



Proceedings of the Annual Network Meeting 2002
18-19 July 2002
Kathmandu, Nepal

PROCEEDINGS

ANNUAL NETWORK MEETING ON MALÉ DECLARATION

18-19 July 2002, Kathmandu, Nepal

C O N T E N T S

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LIST OF ACRONYMS

ABC	Asian Brown Clouds
EANET	East Asia Network on Acid Deposition
HMG	His Majesty the Government
ICIMOD	International Centre for Integrated Mountain Development
MoPE	Ministry of Population and Environment
MoC	Monitoring Committee
NFP	National Focal Point
NIA	National Implementing Agency
SACEP	South Asia Co-operative Environment Programme
SEI	Stockholm Environment Institute
Sida	Swedish International Cooperative Development Agency
UNEP/RRC.AP	United Nations Environment Programme / Regional Resource Center for Asia and the Pacific

PROCEEDINGS

The network meeting 2002 on the Malé Declaration on 'Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia' was held in Kathmandu on 18-19 July 2002. The meeting follows a continuation of the process, which began in Bangkok in March 1998 where a policy dialogue concerning regional air pollution in South Asia was initiated, followed by an inception workshop held in Kathmandu during 22-23 February and the network meeting 2001 was held in Colombo on 29 June 2001. Each participating country in South Asia nominated the National Implementing Agency (NIA) and National Focal Points (NFP) to follow-up activities and implementation of the Malé Declaration. Phase I activities on baseline studies and national action plans to monitor air pollution and its transboundary effects were successfully completed with active participation of countries. Phase II activities were initiated in March 2002 aimed at building capacity in each participating country for generating dry and wet deposition data in order to carry out the assessment of transboundary air pollution. The network meeting 2002 was organised in order to review the progress made since the last network meeting, and to chart out the future plan of action.

The meeting was attended by the Ministries of Environment and National Implementing Agencies (NIA) of the participating countries, members of Monitoring Committee (MoC), ICIMOD, SACEP, SEI, UNEP, and an independent facilitator. A list of the participants is enclosed in Attachment 1.

The meeting was organised by UNEP/RRC.AP, in collaboration with MoPE, Nepal, ICIMOD, SACEP and SEI. The meeting was funded by Sida as a part of the Programme on Atmospheric Environment Issues in Developing Countries.

1. Opening session

The network meeting 2002 for Male Declaration was inaugurated on 18 July 2002. The inauguration was addressed by H.E. P.L.Singh, Hon. Minister of Population and Environment (MOPE), Dr. J.C. Pokhrel, Hon. Member of Planning Commission, Dr. Jigbar Joshi, Acting Secretary of MOPE, Dr. Binayak Bhadra, Deputy Director General, ICIMOD and Mr. Surendra Shrestha, Director, UNEP RRC.AP.

In an opening speech, H.E. Mr. P.L. Singh welcomed the participants, and thanked UNEP, SEI, SACEP and participating countries on successful completion of the Phase I activities of Malé Declaration. He expressed concern over the deterioration of air quality in South Asia leading to problem of human health and economic loss. He stressed the need for clear air in urban cities. He also mentioned that transboundary air pollution is an emerging issue, which can't be solved by initiatives of individual country, but required collective efforts from all the countries to tackle the problem. He appreciated the Malé Declaration programme as an example for successful subregional cooperation. He hoped that the programme would lead to building up appropriate capacity in the participating

countries in order to understand and take necessary actions to deal with the transboundary air pollution. He reaffirmed the commitments of HMG to the Malé Declaration programme.

Dr. Pokhrel stressed the need for generating time series data and standardization of data collection system in the subregion. He commended the efforts under the Malé Declaration to provide a networking among participating countries for exchange of data and information. He felt a great need in the subregion for such networking. He also emphasized for harmonization of legal instruments across the countries in the subregion in order to address air pollution as well as transboundary air pollution. At the end, he appreciated the implementing agencies for effective persuasion of the programme thus far.

Dr. Joshi in his speech expressed concern over the existing trend of development and the associated problem of air pollution in the subregion. He said that the incidence of air pollution related diseases has been increasing due to poor indoor air quality. He stressed the need for effective institutional mechanism and networking to address the air pollution problem. He appreciated the collaboration among interested partners under Phase I and hoped for successful completion of Phase II.

Mr. Shrestha briefly elaborated the process of Malé Declaration and the expected outcomes in 3 Phases of the programme. He mentioned about the replication of similar programme in other subregions in Asia, such as regional environmental action plan of Central Asia, legal framework on transboundary haze in ASEAN, and acid deposition network in East Asia (EANET) and the Asia Brown Cloud (ABC) study in Asia. He referred the scientific report on impacts of Asia Brown Cloud on human health, crop yields, drought and flood. He highlighted the commitments of UNEP in each programme. Lastly, he thanked all the participating countries and agencies for their commitments and active cooperation to the implementation of Malé Declaration.

Dr Bhadra expressed concern over rapidly increasing energy production and the associated impacts of transboundary air pollution in the subregion. He stressed the need for developing alternative energy in order to reduce the impacts of air pollution. He recommended the pull of experts from the subregion to solve the problem of air pollution. He also suggested the need to strengthen the legal mechanism for control of transboundary air pollution. He appreciated the efforts under Malé Declaration to develop networking and capacity building in each country.

2. Review on progress made

Mr. R. Rajamani, former Secretary of Ministry of Environment and Forests, Government of India was invited to facilitate the proceedings. In his introductory remarks, Mr. Rajamani briefly elaborated the objectives of the meeting and requested participating countries to make a presentation on progress made in preparation for Phase II activities.

He also requested countries to put forward issues of concerns that could be discussed in details in the meeting.

Mr. M. Iyngararasan of UNEP-RRC.AP presented the progress made since the last network meeting 2001. The various activities carried out in the period included: development and finalization of manuals for activities in Phase II; circulation of manuals for comments; a list of instruments for Phase II; organize a technical training programme; and establishment of news groups at www.rrcap.uneo.org/md/webboard for information exchange. He also outlined the activities to be undertaken in Phase II include: stakeholders meeting in Bangladesh, India, and Pakistan; finalization of vendors for supply of instruments at NIAs; installation of monitoring instruments at one site in each country; in-country training programme on operation of instruments and data generation; refreshers course on annual basis to share experience; regular publication of newsletter; and database management at UNEP RRC.AP. Presentation is enclosed in Attachment II.

3. Parallel activities on emission inventory and integrated modelling

Dr. Johan Kuylenstierna and Mr. Harry Vallack of Stockholm Environment Institute (SEI) presented the parallel activities on emission inventory and integrated assessment modelling (IAM) that has been initiated under Malé Declaration for assessment of transboundary air pollution. He elaborated the various elements involved in the integrated assessment modelling, including a detailed emission inventory at the national and state level, provide data in the Match Model that is being developed for the purpose, run the model to assess the level of concentration of pollutants from sources to various receptors, and validate the model with monitoring data generated under Phase II of the Male Declaration. To this end, a database format will be developed for emission inventory, which will be provided to participating countries for completion. He said that a questionnaire has been prepared to provide information with the need and usefulness of the emission inventory and modelling exercise. The participating countries are requested to provide with information to UNEP RRC.AP by September 2002 in order to enable the completion of database format. The salient feature of the manual include: tailored to meet the need for the subregion; EXCEL based software for the emission inventory; top down approach will be followed for preparation of national level database; bottom up for the large point sources; emission factors need to be provided for sectoral activities; and country specific emission factor will be used. The presentation is attached (Attachment III).

4. Country presentation on preparations for Phase II activities

Bangladesh: Selection of monitoring stations is in progress and expected it to be completed by August 2002 following the criteria given by MoC for selection of station. Project document is currently with MOEF for final approval. It is expected to be approved in a month time. Land procurement is in progress. A ten member National advisory committee have been proposed and it will be established soon. Manpower and

laboratory have been identified for monitoring and analysis. Training will be required for building capacity on monitoring and analysis. (Attachment IV)

Bhutan: Monitoring station has been identified. The details of the proposed site were presented. National advisory committee will be established soon involving all the relevant line ministries, meteorological units, district administration, and local community. National Environment Commission already have an advisory committee to provide advise on environmental issues and the same will be used for the Malé Declaration also. Manpower, laboratory and structure need to be identified. Capacity building is very important to carry out the Phase II activities. (Attachment V)

India: Monitoring stations have been identified mainly to capture pollutants from in and outside country, and one station for Phase II activities will be finalized soon. Land procurement, manpower and laboratory will also be finalized soon. National advisory committee will be finalized. Capacity existed with NIA was presented and it was mentioned that other countries can avail the facility to enhance their capability, such as monitoring, analysis, quality control, database management, and reporting. (Attachment VI)

Maldives: Location of monitoring station has been identified. National advisory committee has formulated. Institutional arrangement has been finalized. Manpower, laboratory and land will be finalized soon. There is no capacity existed on monitoring and assessment of air quality. Hence, there is a need for capacity building on monitoring, analysis, and data management. (Attachment VII)

Nepal: Monitoring station has been identified and will be finalized soon following criteria given by MoC. Details of the proposed sites were presented. Manpower, land facility and laboratory need to be identified. National advisory committee needs to be established. (Attachment VIII)

Sri Lanka: Site selection has been completed. Proposed composition of the National Advisory Committee was presented. Advisory committee will be finalized. Laboratory facility has been identified. Manpower needs to be identified. Training will be required to carry out the Phase II activities. (Attachment IX)

5. Presentation on technical manual

Mr. Sagar Dhara of MoC presented the background of development of technical manuals and highlighted the salient features of the manual. Three manuals have been developed for wet and dry deposition, soil and vegetation, and inland aquatic environment. The technical manuals broadly cover site selection criteria, site preparation, sample collection, sample storage, sample analysis, analytical methods, data management, reporting, and quality control and quality assurance. The manuals have been circulated in the training programme as well as annual network meeting 2002. Missing portions in the manual were also mentioned, included data manipulation and analysis, data interpretation and

dissemination, and trouble-shooting guide. He emphasized the need for updating the manuals in 2/3 years taking into account experience with Phase II activities.

Discussions on technical manual included:

1. Some participants provide their written comments on the manual. it will be reviewed by MoC and the manual will be updated accordingly.
2. The manual should be dynamic and flexible enough to make necessary changes as the programme goes along. Technical Committee will be responsible for making the changes Therefore, it need to be placed on the Internet for continues review by the NIAs.
3. Site selection criteria need more flexibility.
4. Recommended methods need to be low cost in terms of capital cost and operational cost.

The manual will be updated based on the comments and suggestions from the meeting

6. Recommendations

Discussions were taken place on presentations made by different speakers. The comments and recommendations are summarized as follows:

- **News Group:** It is aimed at providing a platform where questions, comments and suggestions received on activities under Malé Declaration will be discussed and possible solutions will emerge. All concerning Malé declaration will be the part of this group;
- **Agencies for soil and water analysis:** NIAs should identify agencies specialized in water and soil studies in order to generate reliable database and information under Malé programme;
- **Technical committee:** A technical committee will evaluate the critical comments put forward by NIAs and provide with solutions. The committee will also responsible for a comparative study with works carried out in other subregions;
- **Relevance for policy making :** The meeting strongly believed that the findings of the Malé programme can't be overlooked by policy makers in the subregion since the programme has been developed in a step-by-step, and systematic process;
- **Advisory committee:** NIAs will establish a national advisory committee in order to obtain guidance on the Phase II activities as well as building awareness. Composition of the committee will to be decided by NIAs;
- **Training need:** A blue print on training requirement needs to be prepared by NIAs for future training schedule. To this end, a questionnaire will be prepared by UNEP with the help of MOC and sent it to NIAs for response by 2-3 weeks time from the receipt of the communication;

- **Procurement of instruments** : Conditions need to be imposed on vendors for testing of instruments before delivery to the NIAs. 5-year contract with vendors should be arranged for proper maintenance of the instruments;
- **Training**: It is recommended that specialized training programs need to be organized. After the installation of the equipments, country specific training programs will be organized;
- **Database management**: the centralized database developed at UNEP RRC.AP also to be mirrored at SACEP.
- **NIA India**: It is recommended that NIA India will be requested to relocate some of its existing monitoring stations to sites identified under Malé Declaration for monitoring transboundary air pollution;
- **Manpower and analysis instruments**: The meeting recommended all the NIAs to take necessary actions to identify manpowers and arrange for analysis instruments, which are prerequisite for the Phase II activities; and
- **Sustainability of programme** : In order to make the Malé programme sustainable, national governments should provide in kind contribution to the programme. It need to be reflected in the status report to the ministers.

7. Status report to be submitted in SACEP GC

The draft status report was discussed and adopted without major changes. The report by the network meeting 2002 will be tabled in the SACEP GC meeting for necessary action by the national governments. It was recommended that a covering letter needs to be prepared highlighting the salient features of the Phase I and Phase II status report of Malé Declaration, and will be communicated it to the National Focal Points. The letter should broadly covers the following: achievements in Phase I, objectives of Phase II, developing a dynamic manual for the Phase II, parallel activities on emission inventory and integrated assessment modelling, need for formulation of advisory committee, NGO workshop to promote public awareness and participation, quality assurance and quality control programme for Phase II, and database management in UNEP RRC.AP and SACEP. SACEP should ensure commitments from national governments on the Phase II activities under Malé Declaration.

8. Closing session

Mr. Rajamani, facilitator, summarized the meeting. The meeting ended with the representatives from SACEP, SEI and UNEP thanking the facilitator, participants and organizers.