NEASPEC/SOM(18)/1

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

Distr.: Limited
8 October 2013

English only

UNITED NATIONS

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Eighteenth Senior Officials Meeting (SOM) of NEASPEC

5-6 November 2013

Ulaanbaatar, Mongolia

REVIEW OF PROGRAMME PLANNING AND IMPLEMENTATION

(Item 5(a) of the provisional agenda)

Transboundary Air Pollution in North-East Asia

Note by the Secretariat

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I. OVERVIEW OF PROGRESS: Post SOM-17 Exchange on the Russian Federation Proposal of NEASPEC Project on Transboundary Air Pollution

1. At SOM-17 a new project proposal had been put forward by the Russian Government for the development of technical and policy framework for transboundary air pollution assessment and abatement. According to the proposal, the UNECE Convention on Long-Range Transboundary Air Pollution (CLRTAP) and its policy and scientific bodies are to be used as model for the proposed framework. The project aims to enhance cooperation on assessment and mitigation of transboundary air pollution in the subregion through the promotion of common methodologies and prospective establishment of the framework which would function on a continual basis. It will involve data and technology assessment, modelling study, formulation of a conceptual approach to the development of the framework, extensive expert discussions, and presentations at SOM-18 and SOM-19 on its results and recommendations.

2. The proposal was welcomed by the SOM for strengthening subregional cooperation on transboundary air pollution. Given the technical complexity of the topic and limited time for member Governments' internal review, the SOM recommended the Russian Government to elaborate on the proposal and circulate it to other member States for further consultation.

3. Subsequent to the SOM, the Japanese Government in January 2013 requested the Russian Government to clarify the view on the prospects of the development of Acid Deposition Monitoring Network in East Asia (EANET) and on the coordination between EANET and the proposed activity before discussing the substance of the project proposal.

4. In this connection, the Russian Government in May 2013 provided further information on its proposal and clarified that it will pursue a number of goals including (i) emission inventory; (ii) dispersion calculation, monitoring transboundary movement and pollution deposition; (iii) estimation of critical loads and monitoring of excessive depositions; and (iv) scenario modeling and elaboration of practical solutions. In particular, modeling results will be compared to the findings of relevant international programmes and the project will be based on progressive solutions successfully piloted under the framework of the UNECE CLRTAP. In this regard, the Russian Government assured that the project and EANET do not overlap but rather complement each other. And the mechanism deployed under the project is intended to put EANET's findings into practical dimension.

5. In recognition to the above clarifications, the Japanese Government suggested in July 2013 that the proposed project play a role as the discussion forum for NEASPEC members to exchange views. This will provide inputs to regional forums such as the "Joint Forum on Atmospheric Environment and the Pacific". This proposal is based on the view that NEASPEC should focus on how to assure the alliance with other parts of the world rather than establishing a framework only for NEASPEC. The Government also views that modeling study has taken place under EANET research activities as well as the Model Inter-

Comparison Study in East Asia (MICS-Asia). Furthermore, the Government proposed the implementation of specific projects like the coal-fired power plant pollutant reduction supported by external funds from such as the Asian Development Bank.

6. The Secretariat in August 2013 briefed other member Governments on the major points of the bilateral consultation and requested their view on the points. The Government of the Republic of Korea in September 2013 shared its view on the necessity of a comprehensive transboundary air pollution programme in order to address issues such as impact assessment, monitoring, and modeling to tackle air pollution issues in the subregion. The Government therefore recommended the proposed project to take into consideration other existing air quality efforts in Northeast Asia and their inter-connections to utilise regional resources more effectively. For example, the Joint Research Project on Long-range Transboundary Air Pollutants in North-East Asia (LTP) project can be linked as part of a comprehensive transboundary air pollution programme to collaborate through sharing information and technology.

II. ISSUES PERTAINING TO FURTHER CONSULTATION ON NEASPEC'S APPROACH TO TRANSBOUNDARY AIR POLLUTION

A. NEWLY EMERGING CHALLENGES IN NORTH-EAST ASIA

7. Whilst tackling the air pollution challenges over the years on chronic air pollutants, the subregion has also faced newly emerging challenges such as sharp peaks of extremely high level of air pollution in relatively short periods of time. In January 2013, Beijing released orange-level haze warning, for the first time, and adopted an emergency response plan for extreme levels of air pollution as fine particulate matter (PM2.5) levels was over 400 microgrammes per cubic metre. World Health Organization (WHO) guidelines suggest that it should be no more than 25[1,2]. The dense smog had significantly reduced visibility and sharply increased the number of people seeking treatment at hospitals for respiratory problems. A number of factors have simultaneously caused this severe air pollution episode[3].

8. Firstly, there had been an increase in emissions from energy production, vehicles, industrial production and dust. Pollutants produced by vehicles are a significant cause as Beijing is a megacity with large volume of traffic. At the same time the unusually low temperatures since December 2012 caused a surge in heating demand from coal. Secondly, unfavorable weather conditions of low air pressure had reduced wind speed, and high humidity had prevented dispersion of pollutants making their concentrations high. Lastly,

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[1] Beijing's air pollution episode http://cleanairinitiative.org/portal/node/11599
[2] http://www.bbc.co.uk/news/world-asia-china-21007893
[3] Beijing Environmental Protection Bureau: air pollution episode is caused by increased level of pollutant emissions http://www.chinadaily.com.cn/hqpl/zggc/2013-01-14/content_8024128.html

pollutants from regions around Beijing due to the same set of factors, had also contributed to the extreme pollution levels in the capital making the cumulative impact to further exacerbate the situation.

9. In response to the wide spread air pollution at the Beijing-Tianjin-Hebei area in January 2013, the State Council issued 10 strong measures (the National 10 measures) to prevent and control air pollution[4]. The measures are: reduction of emissions from source; strict control of emissions from highly polluting industries and eliminate industries that could not satisfy current environmental standards; promote clean development and public transport; restructure energy mix and production; enforce energy-saving and environmental protection requirements; apply market instruments and economic policies; strengthen legal framework and enforcement; promote regional collaboration in PM2.5 control with responsibilities clearly assigned; establish monitoring and emergency response systems for air pollution episode; and define responsibilities of local governments on air quality, and promote collaboration with private sector and public awareness.

10. The State Council further released its Action plan for Air Pollution Prevention and Control on 12 September 2013 elaborating on the 10 measures[5]. The Action Plan sets strict targets and presents the road map for air pollution control from 2013 to 2017, for three regions: Beijing-Tianjin-Hebei area, Yangtze River Delta and Pearl River Delta. These include:

a. All second- and third-tier cities' annual average concentration of PM10 should be reduced by at least 10% compared to 2012 level, and number of days with ideal air quality should be increased;
b. For the three key regions, annual average PM2.5 concentration should be reduced by 25%, 20%, 15% respectively; and
c. Beijing's annual average PM2.5 concentration should not exceed 60ug/m^3

11. Further to the State Council's Action Plan, the Beijing municipal government unveiled the Beijing 2013-2017 Clean Air Action Plan to cut PM2.5 by 25% based on 2012 levels[5]. Key actions to be taken in Beijing will also involve capping automobile ownership, significant reduction of coal consumption from 23 million tonnes in 2012 to 10 million tonnes by 2017, and slashing its cement production by more than half by 2017[6].

12. The impact of these new measures and targets, acting on multiple aspects of national air pollution in China, will have broad reaching impacts that go beyond improving the situation in the country. Since the Beijing-Tianjin-Hebei area has the most stringent

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[4] China to tackle air pollution with a new action plan http://cleanairinitiative.org/portal/node/12066
[5] Beijing ramps up pollution fight, challenges remain http://english.peopledaily.com.cn/90882/8409099.html
[6] Beijing unveils clean air action plan http://news.xinhuanet.com/english/china/2013-09/12/c_132715314.htm

targets and the area's close proximity to other member States in the subregion, these actions are likely to have implications on transboundary air pollution in the subregion.

13. The project proposal made by the Russian Government is clearly relevant to contributing towards scaling up the scope of subregional coorperation in addressing this new challenge. China's experience and the series of actions taken to combat this particular issue will shed light on how the subregional can act together in reducing domestic and transboundary air pollution. Thus, NEASPEC member States could seek the potential links between the Russian proposal and the Chinese challenges and responses.

B. PROGRESS IN REGIONAL AND SUBREGIONAL MECHANISMS

14. The Convention on Long-range Transboundary Air Pollution (CLRTAP) in 2009-2012 revised its three most recent Protocols: on persistent organic pollutants, heavy metals and acidification, eutrophication and ground level ozone (Gothenburg Protocol). In particular, the revised Gothenburg Protocol now includes national emission reduction commitments for main air pollutants to be achieved in 2020 and beyond. It also includes, for the first time, emission reduction commitments for PM2.5, the pollutant whose ambient air concentrations notoriously exceed WHO air quality standards throughout Europe and in other parts of the world. Moreover, the revised Protocol have broken new ground in international air pollution policy by specifically including the short-lived climate forcer, black carbon (or soot), as a component of particulate matter. Black carbon is an air pollutant and has a strong warming effect, contributes to glacier melting and reduces ice mass at the Poles, with the knock-on effects on flora and fauna.

15. Currently, the Convention focuses on implementation of the Convention and its protocols across the entire UNECE region with special focus on Eastern Europe, the Caucasus, Central Asia and South-East Europe, and sharing its knowledge and information with other regions of the world.

16. Joint Research Project on Long-range Transboundary Air Pollutants in North-East Asia (LTP) of China, Japan and the Republic of Korea at the 16th Expert Meeting in May 2013 agreed on the roadmap for the fourth stage research plan starting from 2013 for five years. The fourth stage of the LTP project includes a 4-year plan to: (i) develop common guidelines for monitoring and modelling of PM2.5 and its precursors; (ii) analyse and present long-term monitoring data in 2012-2015 through annual reporting; (iii) quantify the long-range transport of PM2.5 until 2014 by conducting source-receptor relationship (SRR) with the common guideline; (iv) conduct a comprehensive campaign in 2015, to combine chemical transport model with remote sensing measurements to analysze measurement data; and (v) provide a summary report for policy makers by end of 2016 on LTP reports as well as through literature review by LTP taskforce and relevant experts. These activities aim to improve the understanding on the source, chemistry, transport, fate, ecological and health

effects of PM2.5 by providing adequate spaital-temporal coverage and sufficient temporal resolution.

17. Acid Deposition Monitoring Network in East Asia (EANET) has set 22 activities under its Medium Term Plan (MTP) for the EANET (2011-2015). The activities consist of core activities which are indispensable for promoting the network activities and additional activities for strengthening the network by providing technical assistance to the participating countries and by promoting further research activities. Together with the core activities of the EANET, the following areas of activities are scheduled to be implemented during the period until 2015:

- Capacity building for personnel of the participating countries including training courses, capacity building workshops, fellowships, etc.;
- Technical support to participating countries by provision of advice, technical information and equipment to countries;
- Research studies particularly on the applicability of various methodologies for measurement of air concentrations in East Asia;
- Studies on the effects of acid deposition and other priority chemical species on the ecosystem, human health and socio-economics;
- Studies on models to assess and analyze the trend of national and regional acid deposition and other related air pollutants in East Asia;
- Emission inventories; and
- Public awareness on acid deposition and other priority chemical species; etc.

III. ISSUES FOR CONSIDERATION

18. The Meeting may wish to request member Government to express views and ideas regarding the Russian proposal and other potential projects in this field of transboundary air pollution.

19. As noted in the paragraph 13, the Secretariat views that NEASPEC member States could seek the potential links between the Russian proposal and the Chinese challenges and responses. Thus, the Meeting may wish to discuss collaboration opportunities and potential projects with regard to the Russian proposal and the new subregional challenges highlighted in section II with consideration of existing (sub) regional mechanisms.

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