



# Male' Declaration

Progress in 2007



by  
Secretariat  
UNEP



# Malé Declaration: National Implementing Agencies

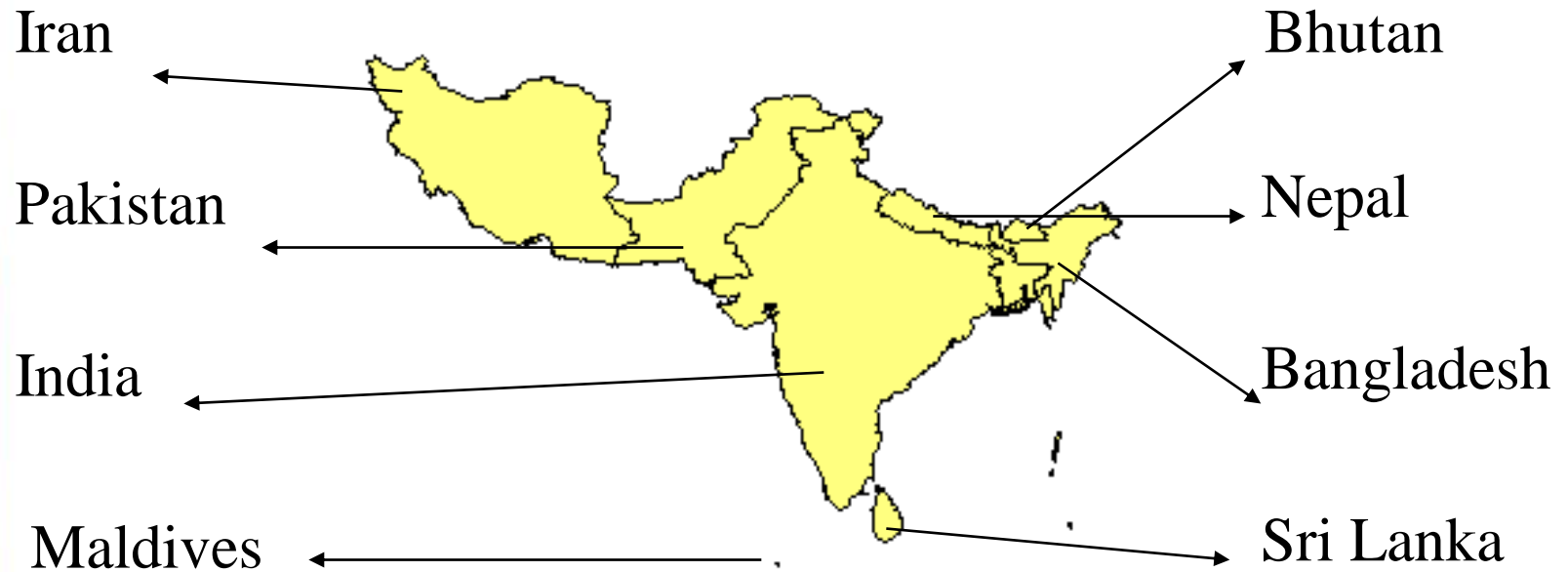
## Development

- March 1998: Policy Dialogue
- April 1998: Adoption of the Declaration

## Implementation

- Phase 1: Awareness and baseline studies
- Phase 2: Local capacity building for monitoring and analysis

## Member States





# Phase III Objectives



IG 6; October 2004, Tehran, Iran

- Strengthen the **regional cooperation** and stakeholders participation under the Malé Declaration;
- Strengthen the **capacity building** programmes initiated during Phase II;
- Enhance the capacity of NIAs on emission **inventory development and Integrated Assessment Modeling**
- Enhance the analytical and **impact assessment capability** at the national level through integration of findings from local pollution studies and conducting assessment studies;
- Provide **decision support information** for policy formulation and air pollution prevention ; and
- **Raise awareness** for action through targeted dissemination



# Ob1. Regional Cooperation

Objective: Strengthen the **regional cooperation** and stakeholders participation under the Malé Declaration



## Review of progress

- October 2004, IG 6 Requested for an evaluation of the implementation process
- 2005, 2006, PMC requested to increase the ownership of the process
- April – August 2006, Review by the regional facilitator
- September 2006, IG8 adapted the review report





# Ob 1. Regional Cooperation: IG8



## ☞ Intergovernmental meeting, stakeholders meeting cum coordination meeting

- Evaluated the implementation since adoption
- Extended organizational structure
- Establishment of specialized centers
- Air pollution related initiatives in South Asia need to be coordinated under the framework of Male' Declaration
- Focus on reduction of air pollution
- Recommended to increase the financial sustainability through local contributions

**IG 8; September 2006, Thimphu, Bhutan**

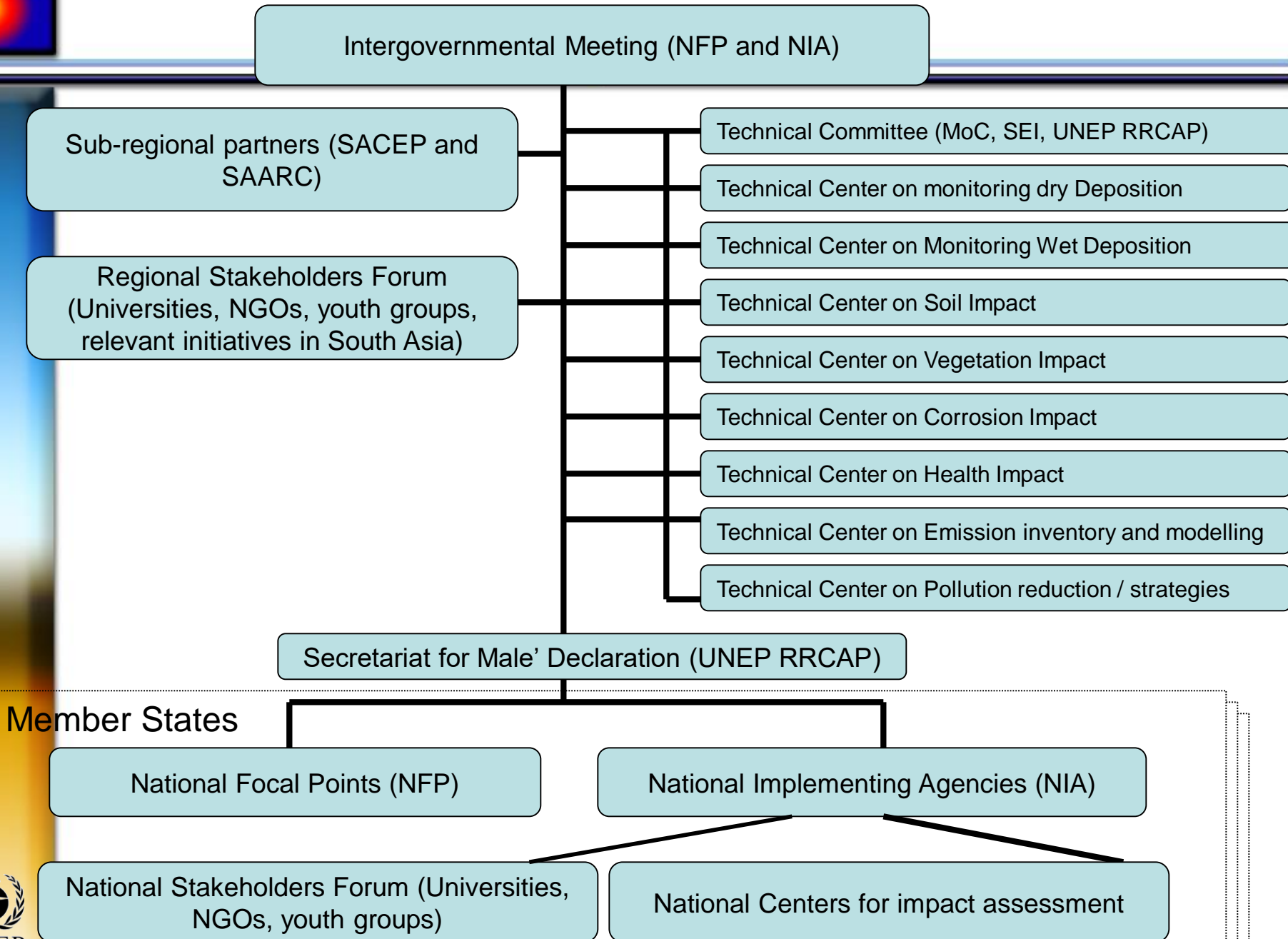
Proceedings:

[www.rrcap.unep.org/md/Maléreport/](http://www.rrcap.unep.org/md/Maléreport/)



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# ORGANIZATIONAL CHART OF MALE' DECLARATION





# Ob 1. Regional Cooperation: National Stakeholders

## ☞ National stakeholders meeting in Sri Lanka, June 2007

- Reviewed progress in the implementation of the Male' Declaration in Sri Lanka
- Information exchange among the air pollution related initiatives in Sri Lanka





# Ob 1. Regional Cooperation



➔ Exchange Programme participated by the National Project Managers of the Male' Declaration; May 2007

- National Brochures
- Priorities for Phase 4 implementation
- Better understanding between the project managers

➔ Meetings of the National Advisory Committee

- Details will be reported by the NIAs





# Ob2. Monitoring: Status of monitoring network

Monitoring site established in Pakistan

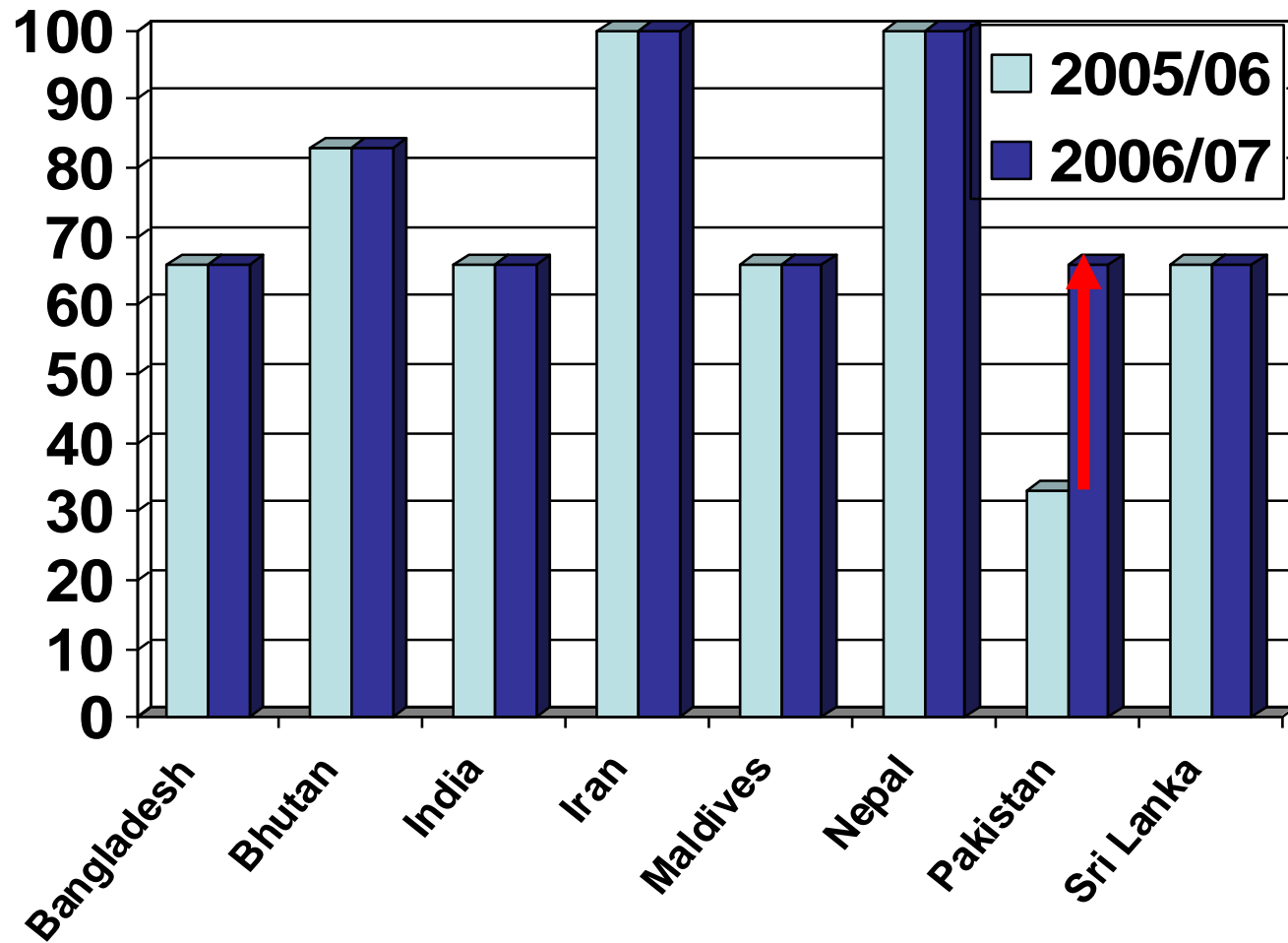


Parameter	Bangladesh	Bhutan	India	Iran	Maldives	Nepal	Pakistan	Sri Lanka
TSP		■	■	■	■	■	■	■
PM <sub>10</sub>		■	■	■	■	■	■	■
SO <sub>2</sub> , NO <sub>2</sub> with passive sampler	■	■	■	■	■	■	■	■
SO <sub>2</sub> , NO <sub>2</sub> with active method		■	■	■	■	■		
pH	■	■		■	■	■	■	■
EC	■	■		■	■	■	■	■



## Ob2: Monitoring: Development

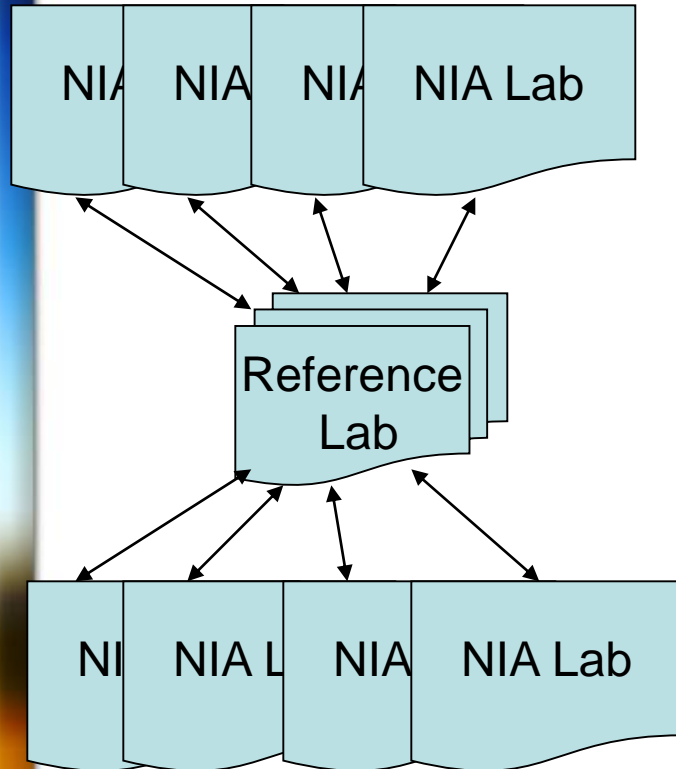
Status of monitoring mandatory parameters



Mandatory parameters: TSPM, PM10, SO<sub>x</sub>, NO<sub>x</sub>, pH (rainwater), EC (rainwater)



# Ob2: Capacity Building on Monitoring ...



## Inter-laboratory Comparison

- Developed protocols

## Passive sampler Inter-Comparison

- Developed protocols

## Establishment of new monitoring sites

- Completed the site selection in Sri Lanka
- Site selection is ongoing in Bhutan



## Ob2: Capacity Building on Monitoring ...



Regional Training Programme; March 2007, RRCAP, Bangkok

### Fifth Regional Training Programme

- Trained in the standardized procedures for lab analysis and QA/QC checks.
- Reviewed the **data** collected from the Malé Declaration monitoring sites
- Reviewed Protocol for **inter-laboratory comparison**
- Reviewed Protocol for **passive sampler inter-comparison**
- Input for the **phase IV** implementation

R1 and R2: within the acceptable limit for 4 out of 5 groups

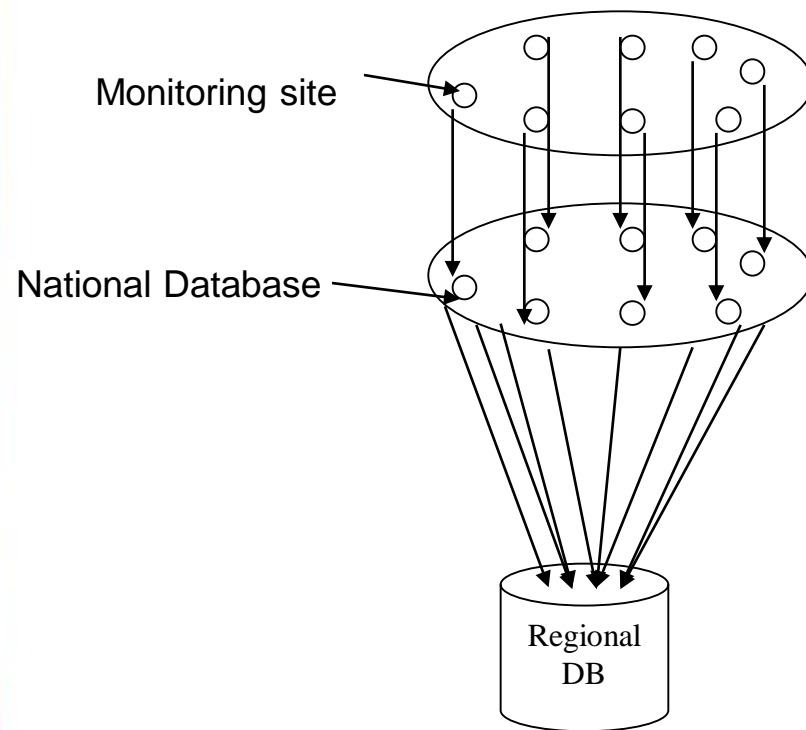
### • National Training programmes

- Follow-up training for technical personnel from DoE, Bangladesh were on operating AAS (May 2007)





## Ob2: Capacity Building on Monitoring ...



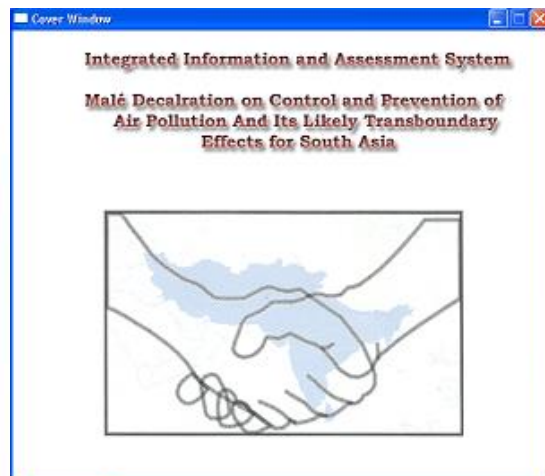
- **Central compilation, evaluation, and storage of data**
  - Data report 2006/07
  - Regional data base is available online for the NIAs:  
[www.rrcap.unep.org/md/](http://www.rrcap.unep.org/md/)



# Ob3: Capacity Building on Inventory and Modeling



Training workshop; Feb 2007, RRCAP



Integrated Information and Assessment System (IIAS)

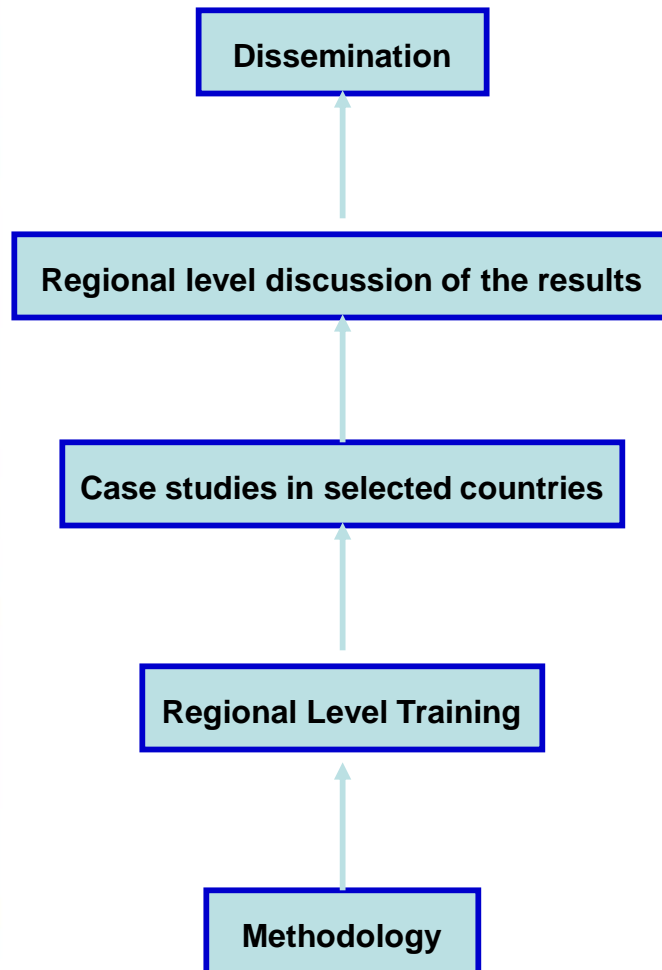
## Training workshop on emission inventory, scenario development, and Integrated modeling (Feb 07)

- Emissions inventory manual accompanied by a workbook (Excel) for compilation
- Input for the development of a comprehensive manual for the development of emission scenarios
- An integrated information and assessment system (IIAS) and Users' Manual
- MATCH Models is installed at UNEP RRCAP



# Ob4. Capacity Building on Impact Assessment

Objective: Enhance the analytical and **impact assessment capability** at the national level through integration of findings from local pollution studies and conducting assessment studies



## Focus areas

- Strengthen knowledge on human health impact assessment
- Strengthen knowledge on crops impact assessment
- Strengthen knowledge on corrosion impact assessment



# Ob4 Impact: Rapid Urban Assessment

## National Training on Rapid Urban Assessment; November 2006



National Training Programme in Nepal;  
November 2006

- The training help the participants to understand the RUA methodology and its application to Kathmandu valley.

**Case study**  
Dhaka, Bangladesh





Regional Training on Health Impact;  
February 2007, RRCAP, Bangkok

## Regional Training on Health Impact Assessment; February 2007

- Relationship between air quality and health in the participating countries of Malé Declaration
- Implementation of technical measures
- policies which can effectively prevent and reduce the impact of air pollution on health.
- Assist participants to conduct assessments of the health effects of air pollution in their cities.



School Teachers and Children participating in the health impact assessment study, Dhaka, Bangladesh

## Case study Dhaka, Bangladesh



# Ob4 Impact: Corrosion



Regional Training on Corrosion Impact Assessment; October 2006, RRCAP, Bangkok



Corrosion monitoring track installed in Kathmandu, Nepal

## Regional Training

Basic theoretical concepts

Technical hands-on training

Evaluation of corrosion attacks of acid deposition on a wide range of materials, ranging from zinc and carbon steel to the stones

## Case study

Tehran, Iran

Agra, India

Kathmandu, Nepal

Colombo, Sri Lanka



# Ob4 Impact: Crop



Dr. C. S. Karim, Hon'ble advisor, Ministry of Environment & Forest, Agriculture, Fisheries & Livestock, Bangladesh answering the media questions on Male' Declaration

## Training

- Crop impact assessment training programme; August 2007 in Bangladesh

## Case Studies are being implemented in the following countries:

- Bangladesh
- India
- Nepal
- Pakistan
- Sri Lanka



Clover plant planted at the BAU campus to detect the impacts of air pollutants on crop



## **(i) Technical support for demonstration**

- Design review consultation for Architects from Maldives; September 2006
- Design review workshop in Bhutan; September 2006
- Workshop on the experience on the experience of implementing the eco-village in Sri Lanka; April 2007

## **(ii) Good practices**

- Completed draft compendium of best practices in prevention and controlling air pollution



# Ob6. Rise Awareness



## (i) Newsletter

- To disseminate Malé Declaration related information to the public and stakeholders.
- The content of the newsletter has largely been reports on the network's activities

## (ii) Networking with youths

- South Asia Youth Environment Network (SAYEN) is participating in the awareness activities.
- 2 consultation workshops
- Completed draft awareness materials for the consideration by IG9

## (iii) National Level Awareness: Bangladesh

- TV programmes
- Stage drama
- Posters