

# National Monitoring Plans (NMPs) of the participating countries

*The summary table*

The Network Center of EANET



Overview of the National Monitoring Plan in 2010

Country	Items	Monitoring sites	Classification	Monitoring interval	Measurement Parameters	Remarks (Start time)	Available Data(2009)
<Cambodia>	Wet deposition	Phnom Penh	Urban	Weekly	All required items	January '05	
	Wet deposition	Chongqing -Hifu	Urban	daily	All required items + F <sup>-</sup>	January '08	✓
<China>		Chongqing -Jinyunshan	Rural	daily	All required items + F <sup>-</sup>	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 <sup>-</sup>	April '99	✓
		Xiamen-Xiaoping	Remote	daily	All required items + F <sup>-</sup>	April '99	✓
		Zhuhai-Xiang Zhou	Urban	daily	All required items + F <sup>-</sup>	April '99	✓
		Zhuhai-Zhuxiandong	Urban	daily	All required items + F <sup>-</sup>	December '99	✓
	Dry deposition	Chongqing -Jinyunshan	Rural	AT	SO <sub>2</sub> , NO, NO <sub>x</sub> , PM <sub>10</sub>		✓
		Xiamen-Hongwen	Urban	AT+FP	SO <sub>2</sub> ,NO <sub>2</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PM		✓
		Zhuhai-Xiang Zhou	Urban	AT	SO <sub>2</sub> ,NO <sub>2</sub> , PM <sub>10</sub>		✓
	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		✓
		Xi'an-Jiwozi River	Remote	4times/years	Water quality of Jiwozi River		✓
	Xiamen-Xiaoping Dam	Remote	4times/year	Water quality of Xiaoping Dam		✓	
	Zhuhai-Zhuxiandong Stream	Urban	4times/years.	Water quality of Zhuxiandong Stream	From 2004	✓	

Country	Items	Monitoring sites	Classification	Monitoring interval	Measurement Parameters	Remarks (Start time)	Available Data(2009)	
<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	✓	
		Serpong (EMC)	Rural	FP	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC,NO <sub>2</sub>	July 2001,2008	✓	
	Dry deposition	Kototabang (BMG)	Remote	PS	SO <sub>2</sub> ,NO <sub>2</sub>	2007	✓	
		Jakarta (BMG)	Urban	PS	SO <sub>2</sub> ,NO <sub>2</sub>	2007	✓	
		Bandung (LAPAN)	Urban	PS	SO <sub>2</sub> ,NO <sub>2</sub>	2008	✓	
	Soil and vegetation	Bogor Research Forest (Darmaga Experimental Forest)	Rural	once/3 years	Decline, K etc. in leaves & ions in soil	2002	✓	
		Patenggang Lake	Rural	4times/yr.	Water quality of Patenggang Lake	2001	✓	
	<Japan>	Wet deposition	Gunung Lake		4times/yr.	Water quality of Situgunung	2007	✓
			Rishiri	Remote	daily	All required items	April '98	✓
Ochiishi			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	✓	

Country	Items	Monitoring sites	Classification	Monitoring interval	Measurement Parameters	Remarks (Start time)	Available Data(2009)		
<Japan>	Dry deposition	Rishiri	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,2.5,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2002	✓		
		Ochiishi	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,2.5,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2008			
		Tappi	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2003	✓		
		Ogasawara	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2003	✓		
		Sado-seki	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2003	✓		
		Happo	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2003	✓		
		Okii	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,2.5,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2002	✓		
		Yusuhara	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2003	✓		
		Hedo	Remote	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2003	✓		
		Ijira	Rural.	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2003	✓		
		Banryu	Urban	AT+ FP(biweekly)	SO <sub>2</sub> ,NO <sub>1</sub> ,NO <sub>x</sub> *,O <sub>3</sub> ,PM <sub>10</sub> ,HNO <sub>3</sub> , HCl,NH <sub>3</sub> ,PMC	FP from 2003	✓		
		Tokyo	Urban	FP(biweekly)	SO <sub>2</sub> ,NO <sub>2</sub> ,HNO <sub>3</sub> ,NH <sub>3</sub> , PMC	FP from 2007	✓		
		Soil and	Inland aquatic environment	Ijira	Rural	Once in 5	All required items		✓
				Banryu	Urban	Once in 5	All required items		✓
				Ijira Lake	Rural	4times/yr.	Water quality of Ijira Lake		✓
				Banryu Lake	Urban	4times/yr.	Water quality of Banryu Lake		✓
				Vientiane	Urban	daily	All required items		
		<Lao PDR>	Wet deposition Inland aquatic environment	Nam Houm Lake	Urban	4times/yr.	Water quality of Nam Houm Lake	October '03	

Country	Items	Monitoring sites	Classification	Monitoring interval	Measurement Parameters	Remarks (Start time)	Available Data(2009)
<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	Remote	weekly*	All required items+Organic acid		✓
	Dry deposition	Petaling Jaya	Urban	FP (weekly)	SO <sub>2</sub> ,NO <sub>2</sub> ,HNO <sub>3</sub> ,NH <sub>3</sub> , PMC		✓
		Tanah Rata	Remote	AT+	SO <sub>2</sub> ,NO,NO <sub>x</sub> *,O <sub>3</sub> ,HNO <sub>3</sub> ,NH <sub>3</sub> , PMC	FP from 2001	✓
		Danum Valley	Remote	FP (biweekly)	SO <sub>2</sub> ,NO <sub>2</sub> ,HNO <sub>3</sub> ,NH <sub>3</sub> , PMC	FP from 2006	✓
	Soil and	Pasoh Reserve Forest	Remote	Every 3 years		From 2001	
		Petaling Jaya	Remote	Every 3 years		From 2002	
	Inland aquatic environment	Semenyih Dam	Urban	4 times/yr.	Water quality of Semeynyih 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 <sub>3</sub> <sup>-</sup>	August '98	✓
		Terej	Remote	daily	All required items+HCO <sub>3</sub> <sup>-</sup>	September '98	✓
	Dry deposition	Ulaanbaatar	Urban	FP (weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC		✓
		Terej	Remote	FP (weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC		✓
	Soil and vegetation	Ulaanbaatar (Bogdkhan mountain)	Urban/Ecolog	Every 3-5 years	PH(H <sub>2</sub> O),pH(KCl),Exchangeable acidity, Tree decline, description	From 2002	
Inland aquatic environment	Terej River	Remote	6 times/yr.	Water quality of Terej River	From 2002	✓	
<Myanmar>	Wet deposition	Kaha-Aya, Yangon	Urban	weekly	pH,EC	June'07	✓
	Wet deposition	Metro Manila	Urban	weekly	All required items	April '99	✓
<Philippines>	Wet deposition	Los Banos	Rural	weekly	All required items	April '99	✓
		Mt. St. Tomas	Remote	weekly	All required items	October '06	✓
		Metro Manila	Urban	FP (Weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC		✓
	Dry deposition	Los Banos	Rural	FP (Weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC		✓
		Mt. St. Tomas	Remote	FP (Weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC	October '06	✓
	Soil and vegetation	Los Banos	Rural	Once in 3 years	(Tree decline, description tree & ions in soil etc.)	From 2001	✓
		Metro Manila(La Mesa Dam Watershed)	Urban		(Tree decline, description tree & ions in soil etc.)	November '07	
	Inland aquatic environment	Beneco Long Term Ecological Research Site	Remote		(Tree decline, description tree & ions in soil etc.)	April '08	✓
		Pandin Lake	Rural	3 times a year	Water quality of Pandin Lake	From 2004	✓
		Ambulalakao Lake	Remote	3times/yr	Water quality of Ambulalakao River	From 2005	✓

Country	Items	Monitoring sites	Classification	Monitoring interval	Measurement Parameters	Remarks (Start time)	Available Data(2009)
<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 <sub>2</sub> , O <sub>3</sub> , PM <sub>10</sub> , Ions in PM <sub>2.5</sub>	From 2001	
		Cheju(Kosan)	Remote	FP(Twice a month)	SO <sub>2</sub> , O <sub>3</sub> , PM <sub>10</sub> , Ions in PM <sub>2.5</sub>	From 2001	
		Imsil	Rural	FP(Twice a month)	SO <sub>2</sub> , O <sub>3</sub> , PM <sub>10</sub> , Ions in PM <sub>2.5</sub>	From 2001	
	Soil and vegetation	Imsil (Mt.Naejang)	Rural	Every 3 years	(Tree decline, description tree & ions in soil)	From 2001	
		Wet deposition	Mondy	Remote	daily	All required items (+NO <sub>2</sub> <sup>-</sup> , Br <sup>-</sup> ,	May '99
	Listvyanka		Rural	daily	All required items (+F <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , Br <sup>-</sup> , HCO <sub>3</sub> <sup>-</sup> )	January '00	✓
	Primorskaya		Rural	daily	All required items (+NO <sub>2</sub> <sup>-</sup> , Br <sup>-</sup> , HCO <sub>3</sub> <sup>-</sup> )	February '02	✓
Irkutsk	Urban		daily	All required items (+F <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , Br <sup>-</sup> , HCO <sub>3</sub> <sup>-</sup> )	January '01	✓	
Mondy	Remote		AT+	SO <sub>2</sub> , O <sub>3</sub> , HNO <sub>3</sub> , HCl, NH <sub>3</sub> , PMC	From 2001	✓	
Dry deposition	Listvyanka	Rural	FP(weekly)	SO <sub>2</sub> , HNO <sub>3</sub> , HCl, NH <sub>3</sub> , PMC	From 2001	✓	
		Rural	FP(weekly)	SO <sub>2</sub> , HNO <sub>3</sub> , HCl, NH <sub>3</sub> , PMC	From 2001	✓	
	Irkutsk	Urban	FP(weekly)	SO <sub>2</sub> , HNO <sub>3</sub> , HCl, NH <sub>3</sub> , PMC	From 2001	✓	
		Remote	Once/3-5 years	Tree decline, description tree & ions in soil	From 2001		
Soil and vegetation	Listvyanka (Bolshie Koty)	Rural	Once/3-5 years	Tree decline, description tree & ions in soil	From 2001		
		Urban	Once/3-5 years	Tree decline, description tree & ions in soil	From 2001		
	Primorskaya	Rural	Once/3-5 years	Tree decline, description tree & ions in soil	From 2002		
		Rural	4times/yr	Water quality of Pereennaya River	From 2004	✓	
		Rural	5times/yr	Water quality of Krestovka River	From 2005	✓	

Country	Items	Monitoring sites	Classification	Monitoring interval	Measurement Parameters	Remarks (Start time)	Available Data(2009)	
<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	✓	
		Khanchnaburi (Vachiralongkorn Dam)	Remote	daily	All required items+Organic acid, Phosphate	April '99	✓	
		Chiang Mai(Mae Hia)	Rural	daily	All required items+Organic acid, Phosphate	January '01	✓	
		Nakhon Ratchasima	Remote	daily	All required items+Organic acid, Phosphate	January '06	✓	
		Dry deposition	Bangkok	Urban	AT+ FP(weekly)	SO <sub>2</sub> ,NO,NO <sub>2</sub> ,NO <sub>x</sub> ,O <sub>3</sub> ,HNO <sub>3</sub> ,HCl, NH <sub>3</sub> ,PMC		✓
			Samutprakarn	Urban	AT	SO <sub>2</sub> ,NO,NO <sub>2</sub> ,NO <sub>x</sub> ,O <sub>3</sub>		✓
			Patumthani	Remote	FP(weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC		✓
			Khanchnaburi (Vachiralongkorn Dam)	Remote	AT+ FP(weekly)	SO <sub>2</sub> ,NO,NO <sub>x</sub> ,PM <sub>10</sub> ,O <sub>3</sub> ,HNO <sub>3</sub> ,HCl, NH <sub>3</sub> ,PMC		✓
	Chiang Mai(Mae Hia)		Rural	AT+ FP(weekly)	SO <sub>2</sub> ,NO,NO <sub>x</sub> ,PM <sub>10</sub> ,O <sub>3</sub> ,HNO <sub>3</sub> ,HCl, NH <sub>3</sub> ,PMC		✓	
	Nakhon Ratchasima		Remote	FP(weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC	January '06	✓	
	Vachiralongkorn Dam		Remote	Once/3 years	Tree Decline, Ions in soil		✓	
	<Viet nam>	Inland aquatic environment	Vachiralongkorn Dam	Remote	4 times/year	Water quality of Vachiralongkorn Dam		✓
			Hanoi	urban	weekly	All required items	August '99	✓
			Hoa Binh	rural	weekly	All required items	August '99	✓
	Wet deposition	Inland aquatic environment	Cuc Phuong	?	weekly	All required items	January '10	✓
Da Nang			?	weekly	All required items	January '10	✓	
Hanoi		urban	FP(weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC		✓		
Hoa Binh		rural	FP(weekly)	SO <sub>2</sub> ,HNO <sub>3</sub> ,HCl,NH <sub>3</sub> ,PMC		✓		
Hoa Binh		rural	Once/3-5 years	Decline, & ions in soil		✓		
Hoa Binh Reservoir		rural	4 times/year	Water quality of Hoa Bin Reservoir		✓		

Note)\*: Biocides are added to precipitation samples  
 PMC; Particulate matter components



Table 1. Wet deposition monitoring

Country/items	City	Monitoring sites	Classification	Monitoring interval	Mandatory items:							Optional items:					Meteorology	
					pH	EC	SO <sub>4</sub> <sup>2-</sup>	NO <sub>3</sub> <sup>-</sup>	Cl <sup>-</sup>	Na <sup>+</sup>	K <sup>+</sup>	Ca <sup>2+</sup>	Mg <sup>2+</sup>	NH <sub>4</sub> <sup>+</sup>	F <sup>-</sup>	HCO <sub>3</sub> <sup>-</sup>		NO <sub>2</sub> <sup>-</sup>
<Cambodia>		Phnom Penh	Urban	Weekly	x	x	x	x	x	x	x	x	x					
<China>	Chongqing	Guanyinqiao	Urban	Daily	x	x	x	x	x	x	x	x	x	F <sup>-</sup>				x
		Jinyunshan	Rural	Daily	x	x	x	x	x	x	x	x	x	F <sup>-</sup>				x
		Haifu	Urban	Daily	x	x	x	x	x	x	x	x	x	F <sup>-</sup>				x
	Xi'an	Shizhan	Urban	Daily	x	x	x	x	x	x	x	x	x					x
		Jiwozi	Remote	Daily	x	x	x	x	x	x	x	x	x					x
	Xiamen	Hongwen	Urban	Daily	x	x	x	x	x	x	x	x	x	F <sup>-</sup>				x
		Xiaoping	Remote	Daily	x	x	x	x	x	x	x	x	x	F <sup>-</sup>				x
	Zhuhai	Xiang Zhou	Urban	Daily	x	x	x	x	x	x	x	x	x	F <sup>-</sup>				x
		Zhuxiandong	Urban	Daily	x	x	x	x	x	x	x	x	x	F <sup>-</sup>				x
<Indonesia>		Jakarta(BMG)	Urban	Weekly	x	x	x	x	x	x	x	x	x					x
		Serpong(EMC)	Rural	Daily	x	x	x	x	x	x	x	x	x					x
		Kotabang(BMG)	Remote	Weekly	x	x	x	x	x	x	x	x	x					
		Bandung(LAPAN)	Urban	Daily	x	x	x	x	x	x	x	x	x					
		Maros(BMG)	Rural	Weekly	x	x	x	x	x	x	x	x	x					
<Japan>		Rishiri	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Ochiishi	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Tappi	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Ogasawara	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Sado-seki	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Happo	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Oki	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Yusuhara	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Hedo	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Ijira	Rural	Weekly	x	x	x	x	x	x	x	x	x					x
		Banryu	Urban	Weekly	x	x	x	x	x	x	x	x	x					x
		Tokyo	Urban	Daily	x	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					x
		Tanah Rata	Remote	Weekly	x	x	x	x	x	x	x	x	x					x
		Danum Valley	Remote	Weekly	x	x	x	x	x	x	x	x	x					
		Kuching	Remote	Weekly	x	x	x	x	x	x	x	x	x					
<Mongolia>		Ulaanbaatar	Urban	Daily	x	x	x	x	x	x	x	x	x	HCO <sub>3</sub> <sup>-</sup>				x
		Tereji	Remote	Daily	x	x	x	x	x	x	x	x	x	HCO <sub>3</sub> <sup>-</sup>				x
<Myanmar>		Kaha-Aya, Yangon	Urban	Daily	x	x												
<Philippines>		Metro Manila	Urban	Weekly	x	x	x	x	x	x	x	x	x	NO <sub>2</sub>				x
		Los Banos	Rural	Weekly	x	x	x	x	x	x	x	x	x	NO <sub>2</sub>				x
		Mt. Sto. Tomas	Rural	Weekly	x	x	x	x	x	x	x	x	x	NO <sub>2</sub>				x
<Republic of Korea>		Kanghwa	Rural	Daily	x	x	x	x	x	x	x	x	x					x
		Cheju(Kosan)	Remote	Daily	x	x	x	x	x	x	x	x	x					x
		Imsil	Rural	Daily	x	x	x	x	x	x	x	x	x					x



Table 2. Dry deposition(Air concentration) monitoring

Country/items	City	Monitoring sites	Classification	Monitoring method	Priority of the chemical species																				
					SO <sub>2</sub>	O <sub>3</sub>	NO	NO <sub>2</sub>	PM <sub>10</sub>	HNO <sub>3</sub>	HCl	NH <sub>3</sub>	SO <sub>4</sub> <sup>2-</sup>	NO <sub>3</sub> <sup>-</sup>	NH <sub>4</sub> <sup>+</sup>	Ca <sup>2+</sup>									
<China>	Chongqing	Jinyunshan	Rural	AT	x			x																	
	Xiamen	Hongwen	Urban	AT,FP	x		x																		
	Zhuhai	Xiang Zhou	Urban	AT	x																				
		Jakarta	Jakarta	Urban	PS	x																			
<Indonesia>		Serpong(EMC)	Rural	FP	x																				
		Kotojabang	Remote	PS	x																				
<Japan>		Rishiri	Remote	AT,FP	x		x																		
		Ochiishi	Remote	FP	x																				
		Tappi	Remote	AT,FP	x		x																		
		Ogasawara	Remote	AT,FP	x		x																		
		Sado-seki	Remote	AT,FP	x		x																		
		Happo	Remote	AT,FP	x		x																		
		Oki	Remote	AT,FP	x		x																		
		Yusuhara	Remote	AT,FP	x		x																		
		Hedo	Remote	AT,FP	x		x																		
		Ijira	Rural	AT,FP	x		x																		
		Banyu	Urban	AT,FP	x		x																		
		Tokyo	Urban	FP	x																				
	<Malaysia>		Petaling Jaya	Urban	FP	x																			
			Tanah Rata	Remote	AT,FP	x		x																	
		Danum Valley	Remote	FP	x																				
<Mongolia>		Ulaanbaatar	Urban	FP	x																				
		Terej	Remote	FP	x																				
<Philippines>		Metro Manila	Urban	FP	x																				
		Los Banos	Rural	FP	x																				
		Mt. Sto. Tomas	Remote	FP	x																				
		Kanghwa	Rural	AT,FP	x		x																		
<Republic of Korea>		Cheju(Kosan)	Remote	AT,FP	x		x																		
		Imsil	Rural	AT,FP	x																				
		Mondy	Remote	AT,FP	x		x																		
<Russia>		Listvyanka	Rural	FP	x																				
		Ikutsk	Urban	FP	x																				
		Primorskaya	Rural	FP	x																				
		Bangkok	Urban	AT,FP	x		x																		
<Thailand>		Samutprakam	Urban	AT	x		x																		
		Patumthani	Rural	FP	x																				
		Khanchanaburi(Vachralo ngkorn Dam)	Remote	AT,FP	x		x																		
<Viet nam>		Chiang Mai(Mae-Hia)	Rural	AT,FP	x		x																		
		Nakhon Ratchasima	Remote	FP	x																				
		Hanoi	Urban	FP	x																				
		Hoa Binh	Rural	FP	x																				

AT:Automatic Monitor,FP:Filter pack,

Table3. Soil & Vegetation monitoring

Country/items	City	Monitoring sites	Classification	Monitoring interval (Soil)	Monitoring interval (Forest)	Soil										Forest monitoring							
						Mandatory items:					Optional items					Voluntary item		mandatory item(3-5years)					Optional items
						Moisture contents	pH (H <sub>2</sub> O)	pH (KCl)	Exchangeable base cations (Ca,Mg,K, and Mg)	Exchangeable Acidity	Exchangeable cation exchange capacity (CEC)	Carbonate contents	Exchangeable acid cations (AL,H)	Total carbon content	Total nitrogen content	Available phosphate/ Sulfate	Name of species	Diameter at breast height	Height of tree	Understory vegetation survey	Observation of tree decline	Photograph of tree decline	Estimation of decline causes
<China>	Chongqing	Jinyunshan	Rural	Once/3years	Once/3years	x	x	x	x	x	x	x	x	x	x	x	x						
	Xi'an	Jiwozi	Remote	Once/3years	Once/3years	x	x	x	x	x	x	x	x	x	x	x	x						
	Xiamen	Xiaoping	Remote	Once/3years	Once/3years	x	x	x	x	x	x	x	x	x	x	x	x						
	Zhuhai	Zhuxiandong	Urban	Once/3years	Once/3years	x	x	x	x	x	x	x	x	x	x	x	x						
<Indonesia>		Bogor Research Forest (Darmaga Experimental Forest)	Rural	Once/3years	Once/3years		x					x											
<Japan>		Ijira	Rural	Once/5years	Once/5year	x	x	x	x	x													
		Banyu	Urban	Once/5years	Once/5year	x	x	x	x	x													
<Malaysia>		Pasoh Reserve Forest	Remote	Once/3years	Once/3years	x	x	x	x	x													
		Petaling Jaya	Remote	Once/3years	Once/3years																		
<Mongolia>		Ulaanbaatar (Bogdkhan mountain)	Urban	Once/3-5years	Once/3-5years		x																
<Philippines>		Los Banos Laguna (Makiling Forest Reserve)	Rural	Once/3years	Once/3years	x	x	x	x	x													
		Merro Manila (La Mesa Dam Watershed)	Urban	Once/3years	Once/3years	x	x	x	x	x													
		Boneco Long Term Ecological Research Site	Remote	Once/3years	Once/3years	x	x	x	x	x													
<Republic of Korea>		Insiit (Mt.Niejeing)	Rural	Once/3years	Once/3years	x	x	x	x	x													
<Russia>		Mondy	Remote	Once/3-5years	Once/3-5years		x																
		Listvyanka	Rural	Once/3-5years	Once/3-5years	x	x	x	x	x													
		Primorskaya	Rural	Once/3-5years	Once/3-5years	x	x	x	x	x													
		Irkusk	Urban	Once/3-5years	Once/3-5years	x	x	x	x	x													
<Thailand>		Vachralongkorn Dam	Remote	Once/3years	Once/3years	x	x	x	x	x													
<Viet nam>		Hoia Binh	Rural	Once/3-5years	Once/3-5years		x																

x\*:Monitoring plan change

