9	0.2	0.2	0.2	0.2	4.7	9.6	7.3	0.105	0.006	2.81	0.079
			2		4.4	3.7	0.2	0.2	0.6	0.5	4.9	11.0	12.9	0.051	0.010	3.38	0.132
			3		4.5	3.9	0.3	0.2	0.4	0.3	4.1	10.0	12.1	0.047	0.004	3.88	0.159
			4		4.3	3.8	0.1	0.2	0.2	0.1	6.7	14.3	4.5	0.049	0.012	4.37	0.172
			5		4.5	3.9	0.3	0.2	0.3	0.2	4.9	11.3	8.5	0.115	0.011	2.97	0.115
			Mean		4.4	3.8	0.2	0.2	0.3	0.3	5.1	11.2	9.1	0.07	0.01	3.48	0.131
			SD		0.1	0.1	0.1	0.0	0.2	0.2	1.0	1.8	3.5	0.03	0.00	0.65	0.04
			CV		2.0	2.3	38.0	0.0	49.2	58.3	19.2	16.4	38.3	45.81	38.09	18.56	28.03
	Arenosol	Banryu 49	1	Uppermost layer	5.0	4.0	0.1	0.1	0.4	1.2	0.7	4.4	39.4	0.006	0.006	1.25	0.054
			2		4.8	3.9	0.1	0.1	0.4	0.7	0.8	3.9	32.2	0.002	0.012	0.97	0.042
			3		5.0	4.1	0.1	0.1	0.4	0.8	0.5	3.2	44.0	0.002	0.012	0.73	0.037
			4		4.7	3.7	0.1	0.1	0.5	0.8	1.2	5.4	27.6	0.001	0.004	1.60	0.067
			5		4.9	3.9	0.1	0.1	0.2	0.4	0.7	2.9	29.9	0.004	0.005	0.68	0.030
			Mean		4.9	3.9	0.1	0.1	0.4	0.8	0.8	4.0	34.6	0.00	0.01	1.05	0.046
			SD		0.1	0.1	0.0	0.0	0.1	0.3	0.3	1.0	6.9	0.00	0.00	0.38	0.01
			CV		2.7	3.8	0.0	0.0	28.8	36.7	33.2	25.2	19.8	66.67	46.98	36.66	31.84

CEC, Cation Exchangeable Capacity; BS, Base Saturation.

Table 3.2 Soil Chemical Properties (Japan-2)

Location	Soil type	Plot	Subplot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC (cmol(+)kg^{-1})	BS (%)	Sulfate (SO_4 mgg^{-1})	Available P (P_2O_5 mgg^{-1})	T-C (%)	T-N (%)
					H_2O	KCl	Na	K	Mg	Ca	Al						
Lake Banryu	Cambisol	Banryu 25	1	Subsequent layer	4.6	3.7	0.2	0.2	0.3	0.3	4.0	8.9	10.9	0.044	0.004	1.75	0.063
			2		4.5	3.8	0.2	0.2	0.3	0.1	4.4	9.9	8.0	0.089	0.009	2.17	0.091
			3		4.5	3.8	0.5	0.3	0.3	0.3	3.7	9.3	15.0	0.110	0.008	1.98	0.098
			4		5.0	3.9	0.2	0.4	1.0	1.5	2.4	10.7	30.4	0.050	0.007	2.77	0.138
			5		6.0	4.7	0.3	0.5	1.0	5.3	0.2	11.5	60.7	0.048	0.005	3.75	0.168
			Mean		4.9	4.0	0.3	0.3	0.6	1.5	2.9	10.1	25.0	0.07	0.01	2.48	0.112
			SD		0.6	0.4	0.1	0.1	0.4	2.2	1.7	1.1	21.7	0.03	0.00	0.80	0.04
			CV		13.0	10.3	46.6	40.7	66.1	146.4	58.0	10.5	87.0	43.40	28.33	32.31	37.08
		Banryu 29	1	Subsequent layer	5.0	4.4	0.2	0.2	0.3	0.2	2.2	6.4	12.7	0.079	0.006	1.68	0.110
			2		4.7	4.2	0.3	0.3	0.4	0.2	4.2	10.8	10.0	0.068	0.011	3.31	0.159
			3		4.9	4.2	0.2	0.2	0.3	0.2	3.4	7.1	12.0	0.054	0.007	1.70	0.088
			4		4.7	4.0	0.2	0.2	0.3	0.1	3.4	7.1	11.4	0.062	0.006	1.36	0.069
			5		5.0	4.1	0.1	0.1	0.4	0.2	3.2	6.7	13.5	0.062	0.006	1.16	0.060
			Mean		4.9	4.2	0.2	0.2	0.3	0.2	3.3	7.6	11.9	0.07	0.01	1.84	0.097
			SD		0.2	0.1	0.1	0.1	0.1	0.0	0.7	1.8	1.3	0.01	0.00	0.85	0.04
			CV		3.1	3.5	35.4	35.4	16.1	24.8	21.8	23.6	11.2	14.27	31.77	46.22	40.66
		Banryu 39	1	Subsequent layer	4.8	4.0	0.1	0.1	0.1	0.1	3.4	6.5	8.2	0.098	0.015	1.19	0.048
			2		4.6	3.9	0.2	0.1	0.3	0.1	4.2	8.0	8.7	0.054	0.013	1.88	0.078
			3		4.6	4.1	0.1	0.1	0.2	0.1	3.4	7.0	8.5	0.064	0.004	2.05	0.083
			4		4.6	4.0	0.2	0.1	0.1	0.1	5.1	10.1	5.5	0.056	0.010	2.62	0.115
			5		4.9	4.1	0.2	0.1	0.2	0.2	4.0	7.1	9.6	0.123	0.005	1.34	0.066
			Mean		4.7	4.0	0.2	0.1	0.2	0.1	4.0	7.7	8.1	0.08	0.01	1.82	0.078
			SD		0.1	0.1	0.1	0.0	0.1	0.0	0.7	1.4	1.5	0.03	0.00	0.58	0.02
			CV		3.0	2.1	34.2	0.0	46.5	37.3	17.4	18.4	19.1	38.37	51.00	31.68	31.65
	Arenosol	Banryu 49	1	Subsequent layer	5.2	4.2	0.1	0.1	0.2	0.4	0.7	2.5	29.4	0.002	0.004	0.40	0.029
			2		5.4	4.3	0.1	0.1	0.2	0.3	0.5	2.0	34.8	0.000	0.004	0.28	0.017
			3		5.0	4.0	0.1	0.1	0.3	0.3	0.6	2.3	32.8	0.000	0.014	0.33	0.020
			4		5.0	4.0	0.2	0.1	0.2	0.1	1.0	2.5	22.8	0.002	0.004	0.32	0.018
			5		5.1	4.1	0.1	0.1	0.2	0.2	0.8	2.2	27.5	0.003	0.006	0.28	0.011
			Mean		5.1	4.1	0.1	0.1	0.2	0.3	0.7	2.3	29.5	0.00	0.01	0.32	0.019
			SD		0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.2	4.7	0.00	0.00	0.05	0.01
			CV		3.3	3.2	37.3	0.0	20.3	43.9	26.7	9.2	15.9	95.83	65.97	15.28	34.31

CEC, Cation Exchangeable Capacity; BS, Base Saturation.

Table 3.3 Soil Chemical Properties (Philippines -1)

Location	Soil type (Name of Site)	Plot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC (cmol(+)kg^{-1})	BS (%)	Sulfate (SO_4 mgg^{-1})	Available P (P_2O_5 mgg^{-1})	T-C (%)	T-N (%)
				H_2O	KCl	Na	K	Mg	Ca	Al						
Los Banos	Eutric Nitosols (Agromet Station)	Plot 1	0-40 mm	5.5	5.0	0.3	2.2	8.0	12.4	0.0	33.9	67.3			2.03	0.0179
	Eutric Cambisols (Makiling Forest)	No.1	0-300 mm	6.8	6.6	0.4	2.9	5.2	19.5	0.0	41.8	66.9			2.37	0.021
		No.2	0-200 mm	7.4	7.2	0.4	2.8	1.6	25.0	0.0	42.3	70.4			1.93	0.0172

CEC, Cation Exchangeable Capacity; BS, Base Saturation.

Table 3.4 Soil Chemical Properties (Philippines -2)

Location	Soil type (Name of Site)	Plot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC (cmol(+)kg^{-1})	BS (%)	Sulfate (SO_4 mgg^{-1})	Available P (P_2O_5 mgg^{-1})	T-C (%)	T-N (%)
				H_2O	KCl	Na	K	Mg	Ca	Al						
Los Banos	Eutric Nitosols (Agromet Station)	Plot 1	40-230 mm	5.7	4.9	0.3	1.5	7.6	13.0	0.0	32.6	68.5			1.25	0.0111
	Eutric Cambisols (Makiling Forest)	No.1	300-500 mm	5.8	5.2	0.4	2.5	11.3	10.5	0.0	37.0	66.7			1.21	0.107
		No.2	>200 mm	7.0	6.3	0.4	2.4	1.8	23.8	0.0	39.0	72.9			0.87	0.0077

CEC, Cation Exchangeable Capacity; BS, Base Saturation.

Table 3.5 Soil Chemical Properties (Russia-1)

Location	Soil type (Name of Site)	Plot	Subplot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC (cmol(+)kg^{-1})	BS (%)	Sulfate (SO_4 mgg^{-1})	Available P (P_2O_5 mgg^{-1})	T-C (%)	T-N (%)
					H_2O	KCl	Na	K	Mg	Ca	Al						
Mondy	Helic Podzol (Ilchir Lake)	1	1	A	3.9	2.7	0.1	1.7	3.3	6.4	6.9	72.7	15.8			15.6	2.2
			2	AB	4.5	3.1	0.2	1.0	2.9	7.8	5.1	43.2	27.5			8.6	1.6
			3	OA*	4.9	3.5	0.08	0.95	4.7	13.18	2.08	57.11	33			11.1	2.23
			4	AB	4.9	3.6	0.4	0.5	2.5	9.6	3.2	39.3	32.8			5.6	1.1
			5	AB	5.1	3.5	0.1	0.2	0.9	4.6	7.0	38.8	14.9			3.6	0.7
			Mean		4.6	3.2	0.2	0.8	2.4	7.1	5.6	48.5	22.8			8.4	1.4
			SD		0.5	0.4	0.1	0.7	1.1	2.1	1.8	16.2	8.8			5.3	0.6
			CV		11.7	12.2	67.8	81.3	44.2	29.7	32.7	33.5	38.7			62.8	45.8
	Helic Gleysol (Ilchir Lake)	3	1	B	6.7	5.7	0.1	0.2	4.1	8.2	0.1	20.3	61.3			12.3	1.2
			Mean		6.7	5.7	0.1	0.2	4.1	8.2	0.1	20.3	61.3			12.3	1.2
			SD														
			CV														
		4	1	A	5.1	4.0	0.0	0.4	3.4	12.1	0.5	36.5	43.7			6.0	0.9
			2	A	5.3	4.5	0.0	0.6	5.4	20.3	0.2	72.2	36.5			8.9	1.5
			3	OA*	6.39	5.66	0.09	0.89	12.11	98.36	0.76	112.15	97.6			24	2.3
			4	OA*	6.84	5.73	0.17	0.68	7.63	66.61	0	74.34	100			14.9	2.0
			5	A	4.9	4.0	0.1	0.5	4.9	13.5	1.4	48.0	39.5			7.4	1.2
			Mean		5.1	4.1	0.1	0.5	4.6	15.3	0.7	52.2	39.9			7.4	1.2
			SD		0.2	0.3	0.0	0.1	1.0	4.4	0.6	18.2	3.6			1.4	0.3
			CV		4.0	6.9	34.6	14.1	22.6	28.8	93.7	34.8	9.0			19.5	23.1
	Helic Podzol (Okinskoe Lake)	5	1	A	5.4	4.0	0.1	0.5	1.8	13.7	5.4	39.8	40.6			9.2	1.0
			2	OA*	4.62	3.74	0.11	0.87	2.01	13.23	1.09	45.47	36.0			13.7	17
			3	A	4.5	3.5	0.0	0.1	0.7	3.0	3.6	16.2	23.9			4.7	6.9
			4	A	4.5	3.5	0.1	0.1	1.1	4.6	2.4	17.8	32.7			4.3	1.1
			5	A	4.6	3.6	0.2	0.5	1.6	9.0	4.3	40.0	28.2			18.6	1.9
			Mean		4.8	3.7	0.1	0.3	1.3	7.6	3.9	28.4	32.3			9.2	2.7
			SD		0.4	0.3	0.1	0.3	0.5	4.8	1.3	13.2	6.5			6.6	2.8
			CV		9.2	7.4	54.8	81.9	38.0	63.3	32.5	46.5	20.2			71.7	104.6
	Rendzina (Solar Observatory)	2	1	A	7.6	-	-	0.3	9.7	97.3	-	151.5	70.8			28.5	4.0
			2	A	7.6	-	-	5.8	6.0	175.7	-	206.1	91.0			22.9	3.1
			3	OA*	7.56	-	-	3.88	6.64	108.49	-	165.26	72			22.26	2.99
			4	A	7.8	-	-	0.0	10.4	110.3	-	167.3	72.1			26.0	3.4
			5	A	7.8	-	-	0.0	18.9	139.8	-	197.6	80.3			15.9	3.2
			Mean		7.7			1.5	11.2	130.8		180.6	78.6			23.3	3.4
			SD		0.1			2.9	5.4	34.8		25.5	9.3			5.5	0.4
			CV		1.5			187.2	48.3	26.6		14.1	11.8			23.4	12.2

CEC, Cation Exchangeable Capacity; BS, Base Saturation. Subplot 5 is the center subplot of a plot. *: OA layer is not used for mean calculation of a plot.

Table 3.6 Soil Chemical Properties (Russia-2)

Location	Soil type (Name of Site)	Plot	Subplot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC (cmol(+)kg^{-1})	BS (%)	Sulfate (SO_4 mgg^{-1})	Available P (P_2O_5 mgg^{-1})	T-C (%)	T-N (%)
					H_2O	KCl	Na	K	Mg	Ca	Al						
Mondy	Helic Podzol	1	1	BC	4.8	3.9	0.2	0.4	0.7	1.0	3.7	10.9	20.6			3.6	0.8
	(Ilchir Lake)		2	BC	4.7	3.7	0.1	0.2	0.5	1.4	5.3	17.0	13.1			2.6	0.7
			3	BC	4.9	3.6	0.1	0.4	1.4	3.5	4.3	19.6	72			2.5	0.8
			4	BC	5.3	3.9	0.1	0.1	1.2	4.1	0.0	8.2	66.1			8.2	4.3
			5	B	4.9	4.0	0.1	0.3	0.4	1.1	4.8	17.3	11.0			3.2	0.8
			Mean		4.9	3.8	0.1	0.3	0.8	2.2	3.6	14.6	27.7			4.0	1.5
			SD		0.2	0.2	0.0	0.1	0.4	1.5	2.1	4.8	25.9			2.4	1.6
			CV		4.9	4.4	34.9	44.9	50.5	65.6	58.2	32.9	93.7			59.2	108.4
	Helic Gleysol	3	1	BC	7.0	5.8	0.1	0.2	2.2	9.1	0.0	23.2	49.9			0.3	0.1
	(Ilchir Lake)		2														
			3														
			4														
			5														
			Mean		7.0	5.8	0.1	0.2	2.2	9.1	0.0	23.2	49.9			0.3	0.1
			SD														
			CV														
		4	1	B	6.2	4.8	0.1	0.2	2.0	9.4	0.0	24.1	48.4			1.2	0.2
			2	B	6.6	5.3	0.1	0.2	1.7	9.3	0.0	23.8	47.5			1.0	0.8
			3	AB	6.7	5.8	0.1	0.5	10.7	98.2	0.0	120.2	91.1			24.6	2.4
			4	BCg	6.7	5.6	0.1	0.2	2.1	11.5	0.0	31.6	43.8			1.1	0.5
			5	B	6.4	5.1	0.0	0.2	1.9	9.4	0.0	23.9	47.9			0.8	0.6
			Mean		6.5	5.3	0.1	0.3	3.7	27.6	0.0	44.7	55.7			5.7	0.9
			SD		0.2	0.4	0.0	0.2	3.9	39.5	0.0	42.3	19.8			10.5	0.8
			CV		3.2	7.5	33.2	58.1	106.8	143.3		94.7	35.6			183.2	93.4
	Helic Podzol	5	1	B1	5.7	4.1	0.1	0.1	0.5	3.0	1.2	7.4	49.5			1.1	0.3
	(Okinskoe Lake)		2	B1	5.1	3.8	0.0	0.2	0.4	3.2	2.0	11.3	33.6			1.5	0.5
			3	B1	5.1	3.9	0.0	0.1	0.3	1.0	2.3	6.5	22.5			0.8	0.2
			4	B1	5.7	4.0	0.1	0.1	0.2	1.0	1.1	3.4	36.8			0.5	0.0
			5	B1	5.7	4.1	0.1	0.1	0.3	2.0	1.7	7.1	34.8			0.8	0.2
			Mean		5.4	4.0	0.1	0.1	0.3	2.0	1.7	7.1	35.4			0.9	0.3
			SD		0.3	0.1	0.0	0.1	0.1	1.0	0.5	2.8	9.6			0.4	0.2
			CV		6.2	3.3	30.8	57.1	37.3	51.6	29.8	39.3	27.2			40.3	77.6
	Rendzina	2	1	Bg	6.9	-	-	1.7	0.2	32.9	-	36.6	95.2			1.2	0.1
	(Solar Observatory)		2	Bg	7.0	-	-	0.3	3.5	142.0	-	194.4	75.0			15.8	1.6
			3	ABg	7.3	-	-	1.8	3.5	35.0	-	39.8	101.1			4.0	0.3
			4	Bg	7.5	-	-	1.7	0.2	29.0	-	31.0	99.8			3.0	0.2
			5	Bg	7.3	-	-	0.5	3.6	35.0	-	39.1	99.9			2.4	0.2
			Mean		7.2			1.2	2.2	54.8		68.2	94.2			5.3	0.5
			SD		0.3			0.7	1.8	48.8		70.7	11.0			6.0	0.6
			CV		3.5			62.5	82.4	89.1		103.7	11.7			112.7	122.8

CEC, Cation Exchangeable Capacity; BS, Base Saturation. Subplot 5 is the center subplot of a plot.

Table 3.7 Soil Chemical Properties (Thailand -1)

Location	Soil type	Sampling date	Plot	Subplot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC	BS	Sulfate	Available P	T-C	T-N
						H2O	KCl	Na	K	Mg	Ca	Al	(cmol(+)kg^{-1})	(%)	(SO_4 mgg^{-1})	(P_2O_5 mgg^{-1})	(%)	(%)
Khao Lam	Ferric Acrisols (Clayey kaolinitic oxic paleustults)	4/27/99	1	1	A	6.0	5.0	0.7	4.3	7.2	2.6		48.0	31.0	0.072	0.047		0.025
				2	A	6.4	5.5	0.2	0.5	2.1	3.3		16.2	37.6	0.033	0.043		0.028
				3	A	6.1	5.0	0.2	0.2	0.6	4.3		24.7	21.5	0.055	0.046		0.024
				M	A	5.6	4.5	0.6	0.7	6.6	18.8		46.9	56.9	0.043	0.051		0.029
				Mean		6.0	5.0	0.4	1.4	4.1	7.2		34.0	36.7	0.1	0.0		0.0
				SD		0.4	0.4	0.3	1.9	3.3	7.7		16.0	15.0	0.0	0.0		0.0
				CV		5.9	8.4	60.6	136.7	78.7	106.9		47.0	40.7	33.2	6.7		9.2
			2	1	A	5.6	4.4	0.6	0.6	2.6	0.1		5.6	70.3	0.044	0.030		0.025
				2	A	6.0	5.5	0.5	0.7	1.8	9.6		14.7	85.0	0.037	0.030		0.016
				3	A	6.6	5.4	0.5	0.8	1.0	13.5		16.8	93.5	0.052	0.031		0.023
				M	A	6.1	4.9	0.1	0.3	2.4	0.2		24.5	11.7	0.045	0.041		0.023
				Mean		6.1	5.1	0.4	0.6	2.0	5.9		15.4	65.2	0.0	0.0		0.0
				SD		0.4	0.5	0.2	0.2	0.7	6.8		7.8	36.9	0.0	0.0		0.0
				CV		6.4	9.9	59.3	39.4	37.3	115.5		50.7	56.6	13.7	16.5		18.4
		8/5/99	1	1	A	6.6	5.3	0.5	1.2	0.3	3.8		6.9	84.1	0.043	0.058		0.026
				2	A	6.2	5.2	0.7	0.6	0.2	3.2		6.3	74.0	0.030	0.048		0.018
				3	A	6.9	5.8	0.5	0.3	0.3	4.9		8.2	73.1	0.049	0.057		0.030
				M	A	6.3	5.9	0.9	1.2	5.3	8.9		19.0	85.5	0.077	0.069		0.345
				Mean		6.5	5.5	0.7	0.8	1.5	5.2		10.1	79.2	0.0	0.1		0.1
				SD		0.3	0.4	0.2	0.4	2.5	2.6		6.0	6.5	0.0	0.0		0.2
				CV		4.8	6.4	23.2	54.0	166.4	49.5		59.1	8.3	39.8	14.6		152.9
			2	1	A	6.2	5.1	0.8	0.5	0.3	2.3		6.1	63.7	0.028	0.121		0.029
				2	A	6.3	5.3	1.9	1.5	0.3	2.1		8.0	72.6	0.048	0.049		0.026
				3	A	6.6	5.5	2.6	1.4	0.2	2.8		9.2	76.1	0.032	0.051		0.024
				M	A	6.0	5.2	2.7	1.0	0.2	1.3		6.2	82.3	0.060	0.042		0.025
				Mean		6.3	5.3	2.0	1.1	0.3	2.1		7.4	73.7	0.0	0.1		0.0
				SD		0.3	0.2	0.9	0.4	0.1	0.6		1.5	7.8	0.0	0.0		0.0
				CV		4.2	3.4	44.5	40.6	25.7	29.6		20.6	10.5	35.2	56.4		8.6

CEC, Cation Exchangeable Capacity; BS, Base Saturation. Subplot M is the main pit of a plot.

Table 3.8 Soil Chemical Properties (Thailand -2)

Location	Soil type	Sampling date	Plot	Subplot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC	BS	Sulfate	Available P	T-C	T-N
						H2O	KCl	Na	K	Mg	Ca	Al	(cmol(+)kg^{-1})	(%)	(SO_4 mgg^{-1})	(P_2O_5 mgg^{-1})	(%)	(%)
Khao Lam	Ferric Acrisols (Clayey kaolinitic oxic paleustults)	4/27/99	1	1	B	5.8	4.7	0.5	1.2	3.4	9.9		20.1	74.6	0.055	0.042		0.017
				2	B	6.2	5.3	0.2	0.4	0.7	1.6		22.6	13.0	0.043	0.030		0.022
				3	B	6.2	5.1	0.2	0.5	0.5	2.0		17.9	18.0	0.044	0.032		0.017
				M	B1	5.5	4.5	0.3		2.1	6.7		18.6	48.9	0.063	0.041		0.028
				Mean		5.9	4.9	0.3	0.7	1.7	5.0		19.8	38.6	0.1	0.0		0.0
				SD		0.3	0.4	0.1	0.4	1.4	4.0		2.1	28.8	0.0	0.0		0.0
				CV		5.5	7.2	43.7	58.8	80.8	78.9		10.6	74.5	18.8	16.2		24.1
			2	1	B	5.7	5.5	0.4	0.3	0.1	5.5		8.4	73.9	0.072	0.032		0.017
				2	B	5.8	5.4	0.4	0.3	1.0	4.1		7.5	77.9	0.053	0.024		0.015
				3	B	6.2	5.2	0.4	1.3	0.4	10.8		14.0	92.1	0.064	0.025		0.017
				M	B	5.6	4.4	0.2	0.1	1.4	6.2		9.5	82.7	0.068	0.024		0.015
				Mean		5.8	5.1	0.3	0.5	0.7	6.6		9.8	81.6	0.1	0.0		0.0
				SD		0.2	0.5	0.1	0.5	0.6	2.9		2.9	7.9	0.0	0.0		0.0
				CV		4.3	9.8	34.8	99.7	82.5	43.8		29.2	9.6	12.8	15.6		8.8
		8/5/99	1	1	B	6.5	5.3	0.6	0.4	0.1	2.5		5.8	61.9	0.019	0.040		0.018
				2	B	6.4	5.8	3.5	1.4	0.1	2.1		8.8	81.2	0.040	0.047		0.027
				3	B	6.7	5.5	0.7	0.9	0.2	3.3		7.3	69.9	0.010	0.040		0.024
				M	B1	6.2	4.9	2.7	0.4	3.2	3.2		11.8	81.4	0.064	0.046		0.026
				Mean		6.5	5.4	1.9	0.8	0.9	2.8		8.4	73.6	0.0	0.0		0.0
				SD		0.2	0.4	1.5	0.5	1.5	0.6		2.6	9.5	0.0	0.0		0.0
				CV		3.8	7.1	78.7	59.5	167.4	19.8		30.5	12.9	72.9	9.3		17.8
			2	1	B	6.0	4.7	0.6	1.1	0.3	1.3		5.4	59.5	0.033	0.030		0.019
				2	B	5.9	4.6	0.6	1.4	0.3	0.5		4.6	59.3	0.030	0.043		0.194
				3	B	6.8	5.5	0.9	1.4	0.2	1.6		5.1	78.6	0.029	0.033		0.016
				M	B	5.9	4.8	0.1	0.3	0.2	0.4		5.4	18.0	0.040	0.042		0.015
				Mean		6.1	4.9	0.6	1.1	0.2	0.9		5.1	53.8	0.0	0.0		0.1
				SD		0.4	0.4	0.3	0.5	0.1	0.6		0.4	25.6	0.0	0.0		0.1
				CV		6.9	8.5	59.2	48.7	23.4	65.6		7.3	47.5	15.1	18.1		145.5

CEC, Cation Exchangeable Capacity; BS, Base Saturation. Subplot M is the main pit of a plot.

Table 3.9 Soil Chemical Properties (Vietnam-1)

Location	Soil type (Name of Site)	Plot	Subplot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC (cmol(+)kg^{-1})	BS (%)	Sulfate (SO_4 mgg^{-1})	Available P (P_2O_5 mgg^{-1})	T-C (%)	T-N (%)
					H_2O	KCl	Na	K	Mg	Ca	Al						
Hoa Binh	Xanthic ferralsols (Cave of Heaven)	1 (1st analysis)	1	Uppermost layer 0 - 100 mm	5.2	4.0	0.4	0.3	0.9	2.2		7.4	52.9				
			2		5.5	4.4	0.2	0.1	0.4	1.0		5.7	29.9				
			3		5.6	4.0	0.2	0.1	1.1	2.1		7.4	47.5				
			4		6.4	5.3	0.3	0.1	1.7	3.4		12.7	43.3				
			5		5.2	4.0	0.3	0.5	0.8	1.3		8.4	35.6				
			Mean		5.6	4.3	0.3	0.2	1.0	2.0		8.3	41.8				
			SD		0.5	0.6	0.1	0.2	0.5	0.9		2.6	9.2				
			CV		8.6	13.3	35.9	81.6	48.8	45.4		31.6	21.9				
		1 (2nd analysis)	1	Uppermost layer 0 - 100 mm	5.2	4.0	0.5	0.3	0.9	2.2		7.4	53.6				
			2		5.5	4.4	0.2	0.1	0.4	1.0		5.6	30.0				
			3		5.6	4.0	0.2	0.1	1.1	2.2		7.3	49.7				
			4		6.3	5.3	0.3	0.1	1.7	3.5		12.9	43.4				
			5		5.2	4.0	0.4	0.5	0.8	1.3		8.4	35.8				
			Mean		5.6	4.3	0.3	0.2	1.0	2.1		8.3	42.5				
			SD		0.5	0.6	0.1	0.2	0.5	1.0		2.7	9.7				
			CV		8.2	13.1	40.1	83.2	49.0	46.5		32.9	22.8				
	Humus ferralsols (Thang Ranh)	2 (1st analysis)	1	Uppermost layer 0 - 100 mm	4.5	3.6	0.2	0.1	0.4	1.9		7.9	33.9				
			2		4.8	3.7	0.3	0.1	0.4	0.6		6.7	20.9				
			3		5.9	3.6	0.3	0.1	0.3	0.7		4.0	33.8				
			4		4.6	3.6	0.4	0.3	0.5	0.5		4.8	34.6				
			5		4.6	3.7	0.2	0.1	0.4	0.7		7.7	18.7				
			Mean		4.9	3.7	0.3	0.1	0.4	0.9		6.2	28.4				
			SD		0.6	0.1	0.1	0.1	0.1	0.6		1.7	7.9				
			CV		11.7	1.9	23.7	59.0	19.8	65.5		27.9	27.8				
		2 (2nd analysis)	1	Uppermost layer 0 - 100 mm	4.5	3.6	0.2	0.1	0.4	2.0		8.0	34.8				
			2		4.7	3.7	0.2	0.1	0.4	0.6		6.7	20.6				
			3		5.6	3.7	0.2	0.1	0.3	0.7		4.1	32.5				
			4		4.6	3.6	0.4	0.3	0.5	0.5		4.8	34.9				
			5		4.7	3.8	0.2	0.1	0.4	0.7		7.7	18.5				
			Mean		4.8	3.7	0.3	0.1	0.4	0.9		6.3	28.3				
			SD		0.5	0.1	0.1	0.1	0.1	0.6		1.8	8.0				
			CV		9.4	1.6	29.7	60.7	19.6	69.1		28.0	28.4				

CEC, Cation Exchangeable Capacity; BS, Base Saturation.

Table 3.10 Soil Chemical Properties (Vietnam-2)

Location	Soil type (Name of Site)	Plot	Subplot	Horizon analyzed	pH		Exchangeable cations (cmol(+)kg^{-1})					CEC (cmol(+)kg^{-1})	BS (%)	Sulfate (SO_4 mgg^{-1})	Available P (P_2O_5 mgg^{-1})	T-C (%)	T-N (%)
					H_2O	KCl	Na	K	Mg	Ca	Al						
Hoa Binh	Xanthic ferralsols	1	1	Subsequent layer	5.1	3.9	0.1	0.1	0.5	1.5		6.8	31.7				
	(Cave of Heaven)	(1st analysis)	2	100 - 250 mm	5.2	4.0	0.2	0.1	0.4	1.1		2.3	75.8				
			3		5.2	3.9	0.2	0.1	0.5	1.2		7.4	27.5				
			4		5.8	4.9	0.2	0.1	1.1	2.5		8.7	44.6				
			5		5.0	3.7	0.2	0.1	0.5	1.0		7.4	25.5				
			Mean		5.3	4.1	0.2	0.1	0.6	1.5		6.5	41.0				
			SD		0.3	0.5	0.1	0.0	0.3	0.6		2.5	20.8				
			CV		6.1	11.2	30.1	9.2	47.4	41.8		37.7	50.7				
		1	1	Subsequent layer	5.0	3.9	0.1	0.1	0.5	1.5		6.7	32.3				
		(2nd analysis)	2	100 - 250 mm	5.2	4.0	0.2	0.1	0.4	1.1		2.3	74.0				
			3		5.3	3.9	0.2	0.1	0.5	1.3		7.4	29.2				
			4		5.8	4.9	0.2	0.1	1.1	2.5		8.7	44.5				
			5		5.0	3.7	0.2	0.1	0.6	1.0		7.3	25.4				
			Mean		5.3	4.1	0.2	0.1	0.6	1.5		6.5	41.1				
			SD		0.3	0.5	0.0	0.0	0.3	0.6		2.4	19.8				
			CV		6.5	11.1	28.3	8.5	46.3	40.6		37.4	48.1				
	Humus ferralsols	2	1	Subsequent layer	4.8	3.7	0.2	0.1	0.8	0.9		6.0	33.4				
	(Thang Ranh)	(1st analysis)	2	150 - 300 mm	4.8	3.7	0.3	0.2	0.4	0.9		4.0	47.6				
			3		4.7	3.8	0.2	0.1	0.4	1.1		5.0	36.7				
			4		4.7	3.8	0.2	0.1	0.5	0.7		5.7	26.9				
			5		4.7	3.8	0.2	0.1	0.3	0.5		8.8	12.6				
			Mean		4.7	3.7	0.2	0.1	0.5	0.8		5.9	31.4				
			SD		0.1	0.0	0.1	0.1	0.2	0.2		1.8	13.0				
			CV		1.3	1.2	27.7	42.0	32.5	28.0		30.4	41.2				
		2	1	Subsequent layer	4.8	3.7	0.2	0.1	0.8	0.9		6.0	33.3				
		(2nd analysis)	2	150 - 300 mm	4.7	3.7	0.3	0.2	0.4	0.9		4.0	46.5				
			3		4.7	3.7	0.2	0.1	0.4	1.1		5.0	36.6				
			4		4.7	3.8	0.2	0.1	0.5	0.7		5.8	26.6				
			5		4.8	3.8	0.2	0.1	0.3	0.5		8.7	12.6				
			Mean		4.7	3.7	0.2	0.1	0.5	0.8		5.9	31.1				
			SD		0.0	0.0	0.1	0.1	0.2	0.2		1.8	12.6				
			CV		0.8	0.9	25.5	40.2	32.2	28.4		29.7	40.4				

CEC, Cation Exchangeable Capacity; BS, Base Saturation.

Table 3.11 Results of survey of tree decline

Country	Name of Site	Forest type	Monitoring Species	Decline level (number of trees)	Estimated cause
Japan	Lake Banryu (No. 25)	Natural forest (mixed forest: *Pinus* sp. and broadleaf trees)	*Pinus densiflora* *Quercus serrata*	Level 2 or 3, Level 4 (2) Level 2 or 3	Disease and insect damage
	Lake Banryu (No. 29)			Level 0	
	Lake Banryu (No. 32)		*Pinus densiflora*	Level 4 (2)	Disease and insect damage
	Lake Banryu (No. 38)		*Chamaecyparis obtusa* *Pinus densiflora*	Level 2 or 3 (13), Level 4 (2) Level 4 (1)	Pressure from other trees
	Lake Banryu (No. 39)		*Chamaecyparis obtusa*	Level 2 or 3 (6)	Pressure from other trees
	Lake Banryu (No. 47)			Level 0	
	Lake Banryu (No. 48)			Level 0	
	Lake Banryu (No. 49)			Level 0	
Vietnam	Hoa Binh (Cave of Heaven)	Man-made forest	*Pinus* sp.	Level 0	
	Hoa Binh (Thang Ranh)	Man-made forest	*Acacia auriculiformis*	Level 0	
Thailand	Khao Lam	Natural forest (mixed forest: *Xylia xylocarpa, Lagerstroenmia tomentosa, Dalbergia cana, Schleichera oleosa, etc.)*	*Xylia xylocarpa*	Level 0	

Decline scale: Level 0, healthy; Level 1, slightly decline; Level 2, evidently decline; Level 3, severely decline; Level 4, dead.

Table 4.1 Properties of lakes

Lake Name: Ilchir Lake

Country	Russian Federation
Location	East Sayan
Altitude	1963m
Origin	Erosion-glacial
Area and shape	3.08km^2 (length 6.5km, width 0.5km)
Shore line length	
Lake hydrologic type	
Lake trophic type	
Water depth	Ave. 7m (Max 12m)
Water volume	0.016km^3
Annual water level fluctuation	0.8-1.0m
Precipitation	
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	
Lake utilization	
Watershed area	52km^2
River (flows into)	Irkut River, Jergolonta River

Table 4.2 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 4.3 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	
Annual water level fluctuation	1.5 m
Precipitation	1,600mm/year (1993-1997)*
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	
Lake utilization	Irrigation
Watershed area	0.73 km^2
River (flows into)	none

Table 4.4 Properties of lakes

Lake Name: Mojicap Lake

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

Table 4.5 Properties of lakes

Lake Name: Hoa Binh Reservoir

Country	Vietnam
Location	Yunnan Province, Lai Chau, Son La and Hoa Binh Provinces
Altitude	23m
Origin	Artificial (dam-made lake)
Area and shape	$208km^2$ - $25km^2$ (*)
Shore line length	208km - 16.7km(*)
Lake hydrologic type	Reservoir
Lake trophic type	Mesotrophic
Water depth	60m (max: 120m)
Water volume	$9.45km^3$ - 2.5 km^3(*)
Annual water level fluctuation	80m - 120m (Ave.100m)
Precipitation	
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	
Lake utilization	flood control and electric power
Watershed area	$51,700km^2$ - $13,700km^2$(*)
River (flows into)	Da River

(*)The second values are in affected area of reservoir

Table 4.6 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	
Lake hydrologic type	Reservoir
Lake trophic type	
Water depth	
Water volume	8.86×10^9 m^3
Annual water level fluctuation	135m- 161m (Ave.155m)
Precipitation	
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	
Lake utilization	electric power and flood control
Watershed area	3,720 km^2
River (flows into)	Quae Noi River

Table 4.7 Properties of lakes

Lake Name: Patenggang Lake

Country	Indonesia
Location	West Java Province
Altitude	1,700m
Origin	Natural Lake
Area and shape	0.6km^2
Shore line length	
Lake hydrologic type	reservoir
Lake trophic type	
Water depth	max 5.0m
Water volume	4.98 x 10^6 km^3
Annual water level fluctuation	1.42 – 4.20 m
Precipitation	
Solar radiation	
Wind speed	
Wind direction	
Residence time of water	
Lake utilization	conservation & protection area
Watershed area	
River (flows into)	Cirengganis River

Table 4.8 Summary of Inland Aquatic Environment Monitoring

Country	Site	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)	DO (mg/l)	BOD (mg/l)	Chl-a (µg/l)
Russia	Ilchir Lake (Center,surface)	-	7.97	23.8	1.71	29.8	0.05	0.49	0.002	0.09	0.73	0.51	32.1	9.20	-	-	-	-
Japan	Ijira Lake (Center, surface)	19.7	7.5	3.9	0.17	4.84	1.63	2.33	0.00	0.04	2.06	0.32	3.45	1.34	0.00	-	-	-
	Banryu Lake (Center, surface)	16.2	6.88	10.1	0.17	4.33	0.14	21.4	0.00	0.04	13.9	1.88	1.43	1.80	0.01	-	4.7 (COD)	6.10
Vietnam	Hoa Binh Reservoir (Surface)	25.9	7.53	14.3	1.58	2.97	0.83	2.16	-	0.15	1.8	1.4	22.2	4.6	-	7.5	-	-
Philippines	Mojikap Lake (Surface)	-	7.86	2.7	0.144	10.0	0.030	6.00	-	0.042	13.9	5.58	12.6	13.3	-	-	-	-
Indonesia	Patenggang Lake (Center, surface)	21.9	7.8	7.9	0.46	4.3	0.045	8.6	0.16	0.22	6.1	1.3	6.0	2.3	-	-	-	-
Thailand	Khao Lam Dam No.1	30.5	7.6	13.3	-	1.3	0.03	1.5	0.02	0.01	1.0	1.5	23.3	2.30	-	7.6	1.0	-
	No.2	30.4	7.7	13.2	-	1.0	0.02	1.5	0.01	0.05	1.3	1.3	24.0	2.80	-	7.6	1.0	-
	No.3	28.7	7.7	12.9	-	1.3	0.05	1.5	0.01	0.04	1.5	1.0	22.5	2.30	-	7.5	1.0	-
	No.4	30.7	7.6	13.5	-	1.3	0.10	1.5	0.02	0.02	1.0	1.0	24.3	2.00	-	7.3	1.0	-
	No.5	30.4	7.5	12.8	-	1.3	0.14	0.3	0.01	0.46	2.3	1.0	22.0	2.00	-	6.8	-	-

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As of July 2000

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