

Twenty-fourth Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
24-25 November 2022, Manila, Philippines

WORK PROGRAMME AND BUDGET IN 2023 CONSIDERATION OF DRAFT EANET PROJECT PLANS FOR 2023

I. INTRODUCTION

1. The Network Center (NC) and the Secretariat (SEC) for the Acid Deposition Monitoring Network in East Asia (EANET) summarized the draft project plans in 2023 that have been submitted to the SEC, and provided this meeting document for consideration at The Twenty-second Session of the Scientific Advisory Committee on the Acid Deposition Monitoring Network in East Asia 18-20 October 2022.
2. The EANET Project Fund and Project Guideline was reviewed, discussed and approved by the Twenty-third Intergovernmental Meeting (IG23) of EANET held on 24-25 November 2021 virtually. In line with the EANET Project Fund and Project Guideline, the SEC called for submission of the EANET project concept notes and project plans. As of the end of June 2022, the Secretariat has received eight project plans. The list of project plans is shown in Attachment 1.
3. For reference, the ideal schedule of submission of EANET project plans and the steps of approval of its plans by IG meeting are shown in in Attachment 2.
4. After receipt of the EANET project plans, the NC and SEC have conducted a screening review to confirm their compliance to the EANET Project Criteria. Results of the screening review and comments from the SEC and NC are shown in Attachment 3 and 4, respectively.
5. the Working Group Meeting (WG) of the EANET was held on 24-25 August 2022 virtually, and the session provided some comments on proposed EANET project plans. In line with the comments received from the WG meeting, the MOEJ and NC, as the project leaders revised the project plans accordingly.
6. This meeting document has been submitted to the Twenty-second Session of the Scientific Advisory Committee (SAC22) for technical review and consideration. At SAC22 session, the participants provided several comments on the proposed EANET Projects Plans. In line with provided comments, the Project Leads have revised the Plans accordingly. Major discussion points are as follow (cited from Report of the Session of SAC22 paragraph #57):
 - It was clarified that Project 2023-1: “Studies on the effects of atmospheric deposition on ecosystems, from a catchment scale to a regional scale” would include a study focusing on the entire EANET region but a regional-scale study would be conducted

as a methodological study. To reflect this, the project title will be modified by adding “as a methodological study” after “a regional scale”.

- It was suggested that the information shared during workshops should be clarified as not representing the official EANET opinion whenever research findings that may include uncertainties are concerned.
 - It was clarified that any scientific activities might have uncertainties and workshops/seminars did not require consensus since such activities did not intend to represent the official EANET opinion, as such, the results of such activities should be attributed to the authors. However, it is important to share scientific facts through such opportunities.
 - It was clarified that concerning Project 2023-06 “The webinar workshop for capacity building on emission inventory for combustion sources” the workshop content would only consist of information sharing from each Participating Country on their local challenges and expected learnings and not intend to express the official opinion of the EANET.
 - The Philippines expressed its enthusiasm to participate in the VOC project as this activity will contribute to the Philippines’ work on the development of national air quality guidelines.
 - Mongolia also informed the Session that they are looking forward to the implementation of the VOC project.
7. The Draft EANET Project Plans in 2023 submitted to the SEC are presented in Attachment 5, and summary of budgetary issues for the proposed EANET Projects in 2023 are presented in Attachment 6.

II. ACTIONS REQUIRED

8. The Twenty-fourth Intergovernmental Meeting (IG24) of EANET is invited to review the Draft EANET Project Plans in 2023 and may wish to consider, discuss, provide guidance, and approval, as appropriate.

Attachment list

Attachment 1: Proposed EANET Project Plans

Attachment 2: Ideal schedule of submission of EANET Project Plans and the steps of approval of by IG meeting

Attachment 3: Summary of EANET Project Plan Criteria Checking

Attachment 4: The Secretariat and NC’s Comments on EANET Project Plans in 2023

Attachment 5: EANET Project Plans from [2023-01] to [2023-08]

Attachment 6: Summary of budgetary issues for the proposed EANET Project Plans in 2023

Attachment 1**Proposed EANET Project Plans**

[2023-01] Studies on the effects of atmospheric deposition on ecosystems, from a catchment scale to a regional scale as a methodological study

[2023-02] The Feasibility for promoting VOCs related Capacity Building in the EANET

[2023-03] Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN)

[2023-04] PM_{2.5} source apportionment in major cities in EANET for recommendations on feasible reduction policy

[2023-05] The collaboration of Technical and Training (TNT) and capacity building program for personnel of the participating countries on monitoring

[2023-06] The webinar workshop for capacity building on emission inventory for combustion sources

[2023-07] Seminar for Acid Deposition/Air Pollution effects on human health and ecosystem

[2023-08] Research Fellowship program

Attachment 2

Ideal schedule of submission of EANET Project Plans and the steps of approval by IG meeting

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Call for Project Proposals												
Submission of Project Concept Notes												
Submission of Project Plans												
Review and Discuss at Working Group (WG) Meeting												
Review and Discuss at Scientific Advisory Committee (SAC) Meeting												
Review, Discuss and approve at Intergovernmental (IG) Meeting												

Attachment 3

Summary of EANET Project Plan Criteria Checking

The EANET Project Criteria (EPC) is a set of Criteria applied for each EANET Project Plan (EPP) to determine whether the EPP is ready to be submitted to the IG for its discussion and approval (EANET Project Fund and Project Guideline (EANET/IG 23/9)). The EPC includes the following, please carefully check (mark ✓) the EPP in line with the guidance below.

Name of EPP: _____

Table 3-1. Sample of Criteria Checking List for Each Project Plan

EANET Project Criteria	Satisfied	Should be Improved	Remarks
1. Activities, including non-core activities, should be within the EANET Scope.			
2. The EANET Project Plan (EPP) is in line with the principles defined in this Guideline.			
3. The EPP clearly and reasonably indicates its objectives, activities, the rationale to implement, tangible expected outputs, and outcomes.			
4. More than half of EANET Participating Countries (PCs) are identified as beneficiaries directly and/or indirectly.			
5-1. Potential to contribute to the achievements of the EANET objects: Will the proposed activities advance the strategies in the Medium Term Plan for EANET and its Priority Objective?			
5-2. Potential for catalyzing impact beyond the proposed activities: Will the project contribute to the development of the regulatory framework and policies of EANET?			
5-3. Technical soundness of the proposal: Is the proposed approach the most adequate for achieving the proposal's expected results and outcomes and to achieve the Project goals?			
5-4. Cost-efficiency and effectiveness: Are the proposed funding amount and implementation structure adequate and reasonable to achieve the proposal's objectives?			
5-5. Relevance of the geographic location and country ownership: Is the rationale for the location of the proposed activities well-grounded and strategic? Did the country/city/Initiative contribute to the development and express support for the proposed activities prior to submission? Is the project relevant to national and regional needs, priorities, and circumstances?			

6. Necessary resources other than EANET Project Fund (EPF) are secured or highly likely to be secured, while the allocation of EPF is the matter of IG decision.			
7. At least one Co-financers (CF), either in financial or in-kind form, is secured or highly likely to be secured. In the case of a small project of which the total amount of required resources is 30,000 USD or less, financial contribution other than EPF is not always required, while in-kind contribution is always necessary.			
8. In principle, the project period is around one year. Some types of projects can set their period up to 3 to 5 years, provided that such project has a mechanism to be reviewed by IG on the implementation of the Project for IG's decision to continue or terminate.			
9. In principle, the requested amount of the EPF is not exceeding 50% of the total required resources for the Project.			

Table 3-2. Summary of Criteria Checking for Submitted Project Plans

Project Plans	Satisfied	Should be Improved	Remarks
[2023-01] Studies on the effects of atmospheric deposition on ecosystems, from a catchment scale to a regional scale as a methodological study, proposed by the NC	✓		
[2023-02] The Feasibility for promoting VOCs related Capacity Building in the EANET, proposed by the MOEJ	✓		
[2023-03] Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN), proposed by the NC	✓		
[2023-04] PM _{2.5} source apportionment in major cities in EANET for recommendations on feasible reduction policy, proposed by the NC	✓		
[2023-05] The collaboration of Technical and Training (TNT) and capacity building program for personnel of the participating countries on monitoring, proposed by the NC and National Institute of Environmental Research (NIER), R of Korea	✓		
[2023-06] The webinar workshop for capacity building on emission inventory for combustion sources, proposed by the NC	✓		
[2023-07] Seminars for Acid Deposition/Air Pollution effects on human health and ecosystem, proposed by the NC	✓		
[2023-08] Research Fellowship program, proposed by the NC	✓		

Attachment 4

The Secretariat and NC's Comments on EANET Project Plans in 2023

Project List	Total ¹ (USD)	Preliminary Review		Review	
		Project Criteria Checking	NC/ Secretariat Comments, if any	WG Comments	SAC Comments
[2023-01] Studies on the effects of atmospheric deposition on ecosystems, from a catchment scale to a regional scale as a methodological study, proposed by the NC	101,000	✓	None	China requested to clarify some terminologies.	China suggested conduct this project as a methodology study
[2023-02] The Feasibility for promoting VOCs related Capacity Building in the EANET, proposed by the MOEJ	63,000	✓	None	Japan showed their interest to this project.	1) From the Philippines: expressed its enthusiasm to participate in the VOC project 2) From Mongolia: informed the Session that they are looking forward to the implementation of the VOC project.
[2023-03] Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN), proposed by the NC	163,000	✓	None	1) Vietnam will provide in-kind contribution. 2) Japan showed their interest to this project. 3) China requested to add a test for the performance of the device, and evaluate the performance of this low-cost sensor in the laboratory beforehand.	

¹ Including Project Fund Holder's additional personnel costs: 3,000 USD
3,000 USD = 6,000 USD/Man/Month (PFH's personnel cost) * 0.5 Man/Month (1 Man for 10 days (half Month))

Project List	Total ¹ (USD)	Preliminary Review		Review	
		Project Criteria Checking	NC/ Secretariat Comments, if any	WG Comments	SAC Comments
[2023-04] PM _{2.5} source apportionment in major cities in EANET for recommendations on feasible reduction policy, proposed by the NC	13,000	✓	None	China requested to clarify some terminologies.	
[2023-05] The collaboration of Technical and Training (TNT) and capacity building program for personnel of the participating countries on monitoring, proposed by the NC and National Institute of Environmental Research (NIER), R of Korea	117,700	✓	None	R. of Korea proposed possible collaboration between EANET&NEIR, R. of Korea.	
[2023-06] The webinar workshop for capacity building on emission inventory for combustion sources, proposed by the NC	15,000	✓	None	Malaysia mentioned the budget plan seemed high as a webinar.	China suggested the results of this project should be attributed to the authors, and not represent of governments.
[2023-07] Seminars for Acid Deposition/Air Pollution effects on human health and ecosystem, proposed by the NC	22,000	✓	None	China requested to clarify some terminologies.	
[2023-08] Research Fellowship program, proposed by the NC	33,000	✓	None	Russia mentioned this project should be considered to conduct as a core activity.	

EANET Project Plans from [2023-01] to [2023-08]**I. General Information**

Title of Project	Proposal Number: 2023-01 Studies on the effects of atmospheric deposition on ecosystems, from a catchment scale to a regional scale as a methodological study
Duration of Project	[January/2023 – December/2025]: 3 years
Project Lead (PL)	[Name of an entity taking the lead in project cycle] Network Center for EANET, Asia Center for Air Pollution Research
Partner organizations (POs)	[List all relevant Partner organizations central to the project] <ul style="list-style-type: none"> • (Japan Society on Promotion of Sciences (JSPS), Japan): a related research grant donor • Niigata University, Japan • Nagoya University, Japan (as a JSPS research project member) • Forestry and Forest Products Research Institute, Japan • Research Institute for Humanity and Nature, Japan
Implementation Agencies (IAs)	[List all relevant Implementation Agencies] <ul style="list-style-type: none"> • Network Center for EANET, Asia Center for Air Pollution Research, Japan • Niigata University, Japan • Nagoya University, Japan (as a JSPS research project member) • Forestry and Forest Products Research Institute, Japan • Research Institute for Humanity and Nature, Japan
Beneficiaries of PCs	<ul style="list-style-type: none"> • General public • Scientists • Policy decision makers
Total Required Resources and Requested amount of Project Fund	<ul style="list-style-type: none"> • The total amount of required resources in USD: 98,000 (for 2023/2024)/ 91,000 (for 2025)/ 287,000 (for three years) • The requested amount for EANET Project Fund (USD): 30,000 (per year)/ 90,000 (for three years) • Note: A research grant has already been secured from JSPS, 17,290,000 JPY (in total) for four years from 2022 to 2025, which would be collaborated with the EANET project. The grant for three years is also included in the total required amount above, although the grant is not transferred to the Project Fund account. The grant is independently managed by the project leader (Dr. Hiroyuki Sase) and his organization (ACAP). Part of the grant (8,255,000 JPY) is allocated to scientists of other Partner Organizations for their roles.

Resources other than EPF from Co-financers	Organization	Financial contribution (USD)	In-kind contribution (with estimated equivalent USD, if possible)	Status (Secured/under consultation etc.)
	MOEJ	30,000 (per year)/ 90,000 (for three years)		Pledged
	JSPS		38,000 (for JFY2023/2024)/ 31,000 (for JFY2025)/ 107,000 (for three years)	Secured (as the project from 2022 to 2025)
	Total	30,000 (per year)/ 90,000 (for three years)	38,000 (for JFY2023/2024)/ 31,000 (for JFY2025)/ 107,000 (for three years)	
Relevant Types of Activities	<ul style="list-style-type: none"> Monitoring of acid deposition (e.g., catchment-scale monitoring) Development/update of strategy papers (activities in line with the Strategy Paper for Future Direction of EANET on Monitoring of Effects on Agricultural Crops, Forest and Inland Water by Acidifying Species and Related Chemical Substances (2020)) 			
Relevant Scope of EANET	<ul style="list-style-type: none"> To create a common understanding of the state of the acid deposition problems in East Asia. 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. 			
Representative of the Project Lead /Contact Address	<p>Dr. Hiroyuki Sase Network Center for EANET, Head of Ecological Impact Research Department, Asia Center for Air Pollution Research (ACAP) Sowa 1182, Nishi-ku, Niigata City, 950-2144, Japan; sase@acap.asia</p>			
Project Processing Information	Submission Date to the EANET Secretariat: 24 June 2022			
	1) Date of Register in the Project Cycle			
	2) Date of Latest Project Plan			
	3) Date of Approval			
	4) Date of Completion Report Submitted			

II. Description of the Project

Keywords of the project	<ul style="list-style-type: none"> Response of forest ecosystems Acidification Nitrogen deposition Extreme weather Regional assessment
Summary of the project	<ul style="list-style-type: none"> Responses of forest ecosystems to a changing atmospheric environment have not been enough clarified, yet. This is important not only to create a common understanding on ecological impacts but also to verify the effectiveness of relevant policy measures to date. This project provides the knowledge on responses of forest ecosystems. Long-term trends at a forested catchment in Niigata, Japan and other catchment-related EANET data will be assessed taking account of interlinkages with extreme weather. The regional-scale study is conducted as a methodological study for future development of the EANET. Appropriate methodologies for impact assessments on a regional scale will be studied in cooperation with other research groups in the EANET PCs and the MICS-Asia community. Scientific outcomes obtained through the activities above will be shared with the EANET PCs not only through scientific publications but also through EANET meetings and thematic workshops/seminars.

Background and Rationale	<p><u>Background and the existing problem:</u></p> <ul style="list-style-type: none"> • Forest ecosystems provide various ecological services, such as provision of nature resources, groundwater recharge, carbon sequestration, and prevention of disasters. Long-term atmospheric deposition of acidifying species and related chemical substances may have disturbed the functions and resilience of forest ecosystems. • According to the experience in Europe and North America, a recovery of forest ecosystems from acidification did not progress as expected and problems remained even after enough reduction of SO₂ and NO_x emissions. Remaining problems, such as O₃ and PM, still exist. • Meteorological variabilities and extreme weather, such as changing precipitation patterns, high temperature and sudden heavy rains, may also affect the recovery process. • Responses of forest ecosystems to a changing atmospheric environment in the region have not been clarified. <p><u>Rationale of the proposal and reasoning for implementation:</u></p> <ul style="list-style-type: none"> • A field observation on a catchment scale is a useful approach to evaluate effects of atmospheric deposition on forest ecosystems, quantitatively and qualitatively, as suggested by previous studies in Europe and the United States. • Regional assessments of ecological impacts by atmospheric deposition have been contributing to reduction of the emissions historically, as shown in the experience in Europe (adoption of relevant protocols under the Convention on Long-Range Transboundary Air Pollution, UNECE). • It is suggested that regional impact assessments be promoted in EANET to create common understanding of the current ecological impacts and provide useful inputs for policy makers. <p><u>Specific solution ways and how to address the problem:</u></p> <ul style="list-style-type: none"> • An external research grant from JSPS has already been obtained to financially support the study on interlinkages between atmospheric deposition and extreme weather for the period 2022 – 2025. Additional surveys/experiments applicable by the grant may upgrade scientific levels of the project. • Regular sampling at Kajikawa catchment (KJK), Japan, will be conducted in cooperation with a local organization, while intensive surveys will be done by ACAP researchers. • Thematic workshops/seminars will be held online to reduce the risk of COVID-19 and to have many audiences. • To promote a capacity building/a methodological study of EANET for regional impact assessments, collaborations with atmospheric modeling communities are useful. Possibility of collaboration with the MICS-Asia community has already been discussed preliminarily with relevant scientists.
Objectives	<ul style="list-style-type: none"> • To understand responses of forest ecosystems, including KJK and Lake Ijira catchment (IJR), to declining atmospheric deposition and any other remaining effects • To promote methodological research on impact assessments applicable to the EANET region • To provide scientific knowledge for common understanding and future policy measures
Activities to achieve Objectives	<ul style="list-style-type: none"> • Continuation of field observations at a forested catchment, KJK • Additional surveys at KJK and Lake Ijira catchment (IJR) (supported by the JSPS grant) • Data assessment of EANET data, including the catchment-scale data at IJR, and La Mesa Watershed, Philippines, and other EANET data, if necessary • Preliminary impact assessments of the EANET region, as methodological research, utilizing existing methods/data in cooperation with external atmospheric scientists including the MICS-Asia community • Sharing of the scientific knowledge above through EANET meetings as well as thematic workshops/seminars (not only for scientists but also for governmental officers/ experts: once/twice for three years, in cooperation with the Proposal Number 2023-07)
Links and relevance to existing policy process of the target areas and regional activities	<ul style="list-style-type: none"> • The project may provide the scientific knowledges on how forest ecosystems respond to the declining deposition. This is a useful input to verify the effectiveness of policy measures to date. • Promotion of a capacity building/a methodological study on regional impact assessment will be informative for consideration of future policy measures in the region.
Expected Outputs	<ul style="list-style-type: none"> • Long-term datasets at KJK since 2002 • Preliminary research result(s) of impact assessments in the EANET region • Scientific knowledges on responses of forest ecosystems to declining atmospheric deposition and any other remaining effects, from a catchment scale to regional scale, through the scientific publications and meetings/workshops

Expected Outcome	<p>Based on the scientific outputs above:</p> <ul style="list-style-type: none"> • Identification of the next topics on ecological impacts, such as nitrogen cycle and O₃ • Common understanding on the current conditions, such as effectiveness of SO₂ and NO_x reduction and necessity of reducing emissions of other pollutants, which contribute to discussion for future policy measures in the region • Practical discussion on the future impact assessments in EANET, including how to utilize this approach for further development of the network, such as strengthening the regional framework <p><u>Later ones above are expected to be achieved as middle/long term outcomes.</u></p>
Risks and Countermeasures	<ul style="list-style-type: none"> • In the current plan, field data from two sites in Japan are mainly studied. Additional data analysis for the EANET sites and other research sites will be conducted to obtain wider views, and to compensate possible missing data in the Japanese sites in case. • To reduce health risks of field surveyors under severe summer/winter, schedules of field operations and team members will be considered carefully.
Plan to deliver outcomes to beneficiaries	<ul style="list-style-type: none"> • Publication of scientific papers in international journals • Presentation at EANET meetings/workshops, including a thematic workshop planned in another project activity. • Preparation of leaflets/brochure to introduce project outputs to the general public
Comments from PC to be considered in the implementation	
Responses from the Project Lead to above	
Comments from SEC, NC, PCs	<p>*This column will be filled after submission of the proposal to SEC. SEC & NC provide comments on whether the project meets the project criteria or not. Other than above, the interests of PCs will also be added.</p>

III. IMPLEMENTATION PLAN

In table format, please present a brief, one- to two-page work plan matrix, with a timeline including target dates for activities for the project's life, reflecting the overall program approach and objectives. Applicants may use smaller but legible font sizes in tables.

Activities and Milestones

Name of Activities	Brief Summary of Each Activity with milestones and name of responsible IA	Implementation Period
Field surveys at KJK	Field sampling of rainwater and river water is conducted in cooperation with local surveyors.	Monthly/twice a month through a year
Laboratory analysis of KJK samples	Chemical analysis of the samples collected at KJK is conducted at the ACAP laboratory.	Ibid.
(Intensive surveys during heavy rain events in summer)	(River water chemistry is monitored intensively during heavy rain events to identify mobilization of deposited/accumulated pollutants from forest ecosystems. Soil analysis is also conducted. This work is mainly conducted as a part of the JSPS research project.)	(Mainly in summer)
Data analysis for KJK and IJR with the data from other EANET sites and Japanese national sites	Data analysis is conducted to discuss ecosystem response to changing atmospheric deposition and meteorological conditions. This work is conducted in cooperation with the national monitoring in Japan and the JSPS research project.	Through a year
Discussion on regional impact assessments as a methodological study	Discussion on the preliminary regional impact assessments utilizing existing methods/data in cooperation with external scientists including the MICS-Asia community	Through a year
Publication and conference	Research outputs are published in international journals and/or	Occasionally

presentation	presented at international/domestic scientific conferences.	
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IV. BUDGET PLAN

In USD

Name of Activities	Required Resources (financial and in-kind)	Secured Sources for Required Resources	In-balance
Field surveys at KJK	25,000 (per year)/ 75,000 (for three years)	EANET Project Fund and Co- finance from MOEJ	
Laboratory analysis of KJK samples	10,000 (per year)/ 30,000 (for three years)	EANET Project Fund and Co- finance from MOEJ	
(Intensive surveys during heavy rain events in summer)	In-kind from JSPS grant 38,000 (for JFY2023/2024)/ 31,000 (for JFY2025)/ 107,000 (for three years)	In-kind from JSPS grant 38,000 (for JFY2023/2024)/ 31,000 (for JFY2025)/ 107,000 (for three years)	
Data analysis for KJK and IJR with the data from other EANET sites and Japanese national sites	10,000 (per year)/ 30,000 (for three years)	EANET Project Fund and Co- finance from MOEJ	
Discussion on regional impact assessments as a methodological study	10,000 (per year)/ 30,000 (for three years)	EANET Project Fund and Co- finance from MOEJ	
Publication and conference presentation	5,000 (per year)/ 15,000 (for three years)	EANET Project Fund and Co- finance from MOEJ	
Total	98,000 (for 2023/2024)/ 91,000 (for 2025)/ 287,000 (for three years)	EANET Project Fund and Co- finance from MOEJ	

Note: For multiple-year projects, specify the total amount for entire projects and subtotal for each year.

I. General Information

Title of Project	Proposal Number: 2023-02 The Feasibility for promoting VOCs related Capacity Building in the EANET			
Duration of Project	January/2023 – December/2023			
Project Lead (PL)	Ministry of the Environment of Japan (MOEJ)			
Partner Organizations (POs)	<ul style="list-style-type: none"> Center for Environmental Science in Saitama (CESS), Japan German-Mongolia Institute for Resources and Technology, Mongolia Supervising Environmental Management Specialist, Air Quality Management Section, Environmental Quality an Management Division (AQMS-EQMD), Environmental Management Bureau (EMB), Department of Environment and Natural Resources (DENR), The Philippines 			
Implementation Agencies (LAs)	<ul style="list-style-type: none"> The Network Center for the EANET 			
Beneficiaries of PCs	<ul style="list-style-type: none"> Senior Level Policy Makers Technicians and Scientists National and local Government Officials Private Sectors The public 			
Total Required Resources and Requested amount of Project Fund	<ul style="list-style-type: none"> The total amount of required resources (USD): 60,000 The requested amount for EANET Project Fund (USD): 30,000 			
Resources other than EPF from Co-financers	Organization	Financial contribution (USD)	In-kind contribution (with estimated equivalent USD, if possible)	Status (Secured/under consultation etc.)
	MOEJ	30,000		Pledged
	Total	30,000		Pledged
Relevant Types of Activities	<ul style="list-style-type: none"> ➢ Capacity building activities on Monitoring and Data Analysis in the pilot cities ➢ Information sharing among EANET Participating Countries including pilot cities ➢ Public Awareness raising activities for EANET Participating Countries ➢ Joint on-site investigations in the pilot cities ➢ Workshops and seminars for EANET Participating Countries including pilot cities 			
Relevant Scope of EANET	<ul style="list-style-type: none"> ➢ Capacity building on monitoring of acid deposition including related chemical substances with quality assurance and quality control (QA/QC) and standard operating procedure (SOP) in the pilot cities ➢ Capacity building on promotion of data dissemination and utilization in the pilot cities ➢ Enhancement of cooperation and collaboration among EANET Participating Countries 			
Representative of the Project Lead /Contact Address	Yumi YASUDA (Ms.) Section Chief Air Environment Division, Ministry of the Environment, Japan Phone: +81-3-5521-8198 (Ex. 5470) Email : YUMI_YASUDA@env.go.jp			
Project Processing Information	Submission Date to the EANET Secretariat: 24 June 2022			
	1) Date of Register in the Project Cycle			
	2) Date of Latest Project Plan			
	3) Date of Approval			
	4) Date of Completion Report Submitted			

II. Description of the Project

<p>Keywords of the project Summary of the project</p>	<p>Keywords: Capacity building, VOCs, Promotion, Cities in the EANET</p> <p>Summary: VOCs are newly added substances for EANET and are noteworthy substances in perspective of achieving co-control of PM2.5 and ozone as VOCs are common precursors of both of them. In addition, VOCs monitoring is much more complex than other air pollutants as it consists of more than a hundred species and has various lifetimes and characteristic sources. This project is starting from feasibility study for promoting VOCs related capacity building in the EANET towards further implementation of such capacity building activities from 2024 to 2026, considering that VOCs were never treated as the target substances under EANET framework and VOCs related activities have never been conducted in the EANET .</p> <p>The objectives of the project are, understand the VOCs monitoring status in EANET, based on understanding of VOCs status in pilot cities; Capacity building towards preparing for the VOCs monitoring in pilot cities; formulate policy implication to improve the VOCs management in coordinately controlling PM2.5 and ozone, and provide VOCs related policy recommendations to the pilot cities and other activities including VOCs related researches with pilot cities.</p> <p>The outcomes and lessons learned from this feasibility study will greatly contribute to other cities in the participating countries of the EANET.</p>
<p>Background and Rationale</p>	<p>The 23rd Session of the Intergovernmental Meeting (IG23) of the EANET was held virtually in November 2021 and made its remarkable progress to adopt the Decision related to expansion of the scope of the EANET. The to-be-expanded scope enables the EANET to cover more atmospheric environment related substances and their related activities. Among these added substances, VOCs are noteworthy substances in the perspective of achieving co-control of PM2.5 and ozone as VOCs are common precursor of both of them. In addition, apart from other substances, VOCs monitoring is much more complex than other air pollutants as it consists of more than a hundred species and has various lifetimes and characteristic sources.</p> <p>According to the Summary of the Fact Sheet of the EANET in 2020, PM2.5 concentrations observed in EANET monitoring sites significantly exceeded WHO Air Quality Guidelines in both years of 2005 and 2021. Ozone concentrations observed in EANET monitoring sites were more serious than the ones of PM2.5, and only a few monitoring sites met WHO Air Quality Guidelines.</p> <p>In order to efficiently reduce both PM2.5 and ozone concentrations in the EANET to achieve co-control of PM2.5 and ozone, understanding the VOCs concentration status in the EANET is crucial. However, VOCs emissions in each region often represent a complex mix of traffic, industry, solvents, waste burning, etc., and have a unique VOCs fingerprint that reflects its major sources. Moreover, this fingerprint evolves over time as levels of VOCs rise or fall in response to changing sources or environmental regulations. Therefore, focusing on the local/city level and monitoring city's VOCs concentrations is more critical to exactly capture the whole air quality of the region, and is a crucial point for the EANET Participating Countries to collaboratively control PM2.5 and ozone to meet their national standards.</p> <p>The EANET participating countries are implementing VOCs related policies and practices differently considering their diversified priorities of national atmospheric environment management. In perspective of improving future capacity of VOCs management in the EANET, capacity building and technical support on VOCs related activities will greatly contribute to air quality improvement in the region.</p>

Objectives	<p>The objectives of the project are,</p> <ul style="list-style-type: none"> • Understand the VOCs monitoring status in EANET, based on understanding of VOCs status in pilot cities. • Capacity building towards preparing for the VOCs monitoring in pilot cities. For instance, summarize and draft VOCs management elements towards future activities of VOCs based on experiences and expertise of supporting cities and other cities in the EANET; Develop capacity building/training materials of VOCs in EANET in collaboration with supporting cities and participating countries with developed VOCs management experiences; Based on materials prepared above, trail implement the VOCs related capacity building activities in pilot cities. • Formulate policy implication to improve the VOCs management in coordinately controlling PM2.5 and ozone, and provide VOCs related policy recommendations to the pilot cities. • Other activities including VOCs related researches with pilot cities.
Activities to achieve Objectives	<ul style="list-style-type: none"> • Capacity building on monitoring of acid deposition including related chemical substances with quality assurance and quality control (QA/QC) • Capacity building on promotion of data dissemination and utilization • Enhancement of cooperation and collaboration among EANET Participating Countries
Links and relevance to existing policy process of the target areas and regional activities	<p>As VOCs play a crucial role in the formation of PM2.5, ozone and other photochemical oxidants associated with urban smog, it is important to determine the occurrence, sources, and behavior of VOCs to establish effective air pollution abatement approaches. However, VOCs are just newly added into EANET target substances, monitoring methodology and data analysis ability should be strengthened and improved.</p>
Expected Outputs	<p>The expected outputs are as follows;</p> <ul style="list-style-type: none"> • Establish VOCs advisory group. • Draft Capacity Building Materials, including VOCs management Elements/cases and training Material of VOCs. • Selecting project pilot cities from the participating countries of the EANET based on close consultation with the National Focal Points of the EANET.
Expected Outcome	<p>Through carrying out of this feasibility study in 2023 and its continued project for promotion of VOCs related capacity building in EANET from 2023 to 2026, gained experiences and insights in the pilot cities will greatly contribute to building future VOCs management capacities in other Participating Countries of EANET. Furthermore, outputs and findings could be further utilized in improvement of VOCs related capacities in other Participating Countries of EANET.</p>
Risks and Countermeasures	<p>Due to unexpected happenings, such as COVID-19 effect and natural disasters (earthquake, flood, typhoon, etc.) cannot conduct activities in person, the planned activities will be replaced by online communication tools.</p>
Plan to deliver outcomes to beneficiaries	<p>By organizing a Workshop on Sharing Knowledge and Practices on VOCs Related Actions, to share the knowledge and practices not only for VOCs monitoring status, but also for research methodologies on VOCs data analysis, and policies in addressing VOCs emission reduction. Considering the topic of VOCs is not a general issue for all EANET countries, the potential participants of this workshop will be gathered from potential pilot cities and others who are interested in VOCs. This workshop aims to gather approximately 50 people. By covering a wide range of VOCs related activities, the EANET Participating Countries can have a good chance to understand and learn from each other. The report of this project will be disclosed to public via the website of EANET.</p>

Comments from PC to be considered in the implementation	
Responses from the Project Lead to above	
Comments from SEC, NC, PCs	*This column will be filled after submission of the proposal to SEC. SEC & NC provide comments on whether the project meets the project criteria or not. Other than above, the interests of PCs will also be added.

III. IMPLEMENTATION PLAN

Activities and Milestones

Name of Activities	Brief Summary of Each Activity with milestones and name of responsible IA	Implementation Period
1. Nomination of pilot city	1) Discussion with potential Participating Countries of EANET to hear the request and common interest on VOCs monitoring (virtual). 2) The National focal points of each potential PC will nominate the pilot cities to join the project.	Jan -May 2023
2. Establishment of VOCs advisory group and organize the VOCs advisory group	1) The NC will invite the available experts recommended by national focal points to establish the advisory group (candidate experts are from Japan, China, Korea and Thailand). 2) Organize VOCs advisory group meeting (virtual and in person) to draft the documents to present the suitable monitoring target and methodology.	Jan -May 2023
3. Implementation plan of feasibility study	1) Kick-off meeting (virtual) of VOCs feasibility study project to clarify the project objective, road map, potential collaboration institutes, deliverables and others.	Jun - Sep 2023
4. Workshop	1) The NC and advisory group will organize the workshop, lecture, or remote training program on some specific topics of VOCs research and present the outcome and deliverables to all PCs.	Jun - Sep 2023
5. Project report	1) The NC will draft the annual report of the VOCs project. 2) Presentation in SAC23 and IG24 and revise the report. 3) Submit the finalized report.	Oct - Dec 2023

IV. BUDGET PLAN

In USD

Name of Activities	Required Resources (financial and in-kind)	Secured Sources for Required Resources	In-balance
1. Preparation of meetings, arrangements and coordination with experts and PCs, etc.	20,000	EANET Project Fund and Co-finance from MOEJ	
2. VOCs advisory group meeting (in person)	20,000	EANET Project Fund and Co-finance from MOEJ	
3. VOCs Workshop (virtual)	20,000	EANET Project Fund and Co-finance from MOEJ	
Total	60,000	EANET Project Fund and Co-finance from MOEJ	

Note: For multiple-year projects, specify the total amount for entire projects and subtotal for each year.

I. General Information

Title of Project	Proposal Number: 2023-03 Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN)			
Duration of Project	January/2023 – December/2024			
Project Lead (PL)	Network Center for EANET, Asia Center for Air Pollution Research			
Partner organizations (POs)	(For onsite support) <ul style="list-style-type: none"> Center for Environmental Research, Vietnam Institute of Meteorology, Hydrology and Climate Change, Ministry of Natural Resources and Environment (MoNRE-VN IMHEN) 			
Implementation Agencies (IAs)	<ul style="list-style-type: none"> Network Center for EANET, Asia Center for Air Pollution Research 			
Beneficiaries of PCs	Direct Beneficiaries: <ul style="list-style-type: none"> Experts in air quality monitoring departments/institutes of PCs who are interested in enhancing their capacity and coverage of air quality monitoring Service providers for air quality monitoring in PC Technical officers in charge of emission inventory Indirect Beneficiaries: <ul style="list-style-type: none"> Experts and practitioners in air quality monitoring in PCs and non-PCs Experts and practitioners in CAA, IGES, and participating countries of Integrated Programme for Better Air Quality in Asia (IBAQ) 			
Total Required Resources and Requested amount of Project Fund	<ul style="list-style-type: none"> The total amount of required resources (USD): 160,000 (230,000 for 2 years) The requested amount for EANET Project Fund (USD): 80,000 (115,000 for 2 years) 			
Resources other than EPF from Co-financers	Organization	Financial contribution (USD)	In-kind contribution (with estimated equivalent USD, if possible)	Status (Secured/under consultation etc.)
	MOEJ	80,000		Pledged
	MoNRE-VN-IMHEN	0	Support of LCS and RefS monitoring at Hoa Binh	Under consideration
	Total	80,000		
Relevant Types of Activities	<ul style="list-style-type: none"> Research on a concept and technical study of the HAQMN system Research and Evaluation of LCSs system Training and Capacity development on usages of air quality monitoring systems and QA/QC Experts and practitioners in air quality monitoring in PCs and non-PCs 			
Relevant Scope of EANET	<ul style="list-style-type: none"> Research Activities of the Monitoring Technologies for Atmospheric Environmental Substances including PM2.5/PM, SOx, O3, NOx Education and Training on QA/QC and LCSs 			
Representative of the Project Lead /Contact Address	Dr. Keiichi Sato Head of Atmospheric Research Department, NC/ACAP 1182 Sowa, Nishi-ku, Niigata-shi 950-2144, JAPAN ksato@acap.asia			
Project Processing Information	Submission Date to the EANET Secretariat: 24 June 2022			
	1) Date of Register in the Project Cycle			

	2) Date of Latest Project Plan	
	3) Date of Approval	
	4) Date of Completion Report Submitted	

II. Description of the Project

Keywords of the project	Low-cost sensor, Hybrid Air Quality Monitoring Network, Capacity building,
Summary of the Project	<ul style="list-style-type: none"> The main activities of the project are to research the accuracy of air quality monitoring using several types of low-cost sensors compared to a reference level monitors on a trial basis under various air quality and climate conditions in EANET participating countries, and to develop practical technical documents that would support the introduction and operation of the hybrid air quality monitoring network (HAQMN) in EANET participating countries.
Background and Rationale	<ul style="list-style-type: none"> Air quality administration usually uses conventional reference monitors (RefS). However, certain countries cannot fully use them in their air quality monitoring network due to the limitation of resources. Less expensive, and smaller monitoring devices, so-called Low-cost sensors (LCSs), have been developed and become popular in use for non-regulatory measures. <ul style="list-style-type: none"> The reliable LCSs would be useful in environmental administration sectors, Obtaining a more detailed spatial distribution of the air pollutants. Disseminating reliable LCSs and utilization to prevent social confusion by low-quality data of LCSs. Utilizing LCSs instead of RefS due to the limited resources 'Hybrid Air Quality Monitoring Network,' (HAQMN) which uses both LCS and RefS in a monitoring network, has great potential to enhance the air quality monitoring network within a country or over the region, in a cost-effective manner, specifically in areas where air quality monitoring capacity is limited due to their resource constraints. LCSs have been tested in a mostly moderate climate. It is important to examine the applicability of HAQMN in Southeast Asia, and to accumulate technical knowledge for the acquisition of reliable monitoring data. This project conducts a technical study of a small-scale implementation of HAQMN in the pilot cities in EANET PCs, and accumulates such technical knowledge and know-how for sharing them among EANET PCs and potential partners.
Objectives	<ul style="list-style-type: none"> Developing knowledge products of HAQMN and LCS <ul style="list-style-type: none"> To demonstrate the effectiveness of the HAQMN concept in areas where resource to develop an air quality monitoring network is limited. Operating a small-sized HAQMN to collect technical and to evaluate the reliabilities of LCSs. Developing technical knowledge products such as technical manuals for LCS will be developed for the policymakers, experts, and practitioners in the air quality monitoring field. Building capacity <ul style="list-style-type: none"> Two capacity building programs will be implemented for the policymakers, experts, and practitioners in the air quality monitoring field.
Activities to achieve Objectives	<p>(1) Developing knowledge products</p> <ul style="list-style-type: none"> Installing LCSs in selected countries and examining a small-scale HAQMN, to demonstrate the suitable system of the operation and QA/QC. The results of laboratory tests, especially the influences of temperature, humidity and pressure conducted by manufactures will be used for QA/QC, Assessing performance of LCS in reference to RefS. Developing technical manuals, training materials, and other knowledge products for HAQMN and LCS operations. <p>(2) Onsite Training and HAQMN seminar for capacity building</p> <ul style="list-style-type: none"> Holding onsite training and HAQMN seminar for capacity building to expand the concept of HAQMN, inviting the policymakers and practitioners in EANET PCs and related organizations.

	<p>(3) Disseminating the project results</p> <ul style="list-style-type: none"> • Compiling and disseminating the results with EANET PCs and interested stakeholders and partners through online seminars and workshops
Links and relevance to existing policy process of the target areas and regional activities	<ul style="list-style-type: none"> • Some countries are interested in using LCSs in air quality monitoring in the needs assessment of FY2021. • Studying on LCSs is a part of the activities of WP&B2022. • The utilization of LCS is also in line with the global trend. Some advanced countries and organizations such as WMO and US EPA are promoting LCSs.
Expected Outputs	<ul style="list-style-type: none"> • The reliable air quality obtained by LCSs in pilot cities. • Practical knowledge products on HAQMN and LCS. • Training programs and materials of HAQMN and LCS. • Introduction of effective HAQMN toward the relevant organizations in the project countries and their personnel, as well as the participants in the seminars and workshops. • Raised awareness of the EANET technical study as well as EANET's potential technical roles in promoting/improving HAQMN and LCS, among EANET PC, regional and international stakeholders. • Opportunities for collaboration with the project partners on other or relevant EANET activities.
Expected Outcome	<ul style="list-style-type: none"> • The policymakers and practitioners gain a better understanding of sources of air pollution and design countermeasures through the wider introduction of HAQMN or LCS. It helps to improve the air quality in the project areas, or wider areas in each project country. • Improved availability and quality of data on air pollution would enable policymakers to design countermeasures including large-scale investments for abatement of the sources of pollution, which may also attract co-financing from bilateral and/or multilateral financing institutions and private sector investments. • EANET countries could enjoy opportunities to improve their air quality monitoring network by the introduction of HAQMN or LCS. • Accelerating surveys and applications of LCS and HAQMN on a regional or global scale toward further improvement of air quality monitoring. • Technical expertise and core competencies of EANET would be well understood by the stakeholders, and the functions and resources for EANET operations would be further developed by enhanced opportunities with the potential partners.
Risks and Countermeasures	<ul style="list-style-type: none"> • Travel regulations would be affected by onsite training and the launch of HAQMN. Therefore, online training is planned with the support of a local agency alternatively. • Preparation of LCS would be delayed due to the shortage of semiconductors and unstable logistics. Therefore, the rental LCSs from local agencies or POs will be planned to use.
Plan to deliver outcomes to beneficiaries	<ul style="list-style-type: none"> • In addition to the outreach component of the Project, NC will continue its work on LCS and HQAMN based on the potential and challenges gained at the workshop and may prepare a subsequent project(s) for EANET consideration. • NC will provide guidance to PCs for following up the events case by case.
Comments from PC to be considered in the implementation	
Responses from the Project Lead to above	
Comments from SEC, NC, PCs	

III. IMPLEMENTATION PLAN

Activities and Milestones

Name of Activities	Brief Summary of Each Activity with milestones and name of responsible IA	Implementation Period
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Preparatory work	<ul style="list-style-type: none"> Collect and analyses up-to-date information Develop seminar/workshop Communicate with potential participants/resource persons 	JAN-MAY 2023
Preparation of technical guideline, manuals	<ul style="list-style-type: none"> Revise and prepare technical guideline, manuals, and SOPs. The results and analyses of the technical studies in pilot cities are utilized to revise the technical documents. Discuss the contents in SAC etc. 	JAN-DEC 2023 (Continues to 2024)
Online Seminar	<ul style="list-style-type: none"> Conduct the event (1 day) to disseminate the concept of HAQMN to the policymakers, technical staff in EANET PCs. 	MAY- SEP 2023
Launch of HAQMN	<ul style="list-style-type: none"> Coordination with the relevant organization to select the candidate cities and suitable monitoring sites. Implement HAQMN in pilot cities. 	JUL-DEC 2023 (Continues to 2024)
Follow-up	<ul style="list-style-type: none"> Summaries the seminar (Compile potentials and challenges) Summaries the training and provides training materials to related experts Compile a proceeding report and publicize 	JUL-DEC 2023 (Continues to 2024)

IV. BUDGET PLAN

In USD

Name of Activities	Required Resources (financial and in-kind)	Secured Sources for Required Resources	In-balance
Preparatory work	8,000 (16,000 for 2 years)	EANET Project Fund and Co-finance from MOEJ	
Preparation of technical guideline, manuals	25,000 (50,000 for 2 years)	EANET Project Fund and Co-finance from MOEJ	
Online Seminar (Development of a program, invitation of presenters, announcement to expected participants, preparing and holding the seminar, uploading the lecture materials for online seminar)	25,000 (50,000 for 2 years)	EANET Project Fund and Co-finance from MOEJ	
Launch of HAQMN	90,000 (for 2023) +In-kind from POs expected (Providing the monitoring place, and necessary assistance for the monitoring)	EANET Project Fund and Co-finance from MOEJ	
Follow-up	12,000 (24,000 for 2 years)	EANET Project Fund and Co-finance from MOEJ	
Total	160,000 (230,000 for 2 years)	EANET Project Fund and Co-finance from MOEJ	

Note: For multiple-year projects, specify the total amount for entire projects and subtotal for each year

I. General Information

Title of Project	Proposal Number: 2023-04 PM_{2.5} source apportionment in pilot cities in EANET for recommendations on feasible reduction policy			
Duration of Project	January/2023 – December/2024			
Project Lead (PL)	Network Center for EANET, Asia Center for Air Pollution Research			
Partner organizations (POs)	Japan International Cooperation Agency (JICA)			
Implementation Agencies (IAs)	<ul style="list-style-type: none"> Network Center for EANET, Asia Center for Air Pollution Research (NC/ACAP) (Japan) 			
Beneficiaries of PCs	<ul style="list-style-type: none"> National and local/city government officers in charge of air quality monitoring Policy makers involved in air pollution mitigation 			
Total Required Resources and Requested amount of Project Fund	<ul style="list-style-type: none"> The total amount of required resources (USD): 10,000 (20,000 for 2 years) The requested amount for EANET Project Fund (USD): 5,000 (10,000 for 2 years) 			
Resources other than EPF from Co-financers	Organization	Financial contribution (USD)	In-kind contribution (with estimated equivalent USD, if possible)	Status (Secured/under consultation etc.)
	Pollution Control Department(PCD), Thailand	0	Providing PM samples, PM chemical component data, and other air quality data. Organizing a regional workshop for PM _{2.5} pollution mitigation	Under consultation
	Sub Institute of Hydro Meteorology and Climate Change(SIHYMECC), Vietnam	0	Ditto	Under consideration
	MOEJ	5,000		Pledged
	Total	0	-	
Relevant Types of Activities	<ul style="list-style-type: none"> Activity 1 of Core Activities: Monitoring of acid deposition, improvement in monitoring methodologies and better instrument maintenance Activity 6 of Core Activities: Conduct an annual assessment of the state of acid deposition using trend analysis, numerical models Activity 10 of Core Activities: Promotion of public awareness on acid deposition, including other priority chemical species, etc. 			
Relevant Scope of EANET	<ul style="list-style-type: none"> ITEM 6 of the Instrument: Studies on scientific issues related to acid deposition (PM components are listed in the attachment of the expansion of the scope of EANET) 			
Representative of the Project Lead /Contact Address	<ul style="list-style-type: none"> Dr. Keiichi Sato, Head of Atmospheric Research Department, NC/ACAP / 1182 Sowa, Nishi-ku, Niigata-shi 950-2144, JAPAN, ksato@acap.asia 			
Project	Submission Date to the EANET Secretariat: 24 June 2022			

Processing Information	1) Date of Register in the Project Cycle	
	2) Date of Latest Project Plan	
	3) Date of Approval	
	4) Date of Completion Report Submitted	

II. Description of the Project

Keywords of the project	PM _{2.5} , Source analysis, Biomass burning, Vehicle emission, Secondary aerosol
Summary of the Project	<p>Many major cities in EANET participating countries suffer severe haze pollution due to rapid urbanization and motorization and biomass burning in forest and agricultural field. Our previous study of PM_{2.5} characterization in Bangkok demonstrated Organic Carbon Mass (OCM) accounted for 40% of total PM_{2.5}. However, there are many unidentified sources of OCM, which becomes an obstacle for haze pollution mitigation.</p> <p>This study aims to assess PM_{2.5} source contributions using the data of organic substances and other components in PM_{2.5} collected in EANET participating countries. PM_{2.5} samples are collected in pilot cities in EANET, and the chemical components of PM_{2.5} such as ions, carbonaceous compounds, trace elements and organic markers will be analyzed. Regional and seasonal characteristics of the chemical components of PM_{2.5} will be clarified. Finally, PM_{2.5} source contributions is evaluated by the receptor models and the time profiles of the chemical components PM_{2.5}.</p> <p>These results will provide scientific knowledge for PM_{2.5} pollution mitigation in Southeast Asian countries through outreach such as regional workshop.</p>
Background and Rationale	<p>Many large cities in East Asia, such as Bangkok and Ho Chi Minh City, suffer from severe air pollution caused by PM_{2.5}. Since the chemical composition of air pollutants emitted from each air pollution source varies greatly depending on the source, information on the chemical composition is necessary for quantitative estimation of the source of PM_{2.5}.</p> <p>Countries in Northeast Asia is industrialized and primary and secondary anthropogenic PM formation is dominant on regional air pollution. There are many researchers of characterization of PM component and source identifications in major cities in Northeast Asia. On the other hand, many major cities in Southeast Asian countries suffer severe haze pollution due to rapid urbanization and motorization and biomass burning in forest and agricultural field. The proponent and collaborators previously studied PM_{2.5} characterization in Bangkok. As a result, Organic Carbon Mass (OCM) accounted for 40% of total PM_{2.5}. However, there are many unidentified sources of OCM, which becomes an obstacle for haze pollution mitigation</p>
Objectives	<p>The objectives of this project consist of three parts. Specifically,</p> <ul style="list-style-type: none"> ➤ Elucidate regional and seasonal characteristics of PM_{2.5} component ➤ Identification of major sources of PM_{2.5} in pilot cities in EANET ➤ Transfer research outcomes to policy actions
Activities to achieve Objectives	<ul style="list-style-type: none"> ➤ Observation and chemical analysis of PM_{2.5} components in Thailand, Japan, Vietnam and other major East Asian cities ➤ Quantitative evaluation of PM_{2.5} sources by using PM chemical composition data and receptor models. Analysis of PM pollution structure in East Asian cities by integrating the results of this source analysis with other source apportionment results in East Asia. ➤ Organizing a workshop for PM_{2.5} pollution mitigation to conclude recommendations on feasible reduction of primary and secondary particulate matter in pilot cities.
Links and relevance to existing policy process of the target areas and regional activities	<p>National or local governments in Asian region have adopted a range of air quality standards, most of which are based on the prevailing international guidelines, such as Air Quality Guidelines (AQG) of WHO and National Ambient Air Quality Standards (NAAQS) of United States Environmental Protection Agency (USEPA), at the time of development. It is desirable that national or local governments should develop standards after considering prevailing exposure levels, meteorological and topographical conditions, socio-economic levels, natural background concentration, and population susceptibility in their</p>

	<p>communities. Some countries in East Asia such as Cambodia and Myanmar still has not established air quality standards of PM₁₀ or PM_{2.5}. Japan has an air quality standard of Suspended Particulate Matter (SPM) and PM_{2.5}. China has air quality standards for several levels classified by industrial, residential and natural conservation area.</p> <p>Compared with AQG of WHO and NAAQS of USEPA, all current PM₁₀ standards in Asia are equivalence or lower than the NAAQS (150 µg/m³ for 24-hour value), whereas those are higher than the AQG (50 µg/m³ for 24-hour value and 25 µg/m³ for annual mean). Establishment of PM_{2.5} standard in Asian countries are slowly moving towards compared to PM₁₀. There are only 12 countries which establish PM_{2.5} standard. Many countries set PM_{2.5} standards equivalent or more than NAAQS (35 µg/m³ for 24-hour value and 12 µg/m³ for annual mean primary standard) and AQG (20 µg/m³ for 24-hour value and 10 µg/m³ for annual mean). The main reason of this situation is lack of epidemiological data on PM_{2.5} and insufficient nationwide monitoring data. It is important to set sufficient number of monitoring stations for assessing compliance to the air quality standards and effectiveness of air quality policies.</p> <p>Since 2018, Japan-Thailand Clean Air Partnership (JTCAP) has been established based on the policy dialogue between the Ministry of the Environment of Japan (MOEJ) and the Ministry of Natural Resources and Environment of the Kingdom of Thailand (MONRE) as the joint project of countermeasure for severe air pollution caused by PM_{2.5} and other air pollutants in Thailand. JTCAP is implementing the following activities to mitigate the effects of air pollution caused by PM_{2.5} and other pollutants.</p> <ol style="list-style-type: none"> (1) Identification of major source sectors and areas of PM_{2.5} by chemical transport model (2) Long-term observations and identification of major PM_{2.5} sources using receptor models (3) Formulate policies and appropriate measures by building relationships with stakeholders
Expected Outputs	<p>Atmospheric observation in pilot cities in EANET will provide seasonal and regional characteristics of PM_{2.5} component variations. There is lack of data for PM_{2.5} component seasonal variations especially in Southeast Asian countries. The outputs in this study will clarify PM_{2.5} composition in specific season, which is important for source analysis in EANET region.</p> <p>Receptor model analysis will show important source factors of biomass open burning, diesel vehicles, secondary inorganic particulate and industry. Source identification by Positive Matrix Factorization (PMF) could be done by combination of marker components.</p> <p>Clarification of major PM_{2.5} source in major cities in EANET will lead to recommendations on feasible reduction policy of PM_{2.5}.</p>
Expected Outcome	<p>The most distinctive outcome of this project is to share the obtained scientific knowledge among policy makers, researchers, and people from industries and general public. A regional workshop is planned in the 2nd year (2024). Through the discussions at the workshop, the stakeholders are expected to recognize the benefit of new regulation and measures for PM_{2.5} and eventually accept them.</p> <p>As a consequence of the proposed research, the following output regarding policy measure will be expected.</p> <ol style="list-style-type: none"> (1) Finalizing the target of PM compositions for setting up reduction strategy and measures (2) Setting up proposed numerical targets of PM compositions for setting up reduction strategy and measures
Risks and Countermeasures	<ul style="list-style-type: none"> • Local surveys of PM_{2.5} monitoring may be difficult due to restrictions imposed by COVID-19. In such a case, we will contact partner organizations and discuss the possibility of shipping samples to Japan by international mail.
Plan to deliver outcomes to beneficiaries	<ul style="list-style-type: none"> • The results of PM_{2.5} characterization and source analysis will be report at relevant Task Force and SAC. • Disseminate information through conference presentations and submissions to international journals such as EANET Research Portal.

Comments from PC to be considered in the implementation	
Responses from the Project Lead to above	
Comments from SEC, NC, PCs	

III. IMPLEMENTATION PLAN

Activities and Milestones

Name of Activities	Brief Summary of Each Activity with milestones and name of responsible IA	Implementation Period
Selection of PM2.5 samples in pilot cities	The NC will contact to the Partner Organizations to discuss target period and cities.	JAN-FEB 2023
Analysis of PM2.5 samples and data compilation	The NC will conduct chemical analysis of PM2.5 and the data are compiled.	MAR-SEP 2023
Source apportionment of PM2.5 in pilot cities	By using PM2.5 chemical component dataset and a receptor model, PM2.5 source contribution will be evaluated.	AUG-SEP 2023
Report on the progress of PM2.5 characterization and source analysis	The interim results of PM2.5 characterization and source analysis will be report at relevant Task Force (e.g. Task Force on Monitoring for Dry Deposition) and SAC.	SEP-OCT 2023
Comparing the PM2.5 source analysis results with other source apportionment results in East Asia	The results of PM2.5 characterization and source analysis will be share with the Partner Organizations to compare with the other source apportionment results in East Asia.,	NOV-DEC 2023
Preparing the activity report	The activity report will be prepared and submitted to the Secretariat	DEC 2023

IV. BUDGET PLAN

In USD

Name of Activities	Required Resources (financial and in-kind)	Secured Sources for Required Resources	In-balance
Collecting of PM2.5 samples in pilot cities.	4,000 (8,000 for 2 years) (Expected in-kind from POs)	EANET Project Fund and Co-finance from MOEJ	
Chemical analysis of PM2.5 samples and data compilation and evaluation.	7,000 (14,000 for 2 years)	EANET Project Fund and Co-finance from MOEJ	
Comparing the PM2.5 source analysis results with those evaluate by other source apportionment results in East Asia	3,000 (1 st year only)	EANET Project Fund and Co-finance from MOEJ	
Organizing a regional workshop for PM2.5 pollution mitigation	3,000 (2 nd year only) (7,000 by in-kind from POs)	EANET Project Fund and Co-finance from MOEJ	
Total	10,000 (20,000 for 2 years)	EANET Project Fund and Co-finance from MOEJ	

Note: For multiple-year projects, specify the total amount for entire projects and subtotal for each year.

I. General Information

Title of Project	Proposal Number: 2023-05 The collaboration of Technical and Training (TNT) and capacity building program for personnel of the participating countries on monitoring			
Duration of Project	January/2023 – December/2023			
Project Lead (PL)	Network Center for EANET, Asia Center for Air Pollution Research The National Institute of Environmental Research (NIER), Republic of Korea			
Partner organizations (POs)	The Ministry of Environment, Republic of Korea (as sponsored agency)			
Implementation Agencies (IAs)	Network Center for EANET, Asia Center for Air Pollution Research The National Institute of Environmental Research (NIER), Republic of Korea			
Beneficiaries of PCs	Researchers of the Institute related to EANET such as the National Center of Participating countries of EANET			
Total Required Resources and Requested amount of Project Fund	The total amount of required resources (USD):114,700 The requested amount for EANET Project Fund (USD): 37,000			
Resources other than EPF from Co-financers	Organization	Financial contribution (USD)	In-kind contribution (with estimated equivalent USD, if possible)	Status (Secured/under consultation etc.)
	EANET Secretariat	37,000		Secured
	NIER, Republic of Korea	77,700		Secured
	Total	114,700		
Relevant Types of Activities	<ul style="list-style-type: none"> • Capacity buildings on sample analysis and monitoring data analysis • Related information sharing and exchange on monitoring activities 			
Relevant Scope of EANET	<ul style="list-style-type: none"> • Capacity building on monitoring of acid deposition including related chemical substances with quality assurance and quality control (QA/QC) • Capacity building on promotion of data dissemination and utilization • Enhancement of cooperation and collaboration among EANET Participating Countries 			
Representative of the Project Lead /Contact Address	Ken Yamashita, Head, Planning and Training Department, the NC for EANET, kyamashita@acap.asia Kwonho Jeon, Senior Researcher, Climate and Air quality Research Department, NIER, jeon0119@korea.kr			
Project Processing	Submission Date to the EANET Secretariat: 24 June 2022			
	1) Date of Register in the Project Cycle			

Information	2) Date of Latest Project Plan	
	3) Date of Approval	
	4) Date of Completion Report Submitted	

II. Description of the Project

Keywords of the project Summary of the project	<ul style="list-style-type: none"> • Capacity building, Monitoring, Data analysis, QA/QC • Training activity for the capacity building <ol style="list-style-type: none"> 1) In-person training <p>Lab study for measurement of pH, EC, ions, making Filter Pack (FP) filters, extracting FP samples, filtration of FP and rain samples, Ion Chromatograph (IC) analysis and checking results of IC, practicing maintenance of PM2.5 monitor and calibration of ozone monitor, site visit etc.</p> 2) Online training of lecture <p>Atmospheric deposition, automatic monitor maintenance (PM2.5, O3 monitor etc.), IC lecture (principle, troubleshooting etc.), data analysis, Soil and vegetation/Inland aquatic environment</p>
Background and Rationale	<p>This capacity building activity has been carried out since 1999 every year because of its importance especially for developing countries of EANET. The individual training could meet for various needs of countries from basic method to country specific issue. In this Project activity, EANET collaborates with the Technical and Training Program (TNT Program) by NIER.</p> <p>The researchers of the labs of each participating county need to receive the training to carry out the monitoring and sample analysis activity. Lectures for methodology and data analysis are also needed.</p>
Objectives	To obtain the latest information and skill for monitoring and sample analysis as well as basic knowledge.
Activities to achieve Objectives	<ul style="list-style-type: none"> • Consider and develop the appropriate training materials, technical documents for monitoring wet deposition, dry deposition, soil and vegetation, and inland aquatic environment from opportunities of training, monitoring, and research activities. • Assist national training activities by providing technical materials and experts when the activities are carried out. • A capacity building for several persons, including training and lecture for monitoring, will be held in the Republic of Korea and Japan for three weeks for two sessions in 2023. • A series of lecture on monitoring activity for trainees. • Use the training programs and technical assistance provided by donor agencies to support training on acid deposition and related monitoring targeting the participating countries, if applicable.
Links and relevance to existing policy process of the target areas and regional activities	<ul style="list-style-type: none"> • To support the monitoring of air pollution by trained researchers • To obtain the reliable monitoring data of air pollution • To support PCs to solve the troubles of monitoring activity by themselves
Expected Outputs	Trained persons for monitoring and sample analysis
Expected Outcome	Smooth implementation and improvement of monitoring activity and sample analysis in terms of continuous monitoring and data acquisition with good QA/QC

Risks and Countermeasures	If COVID-19 is outbreak again, online activity would be only implemented.
Plan to deliver outcomes to beneficiaries	The obtained knowledge, skill and technic can be shared among the organization that the trainee belongs to.
Comments from PC to be considered in the implementation	
Responses from the Project Lead to above	
Comments from SEC, NC, PCs	

III. IMPLEMENTATION PLAN

In table format, please present a brief, one- to two-page work plan matrix, with a timeline including target dates for activities for the project's life, reflecting the overall program approach and objectives. Applicants may use smaller but legible font sizes in tables.

Activities and Milestones

Name of Activities	Brief Summary of Each Activity with milestones and name of responsible IA	Implementation Period
Development of program	The training program is developed in collaboration with the TNT program of NIER	2 month/session * 2 sessions
Invitation to PCs	Invitation letter is issued to PCs and screening and select applicants	1 month/session * 2 sessions
Implementation of training	Implementation of lectures, lab study, site visit, and etc.	3 weeks/session * 2 sessions
Review of training	Review of output of the training	1 month/session * 2 sessions

IV. BUDGET PLAN

In USD

Name of Activities	Required Resources (financial and in-kind)	Secured Sources for Required Resources	In-balance
1) Travel costs			
Travel costs from the participant's country to Korea	7,000	Co-finance from NIER, Republic of Korea	
Expense occurring in Korea	15,200	Co-finance from NIER, Republic	

(Lodging and meals, Visa issuance fee, Insurance fee, Business trip expenses, and others)		of Korea	
Consumables at lab in Korea	9,000	Co-finance from NIER, Republic of Korea	
Travel costs from Korea to Japan	2,500	Co-finance from NIER, Republic of Korea	
Expense occurring in Japan (Lodging and meals, Visa issuance fee, Insurance fee, Business trip expenses, and others)	8,000	EANET Project Fund from EANET Secretariat	
Consumables at lab in Japan	5,000	EANET Project Fund from EANET Secretariat	
Travel costs from Korea to participant's country	7,000	Co-finance from NIER, Republic of Korea	
2) Personnel costs			
Personnel cost of NIER	37,000	Co-finance from NIER, Republic of Korea	
Personnel cost of NC	24,000	EANET Project Fund from EANET Secretariat	
Total	114,700	EANET Project Fund from EANET Secretariat and Co-finance from NIER, Republic of Korea	

Note: For multiple-year projects, specify the total amount for entire projects and subtotal for each year.

I. General Information

Title of Project	Proposal Number: 2023-06 The webinar workshop for capacity building on emission inventory for combustion sources			
Duration of Project	January/2023 – December/2023			
Project Lead (PL)	Network Center for EANET, Asia Center for Air Pollution Research			
Partner organizations (POs)	<ul style="list-style-type: none"> Japan Automobile Research Institute (JARI) (Japan) National Institute for Environmental Studies (NIES) (Japan) 			
Implementation Agencies (IAs)	<ul style="list-style-type: none"> Network Center for EANET, Asia Center for Air Pollution Research (NC/ACAP) (Japan) 			
Beneficiaries of PCs	<ul style="list-style-type: none"> Technical officers in charge of emission inventory Policy decision makers interested in emission inventory 			
Total Required Resources and Requested amount of Project Fund	<ul style="list-style-type: none"> The total amount of required resources (USD): 12,000 The requested amount for EANET Project Fund (USD): 6,000 			
Resources other than EPF from Co-financers	Organization	Financial contribution (USD)	In-kind contribution (with estimated equivalent USD, if possible)	Status (Secured/under consultation etc.)
	JARI	0	Providing advices to the webinar workshop, preparation of lecture materials, and participation in the webinar workshop as a lecturer and adviser.	Under consultation
	NIES	0	Ditto	Under consultation
	MOEJ	6,000		Pledged
	Total	6,000		
Relevant Types of Activities	<ul style="list-style-type: none"> Objective 3 of Project Activities: Promotion of capacity building Activity 6 of Core Activities: Conduct an annual assessment of the state of acid deposition using trend analysis, numerical models Activity 12 of Core Activities: Consideration on the future development of the EANET Objective 2 of Project Activities: Promotion of data dissemination and utilization 			
Relevant Scope of EANET	<ul style="list-style-type: none"> ITEM 3 of ANNEX to the Instrument: Methodological research and capacity building of the research activities 			
Representative of the Project Lead /Contact Address	<ul style="list-style-type: none"> Dr. Junichi Kurokawa, Principal Senior Researcher, NC/ACAP / 1182 Sowa, Nishi-ku, Niigata-shi 950-2144, JAPAN, kurokawa@acap.asia 			
Project Processing Information	Submission Date to the EANET Secretariat: 24 June 2022			
	1) Date of Register in the Project Cycle			
	2) Date of Latest Project Plan			
	3) Date of Approval			

	4) Date of Completion Report Submitted	
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II. Description of the Project

Keywords of the project	Capacity building, Emission inventory, Primary atmospheric environment-related substances, Combustion sources
Summary of the Project	<ul style="list-style-type: none"> • This project is aiming at providing a capacity building opportunity to learn emission inventory focusing on combustion sources by holding a webinar workshop. • Considerable target sources are power and industrial plants, road transport and residential sources. • At the webinar workshop <ul style="list-style-type: none"> ➢ Lecture presentations for methodologies to estimate emissions from major stationary and mobile combustion sources are provided from experts of emission inventory. ➢ Participants can have time to ask questions to the lectures. ➢ One representative participant of each PC is requested to make a presentation about status and control measures of emissions from major combustion sources of own country. • With discussion followed by the presentations, related information is shared among PCs. • Expected participants are technical officers and policy decision makers who are in charge of or interested in developing a national emission inventory.
Background and Rationale	<ul style="list-style-type: none"> • Emission inventory is a powerful and essential tool for <ul style="list-style-type: none"> ➢ understanding current status of emissions of air pollutants ➢ considering effectiveness of mitigation measures • Development of emission inventory is not easy task. <ul style="list-style-type: none"> ➢ Methodologies to estimate emissions are complicated. ➢ Variety of necessary data and information must be considered. ➢ Structures of emissions differ country to county. • It is a necessary role for EANET to provide opportunities of capacity development for developing a national emission inventory.
Objectives	<ul style="list-style-type: none"> • Understanding roles of emission inventory in air quality management • Learning basic methodologies to estimate emissions from major stationary and mobile combustion sources • Information sharing of status and control measures of emissions from major combustion sources in PCs that is expected to provide references for considering and updating air pollution policies related to participants
Activities to achieve Objectives	<ul style="list-style-type: none"> • Holding the emission inventory webinar workshop focusing on combustion sources • Lecture presentations from experts of emission inventories including Q & A at the webinar for major combustion sources such as power and industrial plants, road transport, and residential sources • Presentations from one representative participant from each PC at the workshop and following discussions on status and control measures of emissions from major combustion sources of own country
Links and relevance to existing policy process of the target areas and regional activities	<ul style="list-style-type: none"> • Information from a national emission inventory is helpful for <ul style="list-style-type: none"> ➢ evaluating current status of major emission sources ➢ considering policies for mitigation of atmospheric environmental problems and effective control measures
Expected Outputs	<ul style="list-style-type: none"> • Persons who understand roles of emission inventory and basic knowledges necessary to estimate emissions from combustion sources • Presentation materials for methodologies to develop emission inventories of major combustion sources provided by lectures of the webinar • Presentation materials for summarizing status and control measures of emissions from combustion sources in PCs provided by presenters at the workshop.

Expected Outcome	<ul style="list-style-type: none"> Importance of a national emission inventory will be recognized in each country and discussions on developing an official national emission inventory will be promoted. Information exchanges for development of national emission inventories will be promoted among PCs and establishment of related community will be considered. Consideration and updates of policies for emission control measures will be promoted based on outputs and information from this webinar workshop and a developed national emission inventory.
Risks and Countermeasures	<ul style="list-style-type: none"> Experts of emission inventories in the EANET region are limited. Therefore, it is planned to offer experts of global and other regional emission inventories to contribute on the webinar workshop.
Plan to deliver outcomes to beneficiaries	<ul style="list-style-type: none"> Lecture materials and reports of the webinar workshop including results of discussions with experts will be uploaded to the EANET website for reference to technical officers and policy decision makers of EANET PCs. Results of the webinar workshop will be introduced at the EANET meetings such as for SAC and Task Force.
Comments from PC to be considered in the implementation	
Responses from the Project Lead to above	
Comments from SEC, NC, PCs	

III. IMPLEMENTATION PLAN

Activities and Milestones

Name of Activities	Brief Summary of Each Activity with milestones and name of responsible IA	Implementation Period
Development of a program of the webinar workshop (WWS)	Contents of the WWS are considered by NC/ACAP with advices from POs. The program of the WWS is documented.	JAN-MAY 2023
Decision and invitation of lectures of the WWS	Based on the program, appropriate lectures are listed up by NC/ACAP taking into account the advices from POs. NC/ACAP invites selected ones to make lecture presentations at the WWS.	JAN-AUG 2023
Announcement of the WWS	The announcement of the WWS is sent to National Focal Points (NFPs), National Centers, SAC members, National QA/QC Managers of the EANET from NC/ACAP. The WWS is also announced from the EANET website.	AUG-SEP 2023
Decision and invitation of presenters from participants nominated by NFPs.	NC/ACAP asks NFPs to nominate one presenter from each PC to make a presentation about status and control measures of emissions from major combustion sources of own country. NC/ACAP supports the presenters for their preparation.	SEP-OCT 2023
Preparation and holding of the WWS.	NC/ACAP prepares the WWS including creating necessary documents to be sent to participants in advance as well as technical settings of a web meeting system. The WWS is moderated by NC/ACAP with support from POs. POs make lecture presentations, answer questions from participants, and providing comments to presentations from PCs.	OCT-NOV 2023
Creation of a report of the WWS	NC/ACAP creates a report of the WWS. POs review the report and provide comments for improvement. NC/ACAP revise the report based on the comments.	NOV 2023
Upload the lecture materials and report of WWS to the EANET website	NC/ACAP uploads the lecture materials including from POs as well as the report of the WWS to the EANET website. NC/ACAP inform the website to NFPs, National Centers, SAC members, National QA/QC Managers of the EANET and ask them to share the website information to related institutes and persons.	DEC 2023

IV. BUDGET PLAN

(In USD)

Name of Activities	Required Resources (financial and in-kind)	Secured Sources for Required Resources	In-balance
Development of a program of the WWS	1,800 + In-kind from POs expected (Providing advices to the program of the WWS)	EANET Project Fund and Co-finance from MOEJ	
Decision and invitation of lectures of the WWS	1,200 +In-kind from POs expected (Providing advices about appropriate lectures for the WWS)	EANET Project Fund and Co-finance from MOEJ	
Creation of web pages and related documents such as invitation letter and registration form for announcement of the WWS	900	EANET Project Fund and Co-finance from MOEJ	
Decision and invitation of presenters from participants nominated by NFPs and discussions on contents of presentations.	1,200	EANET Project Fund and Co-finance from MOEJ	
Preparation and holding of the WWS.	4,800 +In-kind from POs expected (Providing lecture presentations and answering questions from participants. Providing comments to presentations from participants)	EANET Project Fund and Co-finance from MOEJ	
Creation of a report of the WWS	1,500 +In-kind from POs expected (Providing advices for improvement of the report)	EANET Project Fund and Co-finance from MOEJ	
Creation of a summary material of the WWS including lecture presentations and the WWS report to be uploaded to the EANET website	600 +In-kind from POs expected (Providing lecture materials to be uploaded to the EANET website)	EANET Project Fund and Co-finance from MOEJ	
Total	12,000		

Note: For multiple-year projects, specify the total amount for entire projects and subtotal for each year

I. General Information

Title of Project	Proposal Number: 2023-07 Seminar for Acid Deposition/Air Pollution effects on human health and ecosystem			
Duration of Project	January – October, 2023			
Project Lead (PL)	[Name of an entity taking the lead in project cycle] Network Center (NC) for EANET, Asia Center for Air Pollution Research (ACAP)			
Partner organizations (POs)	[List all relevant Partner organizations central to the project] <ul style="list-style-type: none"> • WHO • ICP Forests and other relevant Task Forces under Working Group on Effects (WGE), CLRTAP 			
Implementation Agencies (IAs)	[List all relevant Implementation Agencies] <ul style="list-style-type: none"> • NC for EANET, ACAP 			
Beneficiaries of PCs	<ul style="list-style-type: none"> • Researchers from the EANET Participating countries • Technical officers from the EANET Participating countries 			
Total Required Resources and Requested amount of Project Fund	<ul style="list-style-type: none"> • The total amount of required resources (USD): 19,000 • The requested amount for EANET Project Fund (USD) :9,500 			
Resources other than EPF from Co-financers	Organization	Financial contribution (USD)	In-kind contribution (with estimated equivalent USD, if possible)	Status (Secured/under consultation etc.)
	MOEJ	9,500		Pledged
	Total	9,500		Pledged
Relevant Types of Activities	<ul style="list-style-type: none"> • Capacity buildings on monitoring • Related information sharing and exchange 			
Relevant Scope of EANET	<ul style="list-style-type: none"> • Capacity building on monitoring of acid deposition including related chemical substances with quality assurance and quality control (QA/QC) • Capacity building on promotion of data dissemination and utilization • Enhancement of cooperation and collaboration among EANET Participating Countries 			

Representative of the Project Lead /Contact Address	<ul style="list-style-type: none"> • Dr. Ken Yamashita, NC for EANET, Head, Planning and Training Department, ACAP, kyamashita@acap.asia Sowa 1182, Nishi-ku, Niigata City, 950-2144, Japan • Dr. Hiroyuki Sase, NC for EANET, Head of Ecological Impact Research Department, ACAP, sase@acap.asia 	
Project Processing Information	Submission Date to the EANET Secretariat: 24 June 2022	
	1) Date of Register in the Project Cycle	
	2) Date of Latest Project Plan	
	3) Date of Approval	
	4) Date of Completion Report Submitted	

II. Description of the Project

Keywords of the project	<ul style="list-style-type: none"> • Capacity building • Human Health impact • Ecological impact • Training activity for the capacity building for scientific approach
Summary of the project	<ul style="list-style-type: none"> • Scientific knowledges on the relationship between the atmospheric environment and human health as well as ecosystems should be shared with relevant scientists and policy-decision makers for effective science-based policy measures. • In particular, practical analytical tools and approaches to assess regional risks will be informative for future policy making. • A series of the workshops/seminars to introduce these scientific knowledges will be held for coming several years. • Basically, a thematic workshop/seminar focusing on one or a few specific topic(s) will be held once a year. • Common understanding on these issues is expected to contribute to promotion of regional impact assessments and their output-derived policy measures.
Background and Rationale	<ul style="list-style-type: none"> • The relationships between the atmospheric environment and human health as well as those between the atmospheric environment and ecosystems should be investigated as scientific works for the region. • Simultaneously, these scientific knowledges should be shared with the general public, relevant scientists and policy-decision makers to consider effective science-based policy measures. • In particular, tools to analyze the adverse effects, regional policy practices and institutional changes will help us to achieve sound atmospheric environment.
Objectives	<ul style="list-style-type: none"> • To discuss the various effects on ecosystem and human health by acid deposition/air pollution • To obtain scientific knowledges on the relationships between the atmospheric environment and human health including epidemiological methodology and between the atmospheric environment and ecosystems • To learn science-based policy experiences on reduction of atmospheric pollutants in other regions, such as Europe

<ul style="list-style-type: none"> • Activities to achieve Objectives 	<ul style="list-style-type: none"> • Following the workshop in 2022 a series of online workshops/seminars will be implemented. • Main topics of the future workshops/seminars will be stepped up year by year: • 2022: Overview of the relationship between atmospheric environment and human health and ecosystems • 2023: Assessment methodologies, such as epidemiological assessments for human health and dose-effect relationship on plant health, etc. • 2024/2025: TBD
Links and relevance to existing policy process of the target areas and regional activities	<ul style="list-style-type: none"> • Air quality standards in the EANET countries are established taking account of human health. Therefore, the atmospheric data should be evaluated with considering the endpoint to validate effectiveness of the existing policies. • In the case of ecological impacts, the secondary standards have already been established in Europe and the US, while the similar standards are still limited in East Asia. The regional assessments on ecosystem impacts will contribute to validate effectiveness of policies to date and common understanding for future policy directions in the regions. • It is effective to conduct the impact assessments on the regional scale to share problems and solutions in collaboration with neighboring countries.
Expected Outputs	<ul style="list-style-type: none"> • Participants can learn analytical tools of adverse effects and how to reduce their risks through the seminar based on scientific information, which contribute to their capacity building for future related work. • Information sharing among many stake holders.
Expected Outcome	<ul style="list-style-type: none"> • Policymakers would be more aware of the scientific knowledge on adverse effects caused by deteriorated atmospheric environment. Though there is still significant scope before policymakers, the activity can be based on the integrated approach and integrated planning. • Recommendation of SAC to link to the scientific knowledge.
Risks and Countermeasures	<ul style="list-style-type: none"> • Because this seminar will be held online, there would be less risk by COVID-19.
Plan to deliver outcomes to beneficiaries	<ul style="list-style-type: none"> • Presentation at EANET meetings/workshops, including a thematic workshop planned in another project activity.
Comments from PC to be considered in the implementation	
Responses from the Project Lead to above	
Comments from SEC, NC, PCs	<p>*This column will be filled after submission of the proposal to SEC. SEC & NC provide comments on whether the project meets the project criteria or not. Other than above, the interests of PCs will also be added.</p>

III. IMPLEMENTATION PLAN

In table format, please present a brief, one- to two-page work plan matrix, with a timeline including target dates for activities for the project's life, reflecting the overall program approach and objectives. Applicants may use smaller but legible font sizes in tables.

Activities and Milestones

Name of Activities	Brief Summary of Each Activity with milestones and name of responsible IA	Implementation Period
Plan of seminar	Considering the needs and results of previous activities, making plan of the seminar	January-June
Invitation	Sending invitation to PCs	July
Seminar	Holding seminar online	September
Analysis on output	Analysis and dissemination on outputs from the seminar	October

IV. BUDGET PLAN

In USD

Name of Activities	Required Resources (financial and in-kind)	Secured Sources for Required Resources	In-balance
Preparation for seminar (discussion with internal and external experts, draft of concept note and scenario, issue of invitations, advertisement using website and mail Chimp, checking and uploading the presentation files)	7,500	EANET Project Fund and Co-finance from MOEJ	
Holding seminar (set-up the Zoom webinar system, rehearsal, connection test and discussion on program arrangement with participants/moderator)	6,000	EANET Project Fund and Co-finance from MOEJ	
Follow-up of seminar (making the complete report, compiling and uploading the presentation files and summary report on EANET website)	1,500	EANET Project Fund and Co-finance from MOEJ	
Invitation for external experts to attend seminar in person	4,000	EANET Project Fund and Co-finance from MOEJ	
Total	19,000		

Note: For multiple-year projects, specify the total amount for entire projects and subtotal for each year.

I. General Information

Title of Project	Proposal Number: 2023-08 Research Fellowship Program			
Duration of Project	June/2023 – December/2023			
Project Lead (PL)	Network Center for EANET, Asia Center for Air Pollution Research			
Partner organizations (POs)				
Implementation Agencies (IAs)	Network Center for EANET, Asia Center for Air Pollution Research			
Beneficiaries of PCs	Researchers related to the Participating countries of EANET			
Total Required Resources and Requested amount of Project Fund	The total amount of required resources (USD):30,000 The requested amount for EANET Project Fund (USD): 30,000			
Resources other than EPF from Co-financers	Organization	Financial contribution (USD)	In-kind contribution (with estimated equivalent USD, if possible)	Status (Secured/under consultation etc.)
Relevant Types of Activities	<ul style="list-style-type: none"> Capacity buildings on research activity Related information sharing and exchange on monitoring activities 			
Relevant Scope of EANET	<ul style="list-style-type: none"> Capacity building on monitoring of acid deposition including related chemical substances with quality assurance and quality control (QA/QC) Capacity building on promotion of data dissemination and utilization Enhancement of cooperation and collaboration among EANET Participating Countries 			
Representative of the Project Lead /Contact Address	Ken Yamashita, Head, Planning and Training Department, the NC for EANET, kyamashita@acap.asia			

Project Processing Information	Submission Date to the EANET Secretariat: 24 June 2022	
	1) Date of Register in the Project Cycle	
	2) Date of Latest Project Plan	
	3) Date of Approval	
	4) Date of Completion Report Submitted	

II. Description of the Project

Keywords of the project	<ul style="list-style-type: none"> Research study, Capacity buildings Research activity of Research Fellowship Program
Summary of the project	About four researchers are invited among applicants to come to ACAP and implement research study for 8 weeks under supervision of senior researchers of ACAP as the supervisor for the research fellow. The theme of research study is flexible if it is relevant to EANET.
Background and Rationale	<ul style="list-style-type: none"> This activity has been carried out annually since 2005 for one/two researchers in EANET participating countries. The researchers, especially young researchers, have less opportunity to carry out the research activity related to EANET. The opportunity of research activity for researchers should be enhanced.
Objectives	Fellowship research program will strengthen research capacity of young researchers in the EANET participating countries, especially in the developing countries, and also promote scientific research in those countries.
Activities to achieve Objectives	<ul style="list-style-type: none"> The selection of four fellows will be conducted early 2023 and the fellowship program will be conducted in the 2nd half of 2023. This program is planned with the duration of 8 weeks, but the duration might be extended through discussion with selected Research Fellows. Selected Research Fellows will carry out their research activities supervised by researchers of NC at ACAP.
Links and relevance to existing policy process of the target areas and regional activities	<ul style="list-style-type: none"> Science is essentially important for science based environmental policy The interlinkage between research activities and policy making is crucial for approach for air pollution problems
Expected Outputs	The improvement of ability of researchers
Expected Outcome	Promotion of scientific research in participating countries of EANET
Risks and Countermeasures	If COVID-19 is outbreak again, online activity would be only implemented.

Plan to deliver outcomes to beneficiaries	The research fellow will make the paper of the outputs from the research activity and publish it on the journal and EANET research portal of the website of EANET.
Comments from PC to be considered in the implementation	
Responses from the Project Lead to above	
Comments from SEC, NC, PCs	

III. IMPLEMENTATION PLAN

Activities and Milestones

Name of Activities	Brief Summary of Each Activity with milestones and name of responsible IA	Implementation Period
Invitation to PCs	Invitation letter is issued to PCs (NC)	1 month
Selection of applicants	Selection committee selects the research Fellows	1 month
Implementation of research activity	Research study at ACAP	8 weeks
Development of paper and review by experts	Research Fellows develop the paper of the research and external experts review the paper	3 month

IV. BUDGET PLAN

In USD

Name of Activities	Required Resources (financial and in-kind)	Secured Sources for Required Resources	In-balance
Research activity			
Travel cost/person	6,000	EANET Project Fund	
Consumables/person	1,000	EANET Project Fund	
Personnel cost of ACAP/person	3,000	EANET Project Fund	
(Sub-total/person)	(10,000)		
Total	30,000 (3 persons)	EANET Project Fund	

Note: For multiple-year projects, specify the total amount for entire projects and subtotal for each year.

Summary of budgetary issues for the proposed EANET Project Plans in 2023

Table 6-1 Project Budget for each Project Plan in 2023 (US\$)

Project Activity (Name of Project with No.)	Man/ Month	Personnel cost	Direct expenses	Sources	Total	Note
Objective 1: Monitoring of acid deposition including related chemical substances with quality assurance and quality control (QA/QC)						
Project Activity (2023-01): Studies on the effects of atmospheric deposition on ecosystems, from a catchment scale to a regional scale	5	30,000	68,000	Project Fund and Co-finance	101,000	Total includes Project Fund Holder's additional personnel costs: 3,000 US\$ ²
Project Activity (2023-03): Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN)	8.5	51,000	109,000	Project Fund and Co-finance	163,000	Total includes Project Fund Holder's additional personnel costs: 3,000 US\$ ²
Project Activity (2023-04): PM2.5 source apportionment in major cities in EANET for recommendations on feasible reduction policy	1	6,000	4,000	Project Fund and Co-finance	13,000	Total includes Project Fund Holder's additional personnel costs: 3,000 US\$ ²
Objective 3: Promotion of capacity building						
Project Activity (2023-02): The Feasibility for promoting VOCs related Capacity Building in the EANET	4.5	27,000	33,000	Project Fund and Co-finance	63,000	Total includes Project Fund Holder's additional personnel costs: 3,000 US\$ ²
Project Activity (2023-05): The collaboration of Technical and Training (TNT) and capacity building program for personnel of the participating countries on monitoring	10.2	61,000	53,700	Project Fund and Co-finance	117,700	Total includes Project Fund Holder's additional personnel costs: 3,000 US\$ ²

² 3,000 USD = 6,000 USD/Man/Month (PFH's personnel cost) * 0.5 Man/Month (1 Man for 10 days (half month))

Project Activity (Name of Project with No.)	Man/ Month	Personnel cost	Direct expenses	Sources	Total	Note
Project Activity (2023-06): The webinar workshop for capacity building on emission inventory for combustion sources	2.0	12,000	0	Project Fund and Co-finance	15,000	Total includes Project Fund Holder's additional personnel costs: 3,000 US\$ ²
Project Activity (2023-07): Seminars for Acid Deposition/Air Pollution effects on human health and ecosystem	2.5	15,000	4,000	Project Fund and Co-finance	22,000	Total includes Project Fund Holder's additional personnel costs: 3,000 US\$ ²
Project Activity (2023-08): Research Fellowship program	1.5	9,000	21,000	Project Fund	33,000	Total includes Project Fund Holder's additional personnel costs: 3,000 US\$ ²
Grand total	35.2	211,000	292,700		527,700	

Table 6-2 Estimated Revenue for each Project Activity in 2023 (US\$)

Project Activity (Name of Project with No.)	Project Proponent/ Implementation Entity	Available cash balance of the Secretariat	Finance from Project Fund	Co-finance	Total	In-kind contribution from contributors
Objective 1: Monitoring of acid deposition including related chemical substances with quality assurance and quality control (QA/QC)						
Project Activity (2023-01): Studies on the effects of atmospheric deposition on ecosystems, from a catchment scale to a regional scale	PL: NC IA: NC	0	30,000 from Japan	33,000 from Japan	63,000	JSPS (38,000)
Project Activity (2023-03): Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN)	PL: NC IA: NC	0	80,000 from Japan	83,000 from Japan	163,000	MoNRE-VN- IMHEN
Project Activity (2023-04): PM2.5 source apportionment in major cities in EANET for recommendations on feasible reduction policy	PL: NC IA: NC	0	5,000 from Japan	8,000 from Japan	13,000	
Objective 3: Promotion of capacity building						
Project Activity (2023-02): The Feasibility for promoting VOCs related Capacity Building in the EANET	PL: Ministry of the Environment, Japan IA: NC	0	30,000 from Japan	33,000 From Japan	63,000	Mongolia, Philippines
Project Activity (2023-05): The collaboration of Technical and Training (TNT) and capacity building program for personnel of the participating countries on monitoring	PL: NC and NIER, Republic of Korea IA: NC and NIER, Republic of Korea	40,000 (as Finance from Project Fund)		77,700 From NIER, Republic of Korea	117,700	
Project Activity (2023-06): The webinar workshop for capacity building on emission inventory for combustion sources	PL: NC IA: NC	0	6,000 from Japan	9,000 from Japan	15,000	JARI, NIES
Project Activity (2023-07): Seminars for Acid Deposition/Air Pollution effects on human health and ecosystem	PL: NC IA: NC	0	9,500 from Japan	12,500 from Japan	22,000	
Project Activity (2023-08): Research Fellowship program	PL: NC IA: NC	33,000 (as Finance from Project Fund)			33,000	
Grand total		73,000	160,500	256,200	489,700	38,000

Table 6-3 All Estimated Income for Project Activities in 2023 (US\$)

	In-kind	Amount	Contributor	Note
1) Financial Contributions (Remitted)	0	0		
2) Financial Contribution (Committed)	0	339,000	Ministry of the Environment, Japan	※ MOEJ's contribution is made in Japanese Yen ※ The amount in USD is based on the official parity exchange rate by GoJ (2022 \$1=¥108) ※ Adjustments may be made by the end of March 2023, based on the official parity exchange rate released by MOF-GOJ ※ Actual disbursement is subject to the approval of the Diet (usually before next Japanese fiscal year starts)
	0	77,700	NIER, Republic of Korea	
	38,000	0	JSPS	
3) Fund Carried Over from Previous Year	0	0		
4) Transferred From Available cash balance of the Secretariat	0	73,000	Secretariat	
Total Financial Amount	38,000	489,700		
5) In-Kind Contributions (Offered)			MoNRE-VN-IMHEN, Mongolia, Philippines, JARI, NIES	
Total non-financial Amount				
Grand Total	38,000	489,700		