NEASPEC/SOM(22)/1

UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific
EAST AND NORTH-EAST ASIA OFFICE

Distr.: Limited
3 October 2018

English only

UNITED NATIONS

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Twenty-second Senior Officials Meeting (SOM) of NEASPEC

25-26 October 2018

Beijing, China

REVIEW OF PROGRAMME PLANNING AND IMPLEMENTATION

(Item 5 (a) of the provisional agenda)

Transboundary Air Pollution in North-East Asia

Note by the Secretariat

CONTENTS

I. BACKGROUND

1. Building on the foundation of almost two decades of collaboration on transboundary air pollution through technical assistance in 1996 to 2013 under NEASPEC, a project on the "Development of the Technical and Policy Frameworks for Transboundary Air Pollution Assessment and Abatement in North-East Asia" was implemented during 2014-2017 with the goal to assess options for establishing a science-based and policy-oriented cooperation framework to assess and mitigate transboundary air pollution in North-East Asia.

2. The 19th Senior Officials Meeting (SOM-19) in September 2014 and the 20th Senior Officials Meeting (SOM-20) in February 2016, respectively, reviewed the following key activities of the project and considered the possibility of developing a new subregional framework on transboundary air pollution by conducting joint scientific assessments and consultations. SOM-20 also recommended the Secretariat consider the programmes of existing mechanisms, notably Long-range Transboundary Air Pollutants in Northeast Asia (LTP) and Acid Deposition Monitoring Network in East Asia (EANET), to ensure the complementarity of a new sub-regional framework.

i. An Expert Group Meeting on the Project was organized in May 2014 to identify target pollutants and priorities of a potential new framework. The meeting prepared an implementation plan of the project, in particular, modeling of transboundary air pollution.

ii. A Consultation Workshop on Modeling of Source-Receptor Relationship (SRR) of Transboundary Air Pollution was held in March 2015 and developed a detailed modeling plan taking into account the methodology and emission inventory of LTP.

iii. A study on the Modeling of source-receptor relationship of transboundary air pollution was carried out by Scientific Research Institute for Atmospheric Air Protection (SRI Atmosphere) with technical support from experts on LTP, focusing on the installation of modeling programmes and the preparation of an input data set.

iv. Consultations with LTP experts on the preliminary modeling results of SRI Atmosphere were held at the 18th and 19th Expert Meeting of LTP in November 2015 and November 2016, respectively.

v. Preparation of technical papers to identify potential roles of NEASPEC and a new subregional framework on selected areas including emission inventory, monitoring, modeling, integrated assessment, and science-policy linkages.

vi. An Expert Consultation on integrated assessment modeling and a Roundtable on Transboundary Air Pollution in North-East Asia was organized in December 2016 to discuss specific approaches and work on a new framework.

3. As an outcome of the project, the 21st Senior Officials Meeting (SOM-21) in March 2017 considered a proposal, including a draft TOR, of launching a "North-East Asia Clean Air Partnership (NEACAP)" as a voluntary, science-based, and policy-oriented programme under NEASPEC. The Meeting suggested the Secretariat to carry out further consultation with member Governments and relevant mechanisms for the development of NEACAP.

4. A subsequent Consultation Meeting, attended by the nominated representatives from member countries, was organized in conjunction with the 20th Expert Meeting on Long-range Transboundary Air Pollution in Northeast Asia (LTP) in October 2017. The Meeting had general statements from each member country on NEACAP and discussed the proposed NEACAP objectives, target pollutants, core programmes, organizational structure, and the modality of collaboration between NEACAP and relevant mechanisms and programmes.

5. Having recognized the needs for effective subregional cooperation to ensure experience exchange, information sharing, comprehensive assessment and monitoring, and promoting dialogue on potential multilateral measures to abate transboundary air pollution in North-East Asia, the Meeting agreed on the final draft of NEACAP Terms of Reference (TOR) for the consideration of the 22nd Senior Officials Meeting (SOM-22) as contained in Annex I.

II. NORTH-EAST ASIA CLEAN AIR PARTNERSHIP

6. The draft NEACAP TOR consists of (1) introduction, (2) Aims and Objectives, (3) Geographic scope and target pollutants, (4) Core Programmes, (5) Organizational structure, (6) Budget, and (7) Role of member States. With the aim to ensure the protection of the environment and human health from air pollution, the draft TOR proposes the following objectives: promote environmental cooperation, including its science, policy and technical aspects; enhance and further develop information and experience exchange; act as the key voluntary framework in addressing transboundary air pollution issues in North-East Asia; contribute, as appropriate, to the development of relevant national and subregional policies; and promote knowledge on environmental and human health aspects of air pollution.

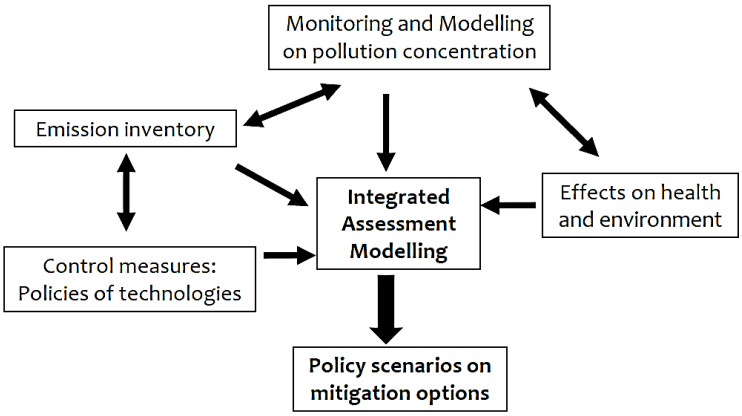
7. In terms of target pollutants, the draft TOR proposes that NEACAP focus, but not limit to, the pollutants of national and subregional concern, namely Particulate Matter (PM2.5 and PM10) and Ozone, and other relevant pollutants, including Sulfur Oxides (SOx),

Nitrogen Oxides (NOx), Black Carbon, Ammonia (NH_3) and Volatile Organic Compounds (VOCs).

8. The proposed Core programmes to be operationalized by the Partnership include (1) exchanging information and data on emissions, the transport and deposition of target pollutants, emissions control technologies and national policies, and modeling and emission inventory; (2) coordinating with relevant mechanisms and synthesizing their results on subregional emissions inventory, monitoring, transport and deposition modelling of air pollution, and integrated assessment modeling; and (3) proposing potential technical and policy measures through regular consultation meetings, technical and policy scenarios, and information exchange on emerging technologies and good practices. Subject to the availability of resources, core activities to be considered under the Partnership include: regular and ad-hoc meetings agreed by the member States; annual or biennial subregional review reports; seminars, workshops and trainings; and research projects.

9. In this regard, a core work of NEACAP for science-based, policy-oriented cooperation will be the development of technical and policy measures, which involves integrated assessment modeling (IAM) supported by the exchange of data and information on emissions, technologies and policies as well as existing subregional collaboration on transport and deposition modelling of air pollution. IAM, as a cornerstone of interactive processes between science and policy, is proposed to develop policy scenarios and optimized technical solutions for cost-effective emission reductions through integrating the assessment of emission trends, health and environmental impacts, mitigation options, and costs and benefits of policy and technical measures.

Figure 1. Overview of IAM



10. With regard to the coordination with relevant mechanisms and synthesizing their results, key partners would be follows.

Table 1. Potential (sub)regional Partners

Activity Areas	Relevant mechanisms	Leading institutions
Emission Inventory	MIX Asian Emission Inventory	• Key Laboratory for Earth System Modeling, Tsinghua University (China, Secretariat) • Asia Center for Air Pollution Research (APCAP-Japan) • Department of Advanced Technology Fusion, Konkuk University (ROK)
Monitoring	Acid Deposition Monitoring in East Asia (EANET)	• UN Environment's Asia and the Pacific Office (Secretariat) • Asia Center for Air Pollution Research (Network Center)
Modeling (Source-Receptor Relationship)	Long-range Transboundary Air Pollution in Northeast Asia (LTP)	• National Institute of Environmental Research (ROK, Secretariat) • Asia Center for Air Pollution Research • Chinese Research Academy of Environmental Sciences (CRAES)
Integrated Assessment Modeling	*No formal mechanism*	• State Key Joint Laboratory of Environment Simulation and Pollution Control, Tsinghua University (China) • Department of Advanced Technology Fusion, Konkuk University (ROK)
Policy Dialogue	Tripartite Policy Dialogue on Air Pollution	• Environmental ministries of China, Japan and the ROK
Multistakeholder Dialogue	Asia-Pacific Clean Air Partnership	• UN Environment's Asia and the Pacific Office (Secretariat)
	Northeast Asia Forum on Air Quality Improvement	• ICELI East Asia (Secretariat)

11. To steer the activities under NEACAP, the draft TOR proposes to set up the Science and Policy Committee participated by two experts from each member State, and to promote science-policy linkages through guiding technical assessments and dialogues. The Committee may also recommend activity direction and organizational structure to the SOM. In addition, Technical Centers, as designated research institutions in member States are proposed to support the technical work of the Partnership, with secretarial support from NEASPEC Secretariat on overall programme coordination and administration.

12. In terms of budget, the draft TOR suggests NEACAP be supported by the Core Fund of NEASPEC with other funding sources, including voluntary contributions from the member States and those from multilateral financial mechanisms.

13. The draft TOR also emphasizes the voluntary and needs-driven nature of NEACAP and invites active participation from member States in the development and effective functioning of NEACAP.

14. To build on the momentum among member States on addressing the air pollution challenge and the associated human health concern, the Secretariat proposes NEASPEC activities during 2018-2019 to focus on establishing the institutional arrangement for operationalizing NEACAP and preparing an Integrated Assessment Modeling in consultation with the nominated members of the Science and Policy Committee and Technical Centers.

III. ISSUES FOR CONSIDERATION

15. With growing public concern about air pollution as well as increasing access to new policy and technology measures, member States have considerably strengthened national policies for reducing air pollutants including PM. Such policies include China's "Three-Year Action Plan for Winning the Blue Sky Battle" for 2018-2020, Mongolia's National Programme for Reducing Air and Environmental Pollution (NPRAEP) 2017-2025, and ROK's "Comprehensive Action Plan on PM".

16. Noting the value of the proposed NEACAP in the context of NEASPEC, China, Japan and the Republic of Korea agreed at the 20th Tripartite Environment Ministers Meeting (TEMM) in June 2018 to cooperate for the establishment of NEACAP at SOM-22 based on the TOR of NEACAP agreed at the Consultation Meeting in October 2017. Thus, it is also the time to strengthen subregional cooperation on air pollution to mutually support national efforts and widely utilize subregional expertise for effective and efficient response to air pollution.

17. Thus, the Meeting may wish to request member States to formally launch NEACAP by adopting the TOR and provide further guidance on implementing the proposed activities.

18. The Meeting may wish to invite member States to nominate two experts for the Science and Policy Committee and research institutions as technical centers.

19. The Meeting may wish to request member States to provide guidance and support on the proper arrangement and collaboration between NEACAP and relevant mechanisms, including LTP, EANET, MIX Inventory, APCAP, etc.

20. The Meeting may wish to request member States to announce their intended contributions to the work of NEACAP.

.....

Annex. Terms of Reference of the NORTH-EAST ASIA CLEAN AIR PARTNERSHIP (NEACAP)

(Agreed by the Consultation Meeting on NEACAP, 13 October 2017)

1. Introduction

The pressing problem of air pollution, its adverse effects on human health and the environment in North-East Asia are well known to countries in the subregion. Countries in the subregion have taken various measures to abate air pollution and have achieved substantial progress over the last two decades. The transboundary nature of air pollution in the subregion requires effective cooperation to ensure experience exchange, information sharing, comprehensive assessment and monitoring as well as to promote dialogue on potential multilateral measures to tackle the problem. With support from NEASPEC member States, the Partnership shall provide basis for strategic cooperation through exchange of information and scientific-technical-policy collaboration, taking into account various initiatives and instruments that exist in the subregion.

2. Aims and Objectives

The Partnership is to ensure protection of the environment and human health from air pollution in North-East Asia with the following objectives.

Objectives of the Partnership include:

a. To promote environmental cooperation, including its science, policy and technical aspects, on atmospheric air protection in the transboundary context in the subregion;

b. To enhance and further develop information and experience exchange in national and transboundary air pollution matters;

c. To act as the key voluntary framework in addressing transboundary air pollution issues in North-East Asia, covering China, the Democratic People's Republic of Korea, Japan, Mongolia, the Republic of Korea and the Russian Federation;

d. To contribute, as appropriate, to the development of relevant national and subregional policies addressing air pollution based on regional and national scientific research;

e. To promote knowledge on environmental and human health aspects of air pollution in the North-East Asian subregion.

3. Geographic scope and target pollutants

The geographic scope of NEACAP includes the territories of China, the Democratic People's Republic of Korea, Japan, Mongolia, the Republic of Korea and the Russian Federation.

Target pollutants of NEACAP include, but not limited to, pollutants of national and subregional concern, namely Particulate Matter (PM2.5 and PM10), Ozone, and other relevant pollutants, including Sulfur Oxides (SOx), Nitrogen Oxides (NOx), Black Carbon, Ammonia (NH_3) and Volatile Organic Compounds (VOCs). Step-wise approach is applied when addressing the listed pollutants as the completeness of relevant emission inventories and modeling capacities in member States may vary.

4. Core Programmes

Core programmes of NEACAP include:

i. Exchange relevant information and data, if available covering:

a. Emissions data of the above-listed target pollutants, at periods of time and formats to be agreed upon;

b. Information on the transport and deposition of target pollutants;

c. Information on emissions control technologies and national policies in use and/or under-development; and

d. Information on experience and challenges of researches on modeling and emission inventory.

ii. Coordinates with relevant mechanisms and synthesizes their results in accordance with the NEACAP activities including,

a. Subregional emissions inventory development and maintenance;

b. Air pollution monitoring through existing programmes and frameworks, including national networks and multilateral initiatives;

c. National and regional air pollution transport and deposition modeling and model comparison, including source-receptor relationship (SRR) modeling, and

d. Integrated assessment modeling.

iii. Propose potential technical and policy measures to tackle air pollution through:

a. Science-based, policy-oriented consultations among national scientists, experts, policy- and decision-makers of the member States;

b. Development of technical and policy scenarios for further consideration;

c. Exchange of information on emerging technologies and potential for technological cooperation on mitigating pollution; and

d. Sharing of information and lessons learnt on relevant good environmental practices applied nationally.

The core programmes of NEACAP are supported through the following activities, subject to the availability of resources:

a. Regular meetings and ad hoc meetings as agreed upon by member States;

b. Annual or biennial subregional review reports;

c. Seminars, workshops and trainings; and

d. Research projects.

5. Organizational structure

The organizational structure of NEACAP includes the following: the Science and Policy Committee, the Secretariat and technical centers. Thematic/working groups can be formed within the Science and Policy Committee (SPC) depending on the needs to advice and review specific technical assessments. The Science and Policy Committee shall report to the Senior Officials Meetings of NEASPEC for the final decision.

i. ***Science and Policy Committee (SPC)*** – as the steering body, to plan, monitor and review activities under NEACAP, and promote science-policy linkages through guiding technical assessments and dialogues. Each member State nominates two experts for the Committee, which may meet on annual or biennial basis. The Committee may also recommend activity direction and organizational structure to the SOM.

ii. ***Technical centers*** – as designated research institutions in member States, to support the technical work of NEACAP.

iii. ***Secretariat (NEASPEC Secretariat)*** – to provide overall programme coordination and administration of NEACAP.

6. Budget

NEACAP will be supported by the Core Fund of NEASPEC. Other funding sources, including the voluntary contributions from the member States, and multilateral financial mechanisms should be explored and utilized.

7. Roles of Member States

NEACAP is a voluntary, needs-driven partnership. Member States may actively participate in and contribute to the development of NEACAP, such as through exploring potential financial or in-kind contributions necessary for the effective functioning of the Partnership.