

# NEWS LETTER

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

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## Intergovernmental Meeting, and Regional Stakeholders cum Coordination Meeting

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His Excellency, Lyonpo Yeshey Zimba, the Minister for the Trade and Industry, Bhutan addressing the Inaugural Session of the Network Meeting 2006.

**T**he Eighth Session of the Intergovernmental Meeting and the Third Session of the Regional Stakeholders cum Coordination Meeting were held during 12 – 13

September 2006 in Thimpu, Bhutan. During the inaugural session, His Excellency, Lyonpo Yeshey Zimba, the Minister for the Trade and Industry, Bhutan mentioned that air pollution

is a major environmental challenge in the region and stressed the need for the continuation of concerted regional cooperation initiated under the framework of Malé Declaration.

### **Eighth Session of the Intergovernmental Meeting**

The Eighth Session of the Intergovernmental Meeting was attended by the National Focal Points (Ministries of Environment) and National Implementing Agencies (NIA) of the participating countries, members of the Monitoring Committee (MoC) for the implementation of Malé Declaration, South Asia Cooperative Environment Programme (SACEP), Stockholm Environment Institute (SEI), Swedish International Development Cooperation Agency (Sida), United Nations Environment Programme (UNEP), and an independent facilitator. A representative from Afghanistan attended as an observer. His Excellency Mr. Dasho

Nado Rinchhen, Deputy Minister of the National Environment Commission (NEC) of Bhutan chaired the session.

The meeting reviewed the progress in the implementation of Malé Declaration during 2006 and adopted a work plan for the activities in 2007.

The meeting also endorsed a review report on the implementation of Malé Declaration. The report, which has been prepared by, an independent facilitator based on the consultation with the owners of Malé Declaration (governments and stakeholders),

reviewed the achievements during 1998-2006 period and provided recommendations for further implementation of the Malé Declaration.

The review indicated that the implementation process thus far has resulted in the establishment of transboundary air pollution monitoring system, and suggested that the future phases should focus more on the reduction of air pollutants.

For more information  
[www.rrcap.unep.org/ew/air/male/](http://www.rrcap.unep.org/ew/air/male/)

## Third Session of the Regional Stakeholders cum Coordination Meeting

The Third Session of the Regional Stakeholders cum Coordination Meeting was attended by the National Focal Points (NFP) and National Implementing Agencies (NIA) of Malé Declaration as well as representatives from various stakeholders groups and

ongoing initiatives on air pollution at national, sub-regional, regional, and global levels.

The meeting provided the opportunity for the stakeholders to review the implementation of Malé Declaration

and raise their concerns. The meeting also provided a forum for coordination among various activities on air pollution issues in South Asia.

## Impact Assessment

Impact assessment programme of Malé Declaration aims to enhance the analytical and impact assessment capacity at the national level of the Malé Declaration Countries. The specific

capacity building activities of the programme include: (i) Development of urban integrated assessment capacities; and (ii) Strengthen knowledge/capacity on assessment of impacts on (a) human

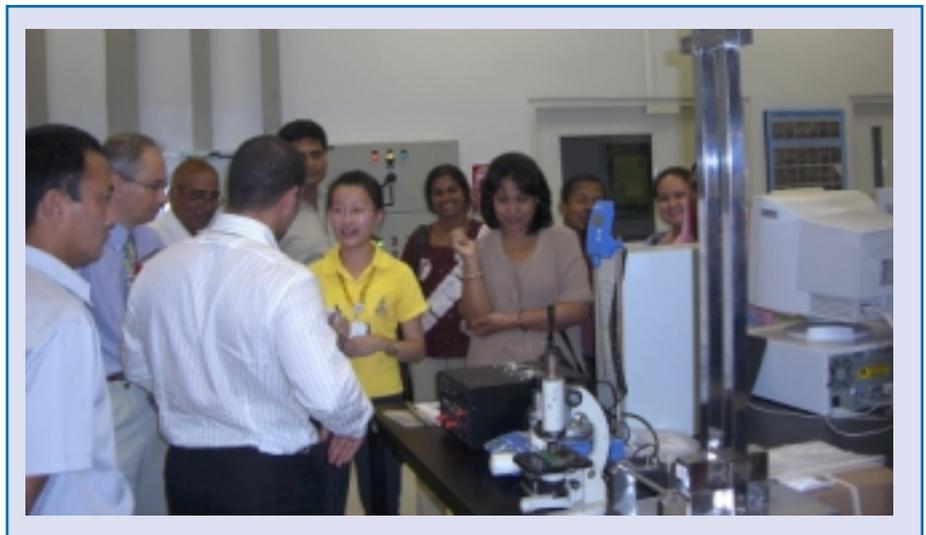
health; (b) crops, and (c) corrosion of materials. Capacity building activities are being implemented through regional level workshops and case studies at the national level.

## Training workshop on Evaluation of Corrosion Attack on Materials

Malé Declaration together with the Corrosion Network (CORNET) jointly organized a training workshop on Evaluation of Corrosion Attack on Material during 9-10 October 2006 at UNEP Regional Resource Centre for Asia and the Pacific (RRCAP), Asian Institute of Technology (AIT), Bangkok, Thailand.

The workshop was followed by a meeting of CORNET, which is a joint network of Malé Declaration and Air Pollution Information Network for Africa (APINA). Both Malé Declaration and APINA are parts of RAPIDC (Regional Air Pollution in Developing Countries) program.

There were 30 participants in the workshop: 9 from Malé Declaration Countries (Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, Sri Lanka), 9 from CORNET countries (Hong Kong-China, Vietnam, China, Malaysia, Thailand), 5 from APINA countries (Mozambique, Tanzania, Zimbabwe, Zambia).



The experts from Corrosion and Metal Research Institute (KiMab) and UNEP RRC.AP participated as resource persons.

The workshop was aimed at capacity building in 8 Malé Declaration Countries and other participating countries for studying the evaluation of corrosion of atmospheric acid deposition on various materials and consequently enabling them to design

policy options based on sound scientific assessments to mitigate air pollution and its adverse effects on materials. Thus, the workshop was designed to provide the basic theoretical concepts and a technical hands-on training to the participants on simulation as well as evaluation of corrosion attacks of acid deposition on a wide range of materials, ranging from zinc and carbon steel to the stones that resemble the stones used in making sculptures.

## Installation of Corrosion Monitoring System in Nepal

During the second week of November 2006, corrosion monitoring racks were installed in 10 locations in Kathmandu, Nepal. Hands-on training on installation of corrosion monitoring system were provided to the local technicians. The installations and training were conducted by experts from KiMAB (Corrosion and Metal Research Institute, Sweden).

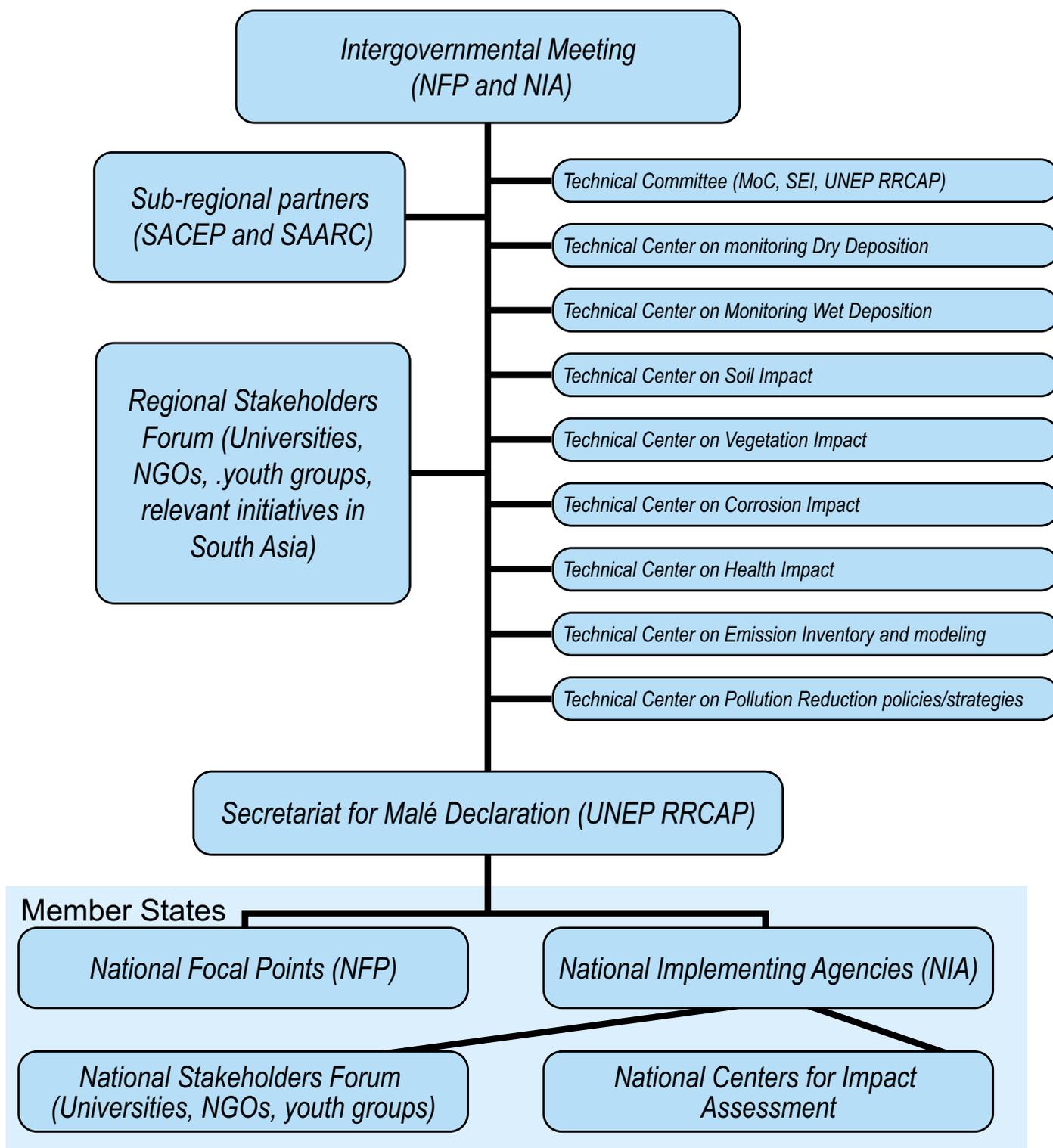


# Extended Institutional Structure

The Sixth Session of the Intergovernmental Meeting of the Malé Declaration held in October 2004 in Tehran, Iran, had suggested for a review of the implementation process. Thus, the review was carried out by an independent facilitator. The review was focused

on five major areas: (i) need assessment, (ii) institutional arrangement, (iii) capacity building, (iv) stakeholders participation, and (v) financial arrangements. The review recommended an extended institutional arrangement for further implementation of the Malé

Declaration. The extended institutional structure, which was endorsed with some suggestions by the Eight Session of the Intergovernmental Meeting, is presented below:

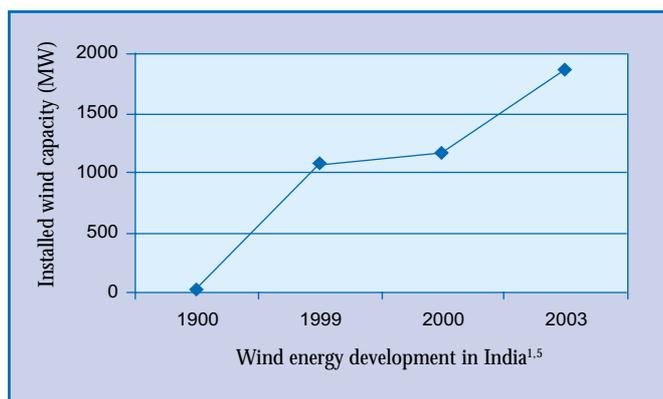


# Towards mitigation

## Renewable Energy Development: the Indian Example

Considerable progress has been made in the area of renewable energy in India. Especially, the use of wind energy has increased remarkably during the 90's. It expanded from just 32 MW in 1990 to 1870 MW in March 2003. In 2000, the contribution of renewable energy (excluding combustible renewables) to the Total Primary Energy Supply (TPES) amounted to 1.3 percent<sup>5</sup>.

The Wind Electric Generators installed in India up to the end of August 2003 has reached 12.69 billion kWh. This has saved about 5.1 million ton of Coal, avoided pollution of approximately 83 thousand ton Sulphur dioxide, 57 thousand ton Nitrogen oxide, 12.69 million ton Carbon dioxide and 7 thousand ton particulates<sup>4</sup>. The Government targets to add 10000 MW of renewable energy power generation capacity by 2012<sup>2</sup> and enacted the Electricity Act 2003. The Act permits any person who sets up a biomass gasification plant or a wind farm to freely sell electricity.



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### Government initiatives

India has a long history in supporting renewable energy development. During the initial stages, the Indian renewable energy programme was focused on the development / adoption of technologies and their demonstration. The Department of Non-Conventional Energy Sources (DNES) was created in 1982. The wind power programme was initiated in 1983-84 and a Wind Energy Data Handbook

published in 1983 served as a data source for early initiatives<sup>1</sup>.

Technology development was followed by policy development that included provision of financial and institutional support for renewables. The DNES was later raised to the status of the Ministry of Non-Conventional Energy Sources (MNES), making India the first country to have an exclusive Ministry

for Non Conventional energy. They prepared policy guidelines in 1993, which recommended among other things that the buy back price of Rs.2.25 should be paid with 5% annual escalation, using 1993 as the base year<sup>2</sup>. Some of the other policy and financial measures taken are tabulated below:

Technology	Policy measures and fiscal and promotional incentives <sup>3</sup>
Wind	Capital subsidies in certain states, soft loan, buy-back by state boards, concessional import duty on certain equipment, accelerated depreciation in the first year, sales tax, excise duty relief.
Small hydro	Incentives for detailed survey and site investigation, special capital grant for northeast region (Rs 75 million per MW), interest subsidy, financial support for renovation, modern ization.
Biomass & cogeneration	Buy-back by state boards, concessional customs duties, tax holiday and accelerated depreciation, soft loans, interest subsidy, capital subsidy on gasification projects for village electrification.
Solar PV	Capital subsidy for grid-connected projects, 50 percent subsidy for solar home systems and stand-alone power plants, 90 percent subsidy to special category states and islands.
Solar thermal	Capital subsidy for demonstration projects; financial assistance to Aditya Solar shops, interest subsidy

1. World Energy Council; [www.worldenergy.org/wec-geis/publications/reports/ser/wind/wind.asp](http://www.worldenergy.org/wec-geis/publications/reports/ser/wind/wind.asp)

2. TERI, Background paper; PDF seminar on "renewable energy and regulations" 15th March 2004.

3. CSE, Down To Earth , 15 June 2004

4 K. S. Krithivasan, Bharat Heavy Electricals Limited (BHEL); Presentation at Power India 2003

5. IEA, Renewable Energy Database Statistics; <http://library.iea.org/renew/eng/ReportFolders/Rfview/explorerp.asp>

# Capacity Building on Emission Inventory

Under the Malé Declaration, compilation of an emission inventory for 8 Malé Declaration countries was started in 1999 as part of the baseline studies. Activities were designed to compile existing information regarding pollution sources and estimates of emissions from those sources.

The pollutants of interest are sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), Suspended Particulate Matter (SPM) and ammonia (NH<sub>3</sub>). The baseline studies also include a summary of all known information related to emission inventories. Emission inventory data compiled during the baseline studies are

available in the Malé Declaration website ([www.rrcap.unep.org/ew/air/male/baseline.cfm](http://www.rrcap.unep.org/ew/air/male/baseline.cfm)).

In 2002, activities were extended to develop an emission inventory manual for harmonization of inventories.

## Training workshop on emission inventory preparation, scenarios and atmospheric transport modeling workshop

A training workshop on emission inventory preparation, scenarios generation, atmospheric transport modeling, and integrated information and assessment modeling (IIAM) was conducted during 3 - 8 July 2006 at UNEP Regional Resource Centre for Asia and the Pacific (RRCAP), Asian Institute of Technology (AIT), Bangkok, Thailand.



The training workshop was aimed at capacity building in eight Malé Declaration countries for studying the air pollution issues, especially transboundary transport of air pollutants, its potential impacts, and consequently enabling them to design science-based, integrated policy options to mitigate the adverse effects of air pollution. Thus, the workshop was designed to provide a technical hands-on training to the participants from Malé Declaration countries on compilation of emissions inventories of major regional air pollutants, generation and analysis of various scenarios, atmospheric transport/transfer/deposition modeling, and design of integrated approach to abate impact of air pollutants, in particular those species that lead to acidification.

There were 27 participants in the workshop from 8 Malé Declaration countries (Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, Sri Lanka) and from other collaborating institutions. Resource persons from SEI, IIIIEE, SMHI, and UNEP RRC.AP also attended the workshop.

### National Advisory Committee Meeting in Bangladesh

At the national level, National Advisory Committees are established to provide guidance for the National Implementing Agencies (NIAs).

A meeting of National Advisory Committee for Bangladesh was held on 2nd July 2006 under the Chairmanship of Mr. Tariq-ul-Islam, Joint Secretary, Ministry of Environment and Forests (MOEF) at the MOEF, Dhaka, Bangladesh. The meeting reviewed the existing monitoring activities and discussed the implementation of impact assessment studies during Phase III.

### Upcoming Events

- **Awareness raising:** In November 2006, South Asia Youth Environment Network (SAYEN) will discuss the participation of youths in the awareness raising activities of the Malé Declaration.
- **Training on AAS:** national training programmes on the operation of Atomic Absorption Spectrometer (AAS) are scheduled to be held in December 2006 in Bhutan and Nepal.
- **Workshop on emission inventory:** the second training workshop on emission inventory is scheduled to be held in February 2007.

# National Focal Points (NFP) and National Implementing Agencies (NIA)

## Bangladesh

NFP: Ministry of Environment & Forest

NIA: Department of Environment  
Dhaka

## Bhutan

NFP & NIA: National Environment Commission  
Thimpu

## India

NFP: Ministry of Environment and Forests

NIA: Central Pollution Control Board  
New Delhi

## Iran

NFP & NIA: Department of Environment  
Tehran

## Maldives

NFP & NIA: Ministry of Environment, Energy and Water, Malé

## Nepal

NFP: Ministry of Environment Science and Technology

NIA: International Centre for Integrated Mountain Development (ICIMOD)  
Kathmandu

## Pakistan

NFP: Ministry of Environment, Local Govt. & Rural Development

NIA: Pakistan Environment Protection Agency, Islamabad

## Sri Lanka

NFP: Ministry of Environment & Natural Resources

NIA: Central Environment Authority, Colombo

## Coordinating Agencies

UNEP Regional Resource Center for Asia and the Pacific (UNEP RRC.AP)  
Bangkok, Thailand



South Asia Co-operative Environment Programme (SACEP)  
Colombo, Sri Lanka



Stockholm Environment Institute (SEI)  
Stockholm, Sweden



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## Malé Declaration Newsletter

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