

The Third Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
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**Results of Questionnaire survey on QA/QC
activities concerning the participation in the
international inter-laboratory comparison projects
in the participating countries.**

November 2003

Network Center for EANET

I. INTRODUCTION

The long-term objectives of the Acid Deposition Monitoring Network in East Asia (EANET) include to create a common understanding of the state of the acid deposition problems in East Asia and to provide useful inputs for decision-making at local, national and regional levels aimed at preventing or reducing adverse impacts on the environment caused by acid deposition.

In order to achieve these objectives, it is very important to accumulate accurate and precise data on acid deposition. Therefore, a lot of effort was made to develop QA/QC (Quality Assurance and Quality Control) Programs for EANET to obtain reliable data that can be comparable among the countries of the East Asian region, as well as with other networks by ensuring data accuracy, precision, representativeness and completeness in acid deposition monitoring.

QA/QC Programs were adopted at the First Session of the Interim Scientific Advisory Group (ISAG) in October 1998 and revised at the Second Session of ISAG in March 2000.

According to the QA/QC Programs, the National Center in each participating country is required to prepare and implement the national QA/QC programs including appointment of the national QA/QC manager, guide for the preparation of SOPs at relevant organizations/laboratories. The activities for QA/QC of sampling organizations and chemical analysis laboratories include preparation of SOPs and participation in QA/QC activities should be conducted by the National Center.

II. QUESTIONNAIRE SURVEY 2003

This questionnaire is planned based on the discussion at SAC2 held in November 2002 in Bangkok with suggestion to involve EANET laboratories into worldwide inter-laboratory comparison campaigns. Such results will also be published as an EANET activity.

As you already know, the results of inter-laboratory comparison projects are useful to study and find solutions of existing laboratory problems and to improve the quality of laboratory analysis.

The questionnaire consists of six questions about QA/QC activities concerning the participation in the international inter-laboratory comparison projects (hereinafter referred to as the "IILC project") in the participating countries.

The Network Center received replies from ten participating countries except Cambodia, Lao P.D.R that had just participated in EANET.

The results of the survey are showed in this report with some graphs and tables, and the Questionnaire formats are also attached as APPENDIX 2.

III. RESULTS OF SURVEY

The results of Questionnaire survey were summarized and prepared in the form of tables (Summary tables; APPENDIX 1) and graphs. The general remarks on the fundamental items are the followings.

1. How many countries/laboratories participate in IILC project now?

The numbers of countries/ laboratories that checked each of items are presented in Summary tables (APPENDIX 1) and Figure 1.

The following observations may be pointed out.

- Six countries/Seven laboratories participate in IILC project (except EANET project) now.
- Five countries participate in IILC project for Wet deposition, one country participates in IILC project for Soil monitoring, and two countries participate in Inland aquatic environment monitoring. But, there is no country participates in IILC project for Dry deposition monitoring.

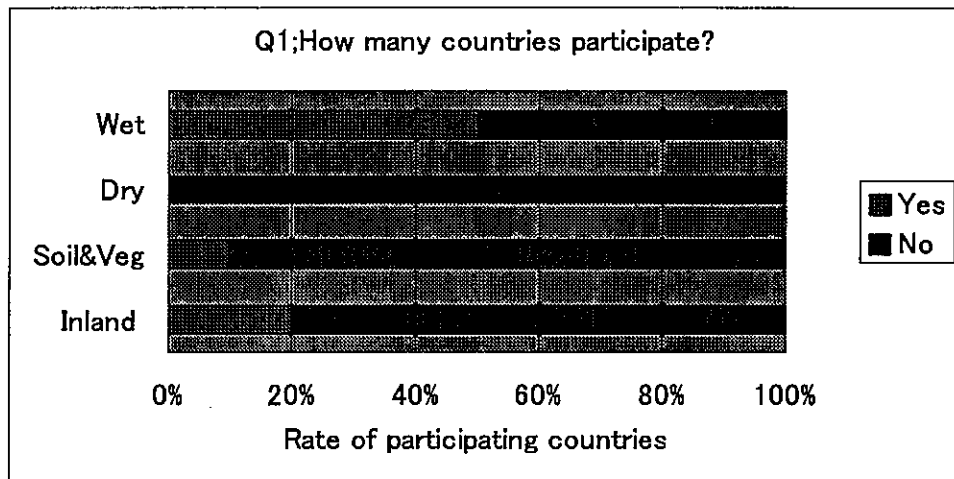


Figure 1 Rate of participation in IILC project

2. Name &Frequency of IILC projects

The numbers of countries that checked each item are presented in Summary table (APPENDIX 1) and Table 1.

The following observations may be pointed out.

- We have been able to find four IILC projects as follows.
(WMO/USGS/CAEAL//NATA).

Table 1 IILC projects name and participating countries

Field	IILC projects (Abbreviation)	IILC projects	Participating countries
Wet	WMO	World Metrological Organization	Japan, Malaysia, Mongolia, Russia, Thailand
	USGS	The US Geological Survey	Japan
Dry			
Soil	CAEAL	Canadian Association for Environmental Analytical Laboratories	Thailand
Inland	CAEAL	Ditto	Thailand
	NATA	National Association Authorities, Australia	Philippine, Thailand

- The frequency of analyzing of IILC projects is 1-4times/year. But in USGS IILC projects, the frequency of the analyzing is 24 times/year.

3. How long does the laboratory participate in IILC projects?

The periods of the laboratories that participate in IILC projects are presented in Summary tables (APPENDIX 1).

The following observations may be pointed out.

- The period of the laboratories that participate in IILC projects is 2-18 years.
- CLEM in Mongolia has been participating in WMO project for 18 years.

4. Report of results

The results of the survey are presented in Summary tables (APPENDIX 1) and Table 2.

The following observations may be pointed out.

- We found that the reports of IILC projects results are usually checked by the organization's web site.

Table 2 IILC projects web site names

IILC projects	Web Site
WMO	http://marble.asrc.cestm.albany.edu/qasac/lab_ic.html
USGS	http://bqsusgs.gov/precip/project_overview/interlab/figure_intro.html
CAEAL	http://www.caeal.ca/progdocs.html
NATA	http://nata.asn.au/services/international3.html

5. Merit of participation in IILC projects

The numbers of countries that checked each items are presented in Summary tables (APPENDIX 1).

The following observations may be pointed out.

- The main reason of participation in IILC projects is to check how is the laboratory's analytical precision and accuracy of the data, and to maintain international standard.

6. Intention of participation in IILC projects

The numbers of countries that checked each items are presented in Summary tables (APPENDIX 1).

The following observations may be pointed out.

- Almost all of countries that are not participating in IILC projects have an intention of participation in IILC projects.

IV. CONCLUSION

The results of this questionnaire survey could be summarized as follows.

- Six countries/ seven laboratories participate in IILC project (except EANET project) now.
- Five countries participate in IILC project for Wet deposition, one country participates in IILC project for Soil monitoring, and two countries participate in Inland aquatic environment monitoring. But, there is no country participates in IILC project for Dry deposition monitoring
- We have been able to find four IILC projects such as WMO, USGS, CAEAL, and NATA in this survey.
- The frequency of analyzing of IILC projects is 1-4times/year. But in USGS IILC projects, the frequency of the analyzing is 24 times/year.
- We found that the reports of IILC projects results are usually checked by the organization's web site.

- The main reason of participation in IILC projects is to check how is the laboratory's analytical precision and accuracy of the data, to maintain international standard.
- Almost all of countries that are not participating in IILC projects have an intention of participate in IILC projects.

Question items	Number of Countries			China	Indonesia	Japan	Malaysia	Mongolia	Philippines	R. of Korea	Russia	Thailand	Viet Nam	Total
Q5) Merit participation of	A1	Wet									Get results easily	Maintain QAQC		
	A2	Wet												
	B1	Dry												
	B2	Dry												
	C1	Soil/Veg												
	C2	Soil/Veg												
	D1	Inland							Gage lab. Compe tence			Maintain QAQC		
	D2	Inland												
Q6) Intention of participate in	A	Wet deposition	Yes	1	1	-	1	-	-		-	-	-	3
			No			-		-	-	1	-	-	-	1
	B	Dry deposition	Yes	1	1	1	1	-	-		1	1	-	6
			No					-	-	1			-	1
	C	Soil/Vegetat ion	Yes	1	1	1	1	-	-		-	-	-	4
			No					-	-	1	-	-	-	1
	D	Inland Aquatic	Yes	1	1	1	1	-	-		-	-	-	4
			No					-	-	1	-	-	-	1

APPENDIX 2

Questionnaire on QA/QC activities concerning the participation in the international inter-laboratory comparison projects for Acid Deposition Monitoring in the Participating Countries of EANET

August 2003

Please answer the questions on the international inter-laboratory comparison projects at your country's laboratories relevant to EANET activities.

Country: Organization and Position: Name:

Q1. Does any laboratory relevant to EANET activities in your country participate in the international inter-laboratory comparison projects/programs now?

a) For wet deposition Yes No

└─ How many laboratories participate? ()

b) For dry deposition Yes No

└─ How many laboratories participate? ()

(Automatic instruments, Filter Pack, Passive Sampler etc.)

c) For soil/vegetation Yes No

└─ How many laboratories participate? ()

d) For inland aquatic environment

Yes No

└─ How many laboratories participate? ()

Remarks

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Q2. Please write the names of the international inter-laboratory comparison projects /programs that laboratories in your country participate other than the project of EANET. (For the each laboratory only which answered, "Yes" in Q1)

Example(WMO,USGS,ICP etc. : 4 times/year)

a) For wet deposition(:)
 (:)
 (:)
 (:)
 (:)

b) For dry deposition(:)
 (:)
 (:)
 (:)
 (:)

c) For soil/vegetation(:)
 (:)
 (:)
 (:)
 (:)

d) For inland aquatic(:)
 (:)
 (:)
 (:)
 (:)

Remarks

Q3. How long does your country's laboratory participate in the international inter-laboratory comparison projects/programs?

(For the each laboratory only which answered, "Yes" in Q1)

Example(ABC laboratory(Name) : 3 years(Period))

a) For wet deposition(:)
 (:)
 (:)
 (:)
 (:)

b) For dry deposition(:)
 (:)
 (:)
 (:)
 (:)

c) For soil/vegetation(:)
 (:)
 (:)
 (:)
 (:)

d) For inland aquatic(:)
 (:)
 (:)
 (:)
 (:)

Remarks

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Q5. Please write the main reason that the laboratories in your country participate the international inter-laboratory comparison projects/programs other than the project of EANET. (For the each laboratory only which answered, "Yes" in Q1)

- Example (Procedure to participate the projects is easy.)
- a) For wet deposition()
 - ()
 - ()
 - ()
 - ()
 - b) For dry deposition()
 - ()
 - ()
 - ()
 - ()
 - c) For soil/vegetation()
 - ()
 - ()
 - ()
 - ()
 - d) For inland aquatic()
 - ()
 - ()
 - ()
 - ()
 - ()

Remarks

Q6. Do the laboratories in your country want to participate other international inter-laboratory comparison projects/programs than the project of EANET?

And why?

(For the each laboratory only which answered, "No" in Q1)

a) For wet deposition Yes No

b) For dry deposition Yes No

(Automatic instruments, Filter Pack, Passive Sampler etc.)

c) For soil/vegetation Yes No

d) For inland aquatic environment Yes No

Remarks

Thank you