



**Malé Declaration on Control and Prevention of Air Pollution
and Its Likely Transboundary Effects for South Asia**



**Proceedings
of the
Annual Network Meeting
11-12 October 2004
Tehran, Iran**

**October 2004
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PROCEEDINGS
ANNUAL NETWORK MEETING ON MALÉ DECLARATION
11-12 October 2004, Tehran, Iran

C O N T E N T S

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LIST OF ACRONYMS

DoE	Department of Environment
MoEF	Ministry of Environment and Forest
MoC	Monitoring Committee
NFP	National Focal Point
NIA	National Implementing Agency
RAPIDC	Regional Air Pollution in Developing Countries
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
UNEP/ ROAP	UNEP Regional Office for Asia and the Pacific

PROCEEDINGS

The network meeting 2004 on the Malé Declaration on 'Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia' was held in Tehran on 11-12, October 2004. 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. The first network meeting after the adoption of Malé Declaration was held in Kathmandu during 22-23 February 1999; the network meeting 2001 was held in Colombo on 29 June; the network meeting for the year 2002 was held in Kathmandu during 18-19 July; in 2003 it was held in Dhaka, Bangladesh during 8-9 October. The network meeting 2004 was organised in order to review the progress made during the phase II implementation of the declaration, and to develop the plan for the phase III implementation.

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

The meeting was organized by UNEP/RRC.AP, in collaboration with DoE, Iran, SACEP and SEI. The meeting was funded by Sida as a part of the Programme on Regional Air Pollution in Developing Countries (RAPIDC).

1. Opening session

The network meeting 2004 for Malé Declaration was inaugurated on 11 October 2004. The inaugural session was addressed by H.E Hojjat Deputy Head, DoE, Saeed Motesaddi, Director General, DoE, Pradyumna Kumar Kotta, Project Coordinator, SACEP, Johan Kuylenstierna, Director, SEI-Y and Surendra Shrestha, Regional Director, UNEP ROAP / RRC.AP.

Dr. Motesaddi welcomed the participants and expressed satisfaction with the outcomes of Phase I and Phase II implementation of Malé Declaration in Iran. He expressed the hope that the Phase III will continue to build the capacity.

Mr. Shrestha provided a broader picture of air pollution and climate change and outlined the impacts of air pollution and climate change on ecosystems. He gave a brief account of the achievements of Malé Declaration since its adoption in 1998 and called for a focus on preventive actions during the next phase. In this regard he proposed: capacity building in monitoring, impact studies that include human health, awareness programmes targeted at legislators and youth, promotion of policies that focus on prevention such as hybrid cars and eco housing concepts. Lastly, he thanked all the participating countries and agencies for their commitments and active cooperation with regard to the implementation of Malé Declaration and to Sida for its financial support.

Mr. Kotta in his opening remark provided a brief on SACEP. He mentioned that the Malé Declaration network has been strongly established and emphasized the need for the continuity of capacity building program initiated during Phase II.

Dr. Johan Kuylensstierna in his speech informed that SEI is providing technical support to the implementation of the Malé Declaration and expressed satisfaction in the progress thus far. He expressed the hope that the Malé Declaration will be in a position to provide data in next 2-3 years time.

In his opening speech, H.E. Dr. Hojjat said that reduction of air pollution is a major factor in attaining sustainable development. He outlined various measures that the Government of Iran has taken to control air pollution and these actions have resulted in a significant improvement in the air quality of Tehran. He identified the Malé Declaration as a successful example for regional cooperation and requested to focus on control and prevention aspects during the next phase of implementation.

2. Review of Phase II

Mr. R. Rajamani, former Secretary of the 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 put forward issues of concerns that could be then discussed in detail at the meeting. He also welcomed the representatives from Pakistan who could not attend the last 3 network meetings due to logistical reasons.

Mr. M. Iyngararasan of UNEP/RRC.AP presented the progress made during the phase II implementation of the Malé Declaration. The various activities carried out in the period included: 3 network meetings; training manuals developed; executed formal contracts with equipment vendors; developed and held in-country training programs and installed equipments in 7 countries; organized 3 technical training programmes at regional level for wet deposition monitoring; organized national level stakeholders meeting in India and Bangladesh; regional stakeholders meeting; and facilitated information exchange through a newsletter (4 issues) and news groups at www.rrcap.uneo.org/md/webboard for information exchange. He also presented the status of capacity and data reporting at the end of Phase II. (see Attachment II).

3. Country presentations

Bangladesh: Mr. Hashmi presented the progress in Bangladesh (Attachment III). Summary of the presentation and major discussions include:

- Started monitoring on 19 July 2004 at a temporary site. 16 decimal of land has been donated for a permanent site and the construction will start within 2004.

- The site is currently operational with passive sampler and rainwater collector. 2 sets of data from passive samplers to IVL and rain chemistry report has been submitted to UNEP.
- Expressed the hope that the monitoring site will be fully operational by June 2005.
- Established a 14 member national advisory committee and the first meeting of the committee will be held in November 2004.
- Focus of phase III in Bangladesh will be on strengthening the monitoring capacity (e.g. training for appointed chemist was requested), information sharing, enhanced analysis and impact studies, increased stakeholders participation, awareness raising for targeted groups, policy adoption at national level, and preparation of emission inventory.

Bhutan: Mr. Nedup presented the current status of monitoring station and the implementation of Malé Declaration in Bhutan (Attachment IV). Summary of the presentation and major discussions include:

- Monitoring site in Bhutan is operational for the last 7 months with passive samplers and rainwater collector.
- Bhutan is currently facing problem with the existing site due to the remoteness of the site. Till now they have not been able to get a steady power supply to the site and requested the meeting for their comments.
- It was suggested that the High Volume sampler could be moved to a new site which will be established during the Phase 3. Current site at Geliphu will continue to be operational with passive sampler and rainwater collector.
- The need for training of more people, hardware, and awareness programs was expressed.

India: Mr. Kamyotra presented the progress in implementing the Malé Declaration in India (Attachment V). Summary of the presentation and major discussions include:

- The site is currently operational at Port Canning. Sampling is being done by a local University and the analysis is carried out at the Central Pollution Control Board;s (CPCB) zonal laboratory ,close to the monitoring site. Gaps in rain chemistry data as rains ceased after the monsoon period.
- Monitoring of water bodies has also been initiated.
- Additional stations will be added to the Malé Declaration network by reallocation of existing stations under the national monitoring programme.
- CPCB conducted 2 regional training programmes during phase II implementation.
- A 9 member advisory committee comprising members from CPCB, State Pollution Control Boards, NGOs, and experts in the field of air pollution was established.
- Recommended inventory of sources; validated air quality models; scientific studies for site selection; study of emissions from neighboring (non participating) countries; road map for improvement of fuel quality, and focus on pollution prevention and control.
- The shelf life of passive samplers received during the training program expired and they are waiting for the new sets of samplers from IVL.

Iran: After a multimedia CD presentation on the Malé Declaration Mr. Alipour and Mr. Tooraj Hemati presented the progress in implementation of the Malé Declaration in Iran (Attachment VI). Summary of the presentation and major discussions include:

- Compiled detailed site information such as landuse, meteorology and topography.
- Construction of a new site with windmill for the power supply is completed and has started operation. The site has already been added to the national power grid and will receive steady power supply in a few months time.
- The shelf life of passive samplers received during the training program expired and they are waiting for the new sets of samplers from IVL. No rain chemistry data yet as site established in the dry season.
- Suggestions for further implementation of the Malé Declaration include: increased financial support, establishment of evaluation system, active participation of governmental as well as non governmental organizations, and establishment of more transboundary monitoring stations.

Maldives: Mr. Ahamed Jameel presented the progress in the implementation in Maldives. (Attachment VII) Summary of the presentation and major discussions include:

- Passive sampling is being carried out at the site established at Hanimaaddhu.
- Hanimaaddhu observatory has been established under the Atmospheric Brown Cloud (ABC) programme with state of the art technology. The observatory started operation in October 2004.
- Air pollution monitoring capacity is being established at the Department of Meteorology. There is a need to continue the capacity building programme initiated during the phase II implementation.
- In the case of Maldives, the duration of training programmes needs to be extended to a longer period (6 – 9 month programs) as the trainees are usually young graduates with relatively little experience.
- Maldives plans to establish another monitoring site during the next phase.

Nepal: Mr. Purushotham Kunwar provided a brief on the progress in the implementation in Nepal (Attachment VIII). Summary of the presentation and major discussions include:

- The site established at Rampur is operational and the technical staffs conducting the monitoring are confident with sampling and analysis.
- Data is being continuously received from the monitoring station.
- Nepal initiated a daily program on national radio to enhance public awareness on air pollution.

Pakistan: Mr. Ziul Islam and Jaweed Ali Khan presented the progress in implementing the Malé Declaration in Pakistan (Attachment IX). Summary of the presentation and major discussions include:

- Installation of monitoring station was delayed due to the difficulties in getting security clearance for the site.
- Pakistan expressed its commitment and expressed the hope that the monitoring station will be operational in 6 months time.

- Activities such as stakeholders participation, formation of national advisory committee and training could go in parallel with the site selection.
- Pakistan plans to establish air quality and water quality monitoring stations in major cities.
- Pakistan has initiated preventive measures such as converting lightweight vehicles into Compressed Natural Gas (CNG) and is willing to share the information with other participating countries. The Malé Declaration is a good forum to share such information among the participating countries.

Sri Lanka: Mr. Annura Jayethilakae and C. K. Amarathunga presented the progress in implementing the Malé Declaration in Sri Lanka (Attachment X). Summary of the presentation and major discussions include:

- Site is currently operational at Dutuwewa. Passive sampler and rainwater collectors are operational.
- Unsteady power supply has prevented the operation of High Volume Sampler (HVS).
- AAQ was monitored at the site for a week using the mobile laboratory. The results show that the concentrations are below the detection limits of the High Volume Sampler. Sri Lanka therefore recommended that active measurement of SO₂ and NO₂ using the bubblers be suspended for the foreseeable future, because of the difficulties experienced in running the HVS with an unreliable power supply.
- A seven member advisory committee has already been established.
- The national level database will be located in the CEA.
- Frequent communication among the NIAs and other experts in the network is encouraged to discuss the day-to-day technical problems faced by the NIAs.
- The two plastic lids provided for the wet only rain sampler have both perished in the hot conditions at the site. A suitable replacement is sought.

4. Review of proposal for the phase III

Mr. Surendra Shrestha spoke on the future focus of the Malé Declaration. The brief included: the World Summit on Sustainable Development's (WSSD's) request for partnership for action; the mega issue of urbanization; available cleaner technologies such as hybrid cars and eco-housing; and prevention oriented concepts such as the concept of 3Rs in Japan (Reduce, Reuse and Recycle), circular economy (in China), National Happiness Index (in Bhutan). He suggested allocation of more resources for prevention aspects during the phase III implementation of the Malé Declaration.

The meeting discussed the proposed plan for the next 3 years (Attachment XI). In general, the meeting expressed satisfaction with the proposed plan for the Phase III. Major discussion includes:

- Most of the national environmental action plans include mechanisms for preventions. Therefore, existing national action plans need to be studied and

proposed activities of the Malé Declaration should be integrated with existing national action plans.

- The following was suggested to be included in the objective: “integrate findings from local pollution studies and contact impact assessment studies”.
- “Coordination Capacity exchange program” need to be in batches and for different durations for different countries. Most of the countries preferred 10 –15 days program. UNEP will communicate to the countries individually to develop the program for each of the countries. Project managers of the Malé Declaration at the national level will participate in this program.
- It was proposed to hold a one-day annual network meeting after the regional stakeholders meeting and regional coordination meeting.
- It was suggested that translation of the Malé Declaration publications into national languages will facilitate wider dissemination. Apart from the Malé Declaration publications, other publications from NIAs and related institutions could also be used to disseminate the information on the Malé Declaration.
- Evaluation of the implementation could begin from the 2nd year of phase III. NIAs will conduct evaluation at the national level and it will contribute to the regional level evaluation.
- Frequency of the National Advisory Committee (NAC) meetings should depend on the requirements and the committee should meet at least once in a year.
- The MoC will review and propose methodologies for monitoring ozone and UV.
- The need for establishment of new monitoring sites was discussed. UNEP will initiate discussions with the NIAs on this issue.
- Efforts should be made to the greatest extent possible to get national resources for the phase III implementation.
- Apart from the reference laboratory, national laboratories are also encouraged to participate in the QA/QC program. Parallel samples will be analysed at the reference laboratory and national laboratories, which expressed willingness to participate in the QA/QC program.
- Development of guideline and methodologies on impacts assessment need to be conducted during phase III.
- Even if the data is not sufficient to conduct detailed impact assessment studies, capacity building in terms of training for the identified institutions should be conducted.
- Development of nation specific emission factors should be promoted during phase III.

The proposal was revised based on the discussions and is provided in Attachment XII.

5. Technical Presentation from NIAs

Mr. Kamyotra, CPCB, India presented the Indian experience on use of hazardous wastes as fuel in cement kiln and environmental policy on their rational use. Presentation is given in Attachment XIII.

Ms. Zima, DoE, Iran presented a study on use of Geographic Information System (GIS) to study air pollution. Presentation is given in the Attachment XIV.

6. Closing session

The country representatives expressed their satisfaction with the meeting outcomes especially the proposed plan for the next 3 years. It was also mentioned in the closing remarks by the participating countries that the Malé Declaration has made good progress in regional cooperation and currently is being considered as a model for regional cooperation. Participants also thanked the local host, coordinating agencies and the facilitator. India expressed its interest to host the next network meeting.

Dr. Johan, SEI, thanked all the participating countries and expressed satisfaction with the outcome of the meeting.

Dr. Lars, RAPIDC Programme Advisory Group (PAG) Chairman participating in this meeting as an observer, said that he is very impressed with the interaction between countries and felt that the implementation of the declaration is moving in the right direction. He also said that when compared with the European experience, the Malé process was relatively fast

Mr. Kotta, SACEP, thanked all the participating countries for their continuous support and informed that the SACEP will provide an update to the upcoming Governing Council in November 2004.

Mr. Iyngararasan, thanked all the participating countries for their commitment in implementing the Malé Declaration and proposed the following follow-up items:

- communication to NIAs on the identification of specialized institutions for impact assessment studies;
- NIAs will be the focal agencies for all the Malé Declaration related activities at national level;
- NIAs may nominate specialized institutions conducting impact assessment studies;
- a data report with the available data will be prepared for the next annual network meeting.

Mr. Rajamani, facilitator, summed up by saying that he was impressed with the progress so far and expressed hopes that the data will start to flow from next year. Continuation of the capacity building program is important and the training program for the next phase should start from the 1st year onward. He requested the NIAs to try and get national support for more efforts, and not to wait for external support. The meeting ended with the representatives from DoE, Iran (Dr. Saeed Motesaddi) thanking the facilitator, participants and coordinating organizations.
