

The Fifteenth Senior Technical Managers' Meeting
of the Acid Deposition Monitoring Network in East Asia
4-5 August 2014, Hanoi, Vietnam

Summary of the National Monitoring Plans in 2014

Network Center for EANET

I. Background

1. National Monitoring Plan (NMP) includes the information on monitoring sites, monitoring methods, monitoring frequency etc. in participating countries. This information is crucial for QA/QC activities in EANET. First summarization of the NMP was prepared in November 2001. NMP is required to be submitted when the participating country submit its annual monitoring data to the Network Center (NC). Additionally, when the participating country makes some revision, the revised NMP shall be submitted to the NC as soon as possible. The NMP has been prepared using the template which was provided in the trial phase of the EANET monitoring.
2. NMP shall be reviewed every year and shall be revised by each participating country, if necessary, because
 - i) The EANET activities shall be carried out according to the NMP; and
 - ii) Suitability of the completed activities to the NMP shall be inspected in every year. Even if there is no point of revision, the existing state of the EANET activities can be re-confirmed periodically and this state should be reported to the NC.
3. However, the existing NMP template has the following issues.
 - i) Description of the relationship between monitoring site, analytical laboratory and meteorological observatory is obscure.
 - ii) There are many improper options in many tables, such as the sampling intervals, analytical methodology etc.
 - iii) The specifying of the site location might be impossible only by referring to the site location map, latitude and longitude described in the NMP.
 - iv) Existing format of NMP is difficult to be utilized for the site and laboratory audit.

II. Preparation of NMP based on the revised template

4. Considering the above mentioned background, the electronic template of NMP were newly prepared and distributed to the National QA/QC managers in March, 2013. NMP shall be reviewed and/or revised for the implementation of monitoring by the National QA/QC manager in each participating countries. The NC requested the first draft NMP by the end of June, 2013 which is the same time of data submission deadline. Then, the NC has compiled the submitted NMP to STM14 meeting held during 48/4: "August 2013 for the confirmation and discussion.
5. The outcome of the STM14 meeting should be reflected to the secondary revision process for the first draft with communication between the NC and the National QA/QC managers in

participating countries. After the confirmation in SAC13 meeting, the NC prepares the compiled NMPs submitted by the participating countries, and site information will be updated on the EANET website. The participating countries implement their EANET monitoring activities in accordance with their own NMP from next year.

III. Development of NMP in 2014

6. Overview of the National Monitoring Plan in 2014 was shown in Attachment 1, and list of sites and monitoring items are shown in Attachment 2. However, the NC has not collected all information in participating countries. Each national QA/QC manager is asked to check the Attachment 1 and 2, and then should be reported to the NC if one find errors and necessary modifications. The summary of NMP in 2014 will be submitted to the SAC14 meeting held during 4/6 September 2014.

Attachment 1

Overview of the National Monitoring Plan in 2014								
Country	Items	Monitoring sites	Classification	Monitoring interval	Measurement Parameters	Remarks (Start time)	Available Data(2013)	
<Cambodia>	Wet deposition	Phnom Penh	Urban	weekly	All required items	January '05	✓	
		Siem Reap	Urban	weekly	All required items	October '11		
	Dry deposition	Phnom Penh	Urban	FP(biweekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	February '10	✓	
	Inland aquatic environment	Sras Srang Lake	Remote	2times/years	Water quality of Sras Srang Lake	From 2012	✓	
<China>	Wet deposition	Chongqing-Haifu	Urban	daily	All required items + F	January '08	✓	
		Chongqing -Jinyunshan	Rural	daily	All required items + F	April '99	✓	
		Xi'an - Shizhan	Urban	daily	All required items	April '99	✓	
		Xi'an-Jiwozi	Remote	daily	All required items	April '99	✓	
		Xiamen-Hongwen	Urban	daily	All required items + F	April '99	✓	
		Xiamen-Xiaoping	Remote	daily	All required items + F	April '99	✓	
		Zhuhai-Xiang Zhou	Urban	daily	All required items + F	April '99	✓	
		Zhuhai-Zhuxiandong	Urban	daily	All required items + F	December '99		
		Dry deposition	Chongqing -Jinyunshan	Rural	AT	SO ₂ , NO, NO _x , PM ₁₀		✓
			Xiamen-Hongwen	Urban	AT+FP	SO ₂ ,NO ₂ ,PM ₁₀ ,HNO ₃ ,HCLNH ₃ ,PMC		✓
		Zhuhai-Xiang Zhou	Urban	AT	SO ₂ ,NO ₂ , PM ₁₀	Suspended in 2012	✓	
		Zhuhai-Haibin Park	Urban	AT	SO ₂ ,NO ₂ , PM ₁₀	2014		
	Soil and vegetation	Chongqing -Jinyunshan	Rural	Every 3 years	Tree decline, Abnormalities of leaves and branches(Ions etc. in soil)		✓	
		Xi'an-Jiwozi	Remote	Every 3 years	Tree decline, Abnormalities of leaves and branches(Ions etc. in soil)		✓	
		Xiamen-Xiaoping	Remote	Every 3 years	Tree decline, Abnormalities of leaves and branches(Ions etc. in soil)		✓	
		Zhuhai-Zhuxiandong	Urban	Every 3 years	Tree decline, Abnormalities of leaves and branches(Ions etc. in soil)		✓	
	Inland aquatic environment	Chongqing-Jinyunshan Lake	Rural	4times/years	Water quality of Jinyunshan Lake	From 2001	✓	
		Xi'an-Jiwozi River	Remote	4times/years	Water quality of Jiwozi River	From 2001	✓	
		Xiamen-Xiaoping Dam	Remote	4times/years	Water quality of Xiaoping Dam	From 2001	✓	
		Zhuhai-Zhuxiandong Stream	Urban	4times/years.	Water quality of Zhuxiandong Stream	From 2004	✓	
	<Indonesia>	Wet deposition	Jakarta (BMG)	Urban	weekly	All required items	April '98	✓
			Serpong (EMC)	Rural	daily	All required items	April '98	✓
Kototabang (BMG)			Remote	weekly	All required items	April '98	✓	
Bandung (LAPAN)			Urban	daily	All required items	January '99	✓	
Maros(BMG)			Rural	weekly	All required items	2008	✓	
Dry deposition		Serpong (EMC)	Rural	FP (Bi-weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	July '01	✓	
		Serpong (EMC)	Rural	PS (Weekly)	SO ₂ ,NO ₂	?		
		Kototabang (BMG)	Remote	PS	SO ₂ ,NO ₂	2007		
		Jakarta (BMG)	Rural	FP (Bi-weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	2014		
		Jakarta (BMG)	Urban	PS	SO ₂ ,NO ₂	2007	✓	
		Bandung (LAPAN)	Rural	FP (Bi-weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	2014		
		Bandung (LAPAN)	Urban	PS	SO ₂ ,NO ₂	2008	✓	
		Soil and vegetation	Bogor Research Forest (Darmaga Experimental Forest)	Rural	once/3-5 years	Decline, K etc. in leaves & ions in soil	2002	✓
Inland aquatic environment	Patenggang Lake		Rural	4times/yr.	Water quality of Patenggang Lake	2001	✓	
		Gunung Lake	---	4times/yr.	Water quality of Situgunung	2007	✓	
<Japan>	Wet deposition	Rishiri	Remote	daily	All required items	April'98	✓	
		Ochishi	Remote	daily	All required items	April'03	✓	
		Tappi	Remote	daily	All required items	April'98	✓	
		Ogasawara	Remote	daily	All required items	May'99	✓	
		Sado-seki	Remote	daily	All required items	April'99	✓	
		Happo	Remote	daily	All required items	April'98	✓	
		Oki	Remote	daily	All required items	April'98	✓	
		Yusuhara	Remote	daily	All required items	December'99	✓	
		Hedo	Remote	daily	All required items	December'99	✓	
		Ijira	Rural	weekly	All required items	June '99	✓	
		Banryu	Urban	weekly	All required items	May'99	✓	
		Tokyo	Urban	daily	All required items	April'07	✓	
		<Japan>	Dry deposition	Rishiri	Remote	AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM _{10/2.5} HNO ₃ , HCLNH ₃ ,PMC	FP from 2002
Ochishi	Remote			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM _{10/2.5} HNO ₃ , HCLNH ₃ ,PMC	FP from 2008	✓	
Tappi	Remote			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM ₁₀ HNO ₃ , HCLNH ₃ ,PMC	FP from 2003	✓	
Ogasawara	Remote			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM ₁₀ HNO ₃ , HCLNH ₃ ,PMC	FP from 2003	✓	
Sado-seki	Remote			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM _{10/2.5} HNO ₃ , HCLNH ₃ ,PMC	FP from 2003	✓	
Happo	Remote			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM ₁₀ HNO ₃ , HCLNH ₃ ,PMC	FP from 2003	✓	
Oki	Remote			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM _{10/2.5} HNO ₃ , HCLNH ₃ ,PMC	FP from 2002	✓	
Yusuhara	Remote			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM ₁₀ HNO ₃ , HCLNH ₃ ,PMC	FP from 2003	✓	
Hedo	Remote			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM ₁₀ HNO ₃ , HCLNH ₃ ,PMC	FP from 2003	✓	
Ijira	Rural			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM ₁₀ HNO ₃ , HCLNH ₃ ,PMC	FP from 2003	✓	
Banryu	Urban			AT+FP(biweekly)	SO ₂ ,NO,NO _x ,O ₃ ,PM ₁₀ HNO ₃ , HCLNH ₃ ,PMC	FP from 2003	✓	
Tokyo	Urban			FP(biweekly)	SO ₂ ,NO ₂ ,HNO ₃ ,NH ₃ ,PMC	FP from 2007	✓	

	Soil and vegetation	Ijira	Rural	Once in 5 years	All required items		✓
		Banryu	Urban	Once in 5 years	All required items		✓
	Inland aquatic environment	Ijira Lake	Rural	4times/yr.	Water quality of Ijira Lake	From 2001	✓
		Banryu Lake	Urban	4times/yr.	Water quality of Banryu Lake	From 2001	✓
	Catchment-scale	Ijira	Rural		Input, output, biochemical process		
<Lao PDR>	Wet deposition	Vientiane	Urban	daily	All required items	October '03	✓
		Nam Houm Lake	Urban	4times/yr.	Water quality of Nam Houm Lake	September '09	
<Malaysia>	Wet deposition	Petaling Jaya	Urban	weekly	All required items+Organic acid	April '98	✓
		Tanah Rata	Remote	weekly	All required items+Organic acid	January '99	✓
		Danum Valley	Remote	weekly	All required items+Organic acid	January '06	✓
		Kuching	Urban	weekly	All required items+Organic acid		✓
	Dry deposition	Petaling Jaya	Urban	FP (weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ , PMC		✓
		Tanah Rata	Remote	FP (weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ , PMC	FP from 2001	✓
		Danum Valley	Remote	FP (biweekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ , PMC	FP from 2006	✓
	Soil and vegetation	Pasoh Reserve Forest	Urban		Tree decline, description tree & ions in soil etc.		
		Universiti Putra Malaysia Rehabilitated Forest	Urban	Every 3 months	Tree decline, description tree & ions in soil etc.		
	Inland aquatic environment	Semeynih Dam	Urban	4 times/yr.	Water quality of Semeynih Dam	February '05	
		Tembaling River	Remote	4 times/yr.	Water quality of Tembaling River	March '07	✓
<Mongolia>	Wet deposition	Ulaanbaatar	Urban	daily	All required items+HCO ₃ ⁻	August '98	✓
		Terej	Remote	daily	All required items+HCO ₃ ⁻	September '98	✓
	Dry deposition	Ulaanbaatar	Urban	FP (biweekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC		
		Terej	Remote	FP (biweekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC		
	Soil and vegetation	Ulaanbaatar (Bogdkhan mountain)	Urban/Ecolog	Every 3-5 years	PH(H ₂ O),pH(KCl),Exchangeable acidity, Tree decline, description tree	From 2002	
	Inland aquatic environment	Terej River	Remote	4-5 times/yr.	Water quality of Terej River	From 2002	✓
<Myanmar>	Wet deposition	Yangon	Urban	weekly	All required items	June '07	✓
	Dry deposition	Yangon	Urban	FP (biweekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ , PMC		
<Philippines>	Wet deposition	Metro Manila	Urban	weekly	All required items	April '99	
		Los Banos	Rural	weekly	All required items	April '99	
		Mt. St. Tomas	Remote	weekly	All required items	October '06	✓
	Dry deposition	Metro Manila	Urban	FP (Weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC		
		Los Banos	Rural	FP (Weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC		
		Mt. St. Tomas	Remote	FP (Weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	October '06	✓
	Soil and vegetation	Los Banos	Rural	Once in 3 years	(Tree decline, description tree & ions in soil etc.)	From 2001	
		UP Quezon- Laguna Land Grant	Rural	Once in 3 years	(Tree decline, description tree & ions in soil etc.)		
		Metro Manila(La Mesa Dam Watershed)	Urban	Once in 3 years	(Tree decline, description tree & ions in soil etc.)	November '07	
		Boneco Long Term Ecological Research Site	Remote	Once in 3 years	(Tree decline, description tree & ions in soil etc.)	April '08	
	Inland aquatic environment	Pandin Lake	Rural	4 times a year	Water quality of Pandin Lake	From 2004	
		Ambulalakao Lake	Remote	4 times/yr	Water quality of Ambulalakao River	From 2005	
<Republic of Korea>	Wet deposition	Kanghwa	Rural	daily	All required items	March '99	✓
		Cheju(Kosan)	Remote	daily	All required items	April '99	✓
		Imsil	Rural	daily	All required items	January '01	✓
	Dry deposition	Kanghwa	Rural	FP(Twice a month)	SO ₂ , O ₃ , PM ₁₀ , Ions in PM _{2.5}	From 2001	✓
		Cheju(Kosan)	Remote	FP(Twice a month)	SO ₂ , O ₃ , PM ₁₀ , Ions in PM _{2.5}	From 2001	✓
		Imsil	Rural	FP(Twice a month)	SO ₂ , O ₃ , PM ₁₀ , Ions in PM _{2.5}	From 2001	✓
	Soil and vegetation	Imsil (Mt.Naejang)	Rural	Every 3 years	(Tree decline, description tree & ions in soil)	From 2001	
<Russia>	Wet deposition	Mondy	Remote	daily	All required items (+F ⁻ , NO ₂ ⁻ , Br ⁻ , HCO ₃ ⁻)	May '99	✓
		Listvyanka	Rural	daily	All required items (+F ⁻ , NO ₂ ⁻ , Br ⁻ , HCO ₃ ⁻)	January '00	✓
		Primorskaya	Rural	daily	All required items (+NO ₂ ⁻ , Br ⁻ , HCO ₃ ⁻)	February '02	✓
		Irkutsk	Urban	daily	All required items (+F ⁻ , NO ₂ ⁻ , Br ⁻ , HCO ₃ ⁻)	January '01	✓
	Dry deposition	Mondy	Remote	FP(biweekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	From 2001	✓
		Listvyanka	Rural	FP(weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	From 2001	✓
		Primorskaya	Rural	FP(weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	From 2001	✓
		Irkutsk	Urban	FP(weekly)	SO ₂ ,HNO ₃ ,HCLNH ₃ ,PMC	From 2001	✓
	Soil and vegetation	Mondy	Remote	Once/5 years	Tree decline, description tree & ions in soil	From 2001	
		Listvyanka (Bolshe Koty)	Rural	Once/5 years	Tree decline, description tree & ions in soil	From 2001	
		Irkutsk	Urban	Once/5 years	Tree decline, description tree & ions in soil	From 2001	
		Primorskaya	Rural	Once/5 years	Tree decline, description tree & ions in soil	From 2002	
	Inland aquatic environment	Pereemnya River	Rural	4times/yr	Water quality of Pereemnya River	From 2004	✓
		Komarovka River	Rural	5times/yr	Water quality of Komarovka River	From 2005	✓
<Thailand>	Wet deposition	Bangkok	Urban	daily	All required items+Organic acid, Phosphate	April '99	✓
		Samutprakarn	Urban	daily	All required items+Organic acid, Phosphate	January '00	✓
		Patumthani	Rural	daily	All required items+Organic acid, Phosphate	March '99	✓
		Khanchaburi (Vachiralongkorn Dam)	Remote	daily	All required items+Organic acid, Phosphate	April '99	✓
		Chiang Mai(Mae H ia)	Rural	daily	All required items+Organic acid, Phosphate	January '01	✓
		Nakhon Ratchasima	Rural	daily	All required items+Organic acid, Phosphate	January '06	✓

	Dry deposition	Bangkok	Urban	AT+ FP(10 days)	SO ₂ ,NO,NO ₂ ,O ₃ ,HNO ₃ ,HCl,NH ₃ ,PMC		✓
		Samutprakarn	Urban	AT	SO ₂ ,NO,NO ₂ ,O ₃		✓
		Khanchanaburi (Vachiralongkorn Dam)	Remote	AT+ FP(10 days)	SO ₂ ,NO,NO ₂ ,O ₃ ,HNO ₃ ,HCl,NH ₃ ,PMC		✓
		Chiang Mai(Mae Hia)	Rural	AT+ FP(10 days)	SO ₂ ,NO,NO ₂ ,PM ₁₀ ,O ₃ ,HNO ₃ ,HCl, NH ₃ ,PMC		✓
		Nakhon Ratchasima	Rural	FP(10 days)	SO ₂ ,HNO ₃ ,HCl,NH ₃ ,PMC	January '06	✓
	Soil and vegetation	Vachiralongkorn Dam	Remote	Once/3-5 years	Tree Decline, Ions in soil		
	Inland aquatic environment	Vachiralongkorn Dam	Remote	4 times/year	Water quality of Vachiralongkorn Dam		✓
<Viet nam>	Wet deposition	Hanoi	urban	weekly	All required items	August '99	✓
		Hoa Binh	rural	weekly	All required items	August '99	✓
		Cuc Phuong	remote	10 days	All required items+HCO ₃ ⁻	January '10	✓
		Da Nang	urban	10 days	All required items+HCO ₃ ⁻	January '10	✓
	Dry deposition	Hanoi	urban	FP(weekly)	SO ₂ ,HNO ₃ ,HCl,NH ₃ ,PMC		✓
		Hoa Binh	rural	FP(weekly)	SO ₂ ,HNO ₃ ,HCl,NH ₃ ,PMC		✓
	Soil and vegetation	Hoa Binh	rural	Once/3-5 years	Decline, & ions in soil		
	Inland aquatic environment	Hoa Binh Reservoir	rural	4 times/year	Water quality of Hoa Bin Reservoir		✓
PMC: Particulate matter components							

Attachment 2

List of sites and monitoring items

Country/items	City	Monitoring sites	Classification	Monitoring interval	Mandatory Items:							Optional Items:	Meteorology	
					pH	EC	SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	Na ⁺	K ⁺			Cd ²⁺
<Cambodia>		Phnom Penh	Urban	Weekly	x	x	x	x	x	x	x	x	x	
		Siem Reap	Urban	Weekly	x	x	x	x	x	x	x	x	x	
<China>	Chongqing	Haitu	Urban	Daily	x	x	x	x	x	x	x	x	x	F ⁻
		Jinyunshan	Rural	Daily	x	x	x	x	x	x	x	x	x	F ⁻
	Xi'an	Shizhan	Urban	Daily	x	x	x	x	x	x	x	x	x	
	Jiwozi	Remote	Remote	Daily	x	x	x	x	x	x	x	x	x	
	Xiamen	Hogewen	Urban	Daily	x	x	x	x	x	x	x	x	x	F ⁻
		Xiaoping	Urban	Daily	x	x	x	x	x	x	x	x	x	F ⁻
	Zhuhai	Xiang Zhou	Urban	Daily	x	x	x	x	x	x	x	x	x	F ⁻
<Indonesia>		Zhuxiandong	Urban	Daily	x	x	x	x	x	x	x	x	x	F ⁻
		Jakarta(BMG) U	Urban	Weekly	x	x	x	x	x	x	x	x	x	
		Serpong(BMC)	Rural	Daily	x	x	x	x	x	x	x	x	x	
		Kotabang(BMG) R	Remote	Weekly	x	x	x	x	x	x	x	x	x	
		Bandung(LAPAN)	Urban	Daily	x	x	x	x	x	x	x	x	x	
<Japan>		Mares(BMG)	Rural	Weekly	x	x	x	x	x	x	x	x	x	
		Rshiri	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Oshishi	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Tappi	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Ogasawara	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Sado-seki	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Happo	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Oki	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Yusuhara	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Hedo	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Jira	Rural	Weekly	x	x	x	x	x	x	x	x	x	
		Buryu	Urban	Weekly	x	x	x	x	x	x	x	x	x	
		Tokyo	Urban	Daily	x	x	x	x	x	x	x	x	x	
<Lao PDR>		Vientiane	Urban	Daily	x	x	x	x	x	x	x	x	x	
<Malaysia>		Petaling Jaya	Urban	Weekly	x	x	x	x	x	x	x	x	x	Fomic-Acetic, xalB cd a
		Taman Kota	Remote	Weekly	x	x	x	x	x	x	x	x	x	Fomic-Acetic, xalB cd a
		Danum Valley	Remote	Weekly	x	x	x	x	x	x	x	x	Fomic-Acetic, xalB cd a	
		Kuching	Remote	Weekly	x	x	x	x	x	x	x	x	Fomic-Acetic, xalB cd a	
<Mongolia>		Ulaanbaatar	Urban	Daily	x	x	x	x	x	x	x	x	x	HCO ₃ ⁻
		Ireji	Remote	Daily	x	x	x	x	x	x	x	x	x	HCO ₃ ⁻
<Myanmar>		Kaha-Aya Yangon	Urban	Daily	x	x	x	x	x	x	x	x	x	
<Philippines>		Metro Manila	Urban	Weekly	x	x	x	x	x	x	x	x	x	
		Los angs	Rural	Weekly	x	x	x	x	x	x	x	x	x	
		Mt. to. Somag	Rural	Weekly	x	x	x	x	x	x	x	x	x	
<Republic of Korea>		Kanghwa	Rural	Daily	x	x	x	x	x	x	x	x	x	
		Cheju(Kosan)	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Insil	Rural	Daily	x	x	x	x	x	x	x	x	x	
<Russia>		Mosdy	Remote	Daily	x	x	x	x	x	x	x	x	x	F ⁻ , NO ₂ ⁻ , Br ⁻ , HCO ₃ ⁻
		Listvyanka	Rural	Daily	x	x	x	x	x	x	x	x	x	F ⁻ , NO ₂ ⁻ , Br ⁻ , HCO ₃ ⁻
		Irkutsk	Urban	Daily	x	x	x	x	x	x	x	x	x	F ⁻ , NO ₂ ⁻ , Br ⁻ , HCO ₃ ⁻
<Thailand>		Prinorskaya	Rural	Daily	x	x	x	x	x	x	x	x	x	NO ₂ ⁻ , Br ⁻ , HCO ₃ ⁻
		Bangkok	Urban	Daily	x	x	x	x	x	x	x	x	x	HCOOHCH ₂ COOHPO ₄ ²⁻
		Samyprakan	Urban	Daily	x	x	x	x	x	x	x	x	x	HCOOHCH ₂ COOHPO ₄ ²⁻
		Patunthani	Rural	Daily	x	x	x	x	x	x	x	x	x	HCOOHCH ₂ COOHPO ₄ ²⁻
		Khanchanaburi (Vachralongkom Dam)	Remote	Daily	x	x	x	x	x	x	x	x	x	HCOOHCH ₂ COOHPO ₄ ²⁻
		Chiang ai(Mue-Hia)	Rural	Daily	x	x	x	x	x	x	x	x	x	HCOOHCH ₂ COOHPO ₄ ²⁻
<Viet nam>		Nakhon Ratchasima	Remote	Daily	x	x	x	x	x	x	x	x	x	
		Hanoi	Urban	Weekly	x	x	x	x	x	x	x	x	x	
		Hoa Binh	Rural	Weekly	x	x	x	x	x	x	x	x	x	
		Cue Phuong	Remote	10 days	x	x	x	x	x	x	x	x	x	HCO ₃ ⁻
		Da ang	Urban	10 days	x	x	x	x	x	x	x	x	x	HCO ₃ ⁻

Table 2. Dry deposition (Air concentration) monitoring			Priority of the chemical species														
Country/items	City	Monitoring sites	Classification	Monitoring method	SO ₂	O ₃	NO	NO ₂ , NOx	PM ₁₀	PM _{2.5}	HNO ₃	HCl	NH ₃	SO ₄ ²⁻	NO ₃ ⁻	NH ₄ ⁺	Ca ²⁺
<Cambodia>																	
<China>																	
	Chongqing	Pinyin Penh	Urban	FP	x												
	Xiamen	Jinyunshan	Rural	AT	x												
	Zhuhai	Hongwen	Urban	AT,FP													
	Zhuhai	Xiang Zhou	Urban	AT													
	Zhuhai	Hanlin Park	Urban	AT													
<Indonesia>																	
	Jakarta	Jakarta	Urban	FP	x												
	Jakarta	Jakarta	Urban	PS	x												
	Serpong(EMC)	Serpong(EMC)	Rural	FP													
	Serpong(EMC)	Serpong(EMC)	Rural	PS	x												
	Koolabang	Koolabang	Remote	PS	x												
	Bandung	Bandung	Urban	FP	x												
	Bandung	Bandung	Urban	PS	x												
<Japan>																	
	Rishiri	Rishiri	Remote	AT,FP	x												
	Ochishii	Ochishii	Remote	AT,FP	x												
	Tappi	Tappi	Remote	AT,FP	x												
	Ogasawara	Ogasawara	Remote	AT,FP	x												
	Sado-seki	Sado-seki	Remote	AT,FP	x												
	Happo	Happo	Remote	AT,FP	x												
	Oki	Oki	Remote	AT,FP	x												
	Yusuhara	Yusuhara	Remote	AT,FP	x												
	Hedo	Hedo	Remote	AT,FP	x												
	Ijira	Ijira	Rural	AT,FP	x												
	Banryu	Banryu	Urban	AT,FP	x												
	Tokyo	Tokyo	Urban	FP	x												
<Malaysia>																	
	Petaling aya	Petaling aya	Urban	FP	x												
	Tanah ata	Tanah ata	Remote	FP	x												
	Darum Valley	Darum Valley	Remote	FP	x												
<Mongolia>																	
	Ulaanbaatar	Ulaanbaatar	Urban	FP	x												
	Tereji	Tereji	Remote	FP	x												
<Myanmar>																	
	Yangon	Yangon	Urban	FP	x												
<Philippines>																	
	Metro anila	Metro anila	Urban	FP	x												
	Los atos	Los atos	Rural	FP	x												
	Mt. Sto. Tomas	Mt. Sto. Tomas	Remote	FP	x												
<Republic of Korea>																	
	Kanghwa	Kanghwa	Rural	AT,FP	x												
	Cheju(Kosan)	Cheju(Kosan)	Remote	AT,FP	x												
	Insil	Insil	Rural	AT,FP	x												
<Russia>																	
	Mondy	Mondy	Remote	FP	x												
	Listvyanka	Listvyanka	Rural	FP	x												
	Irkutsk	Irkutsk	Urban	FP	x												
	Primoorskaya	Primoorskaya	Rural	FP	x												
<Thailand>																	
	Bangkok	Bangkok	Urban	AT,FP	x												
	Samutprakarn	Samutprakarn	Urban	AT	x												
	Khanchanaburi(Vacharon gorn Dam)	Khanchanaburi(Vacharon gorn Dam)	Remote	AT,FP	x												
	Chiang ai(Mae-I-Mi)	Chiang ai(Mae-I-Mi)	Rural	AT,FP	x												
	Nakhon Ratchasima	Nakhon Ratchasima	Rural	AT,FP	x												
<Viet nam>																	
	Hanoi	Hanoi	Urban	FP	x												
	Hoa inh	Hoa inh	Rural	FP	x												

AT:Automatic Monitor,FP:Filter pack.

