



# Male' Declaration

## Overview of Implementation



by  
Secretariat  
UNEP RRC.AP

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## MALE' DECLARATION

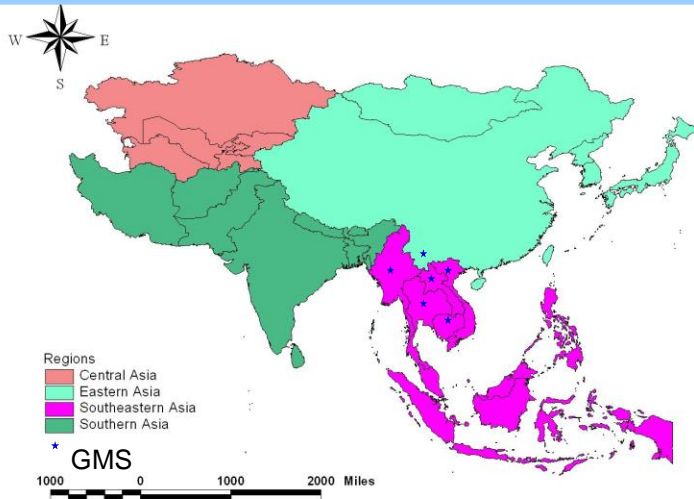
Conceptualization  
Adoption

## IMPLEMENTATION

Networking  
Monitoring  
Modeling and inventory  
Impact assessment  
Stakeholders participation  
Information exchange and rise awareness  
Prevention

# Asia and the Pacific

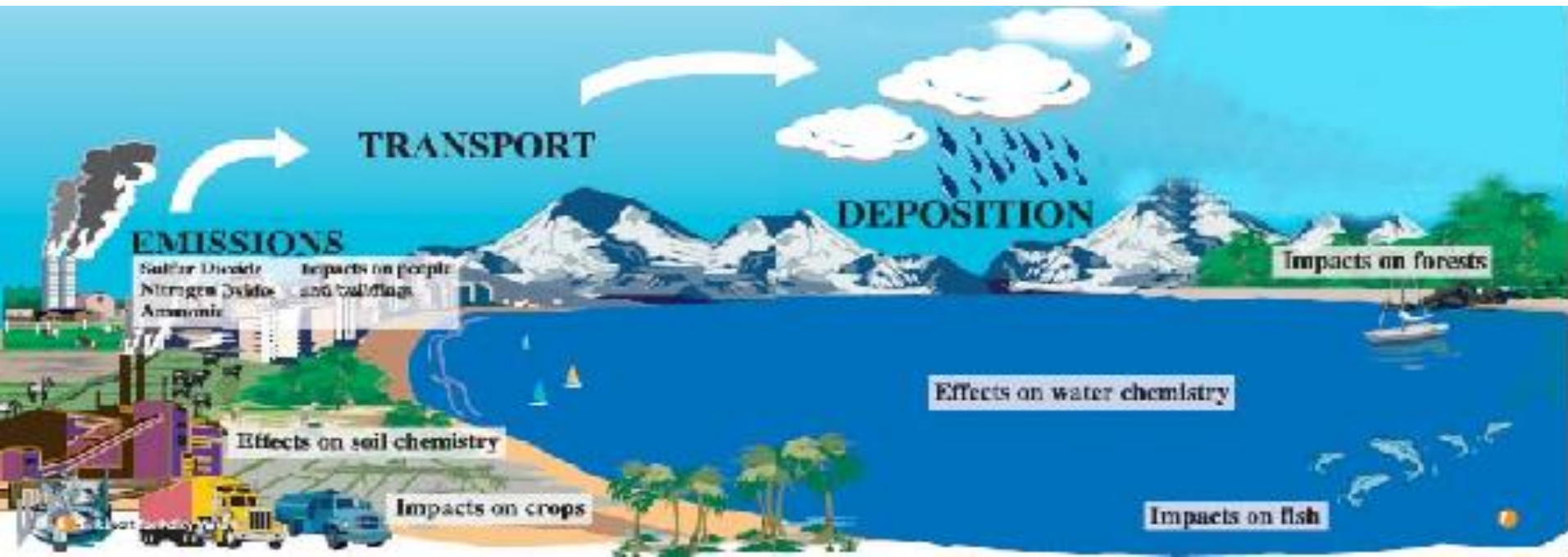
## Asia and the Pacific Region



- ✦ Two-thirds of world population; 50 million people are being added annually
- ✦ World fastest growing economy; > 6 % per year
- ✦ Emerging middle class; middle class households in China is expected to be increased from 50 m (2002) to 100 m (2010)
- ✦ Five sub-regions

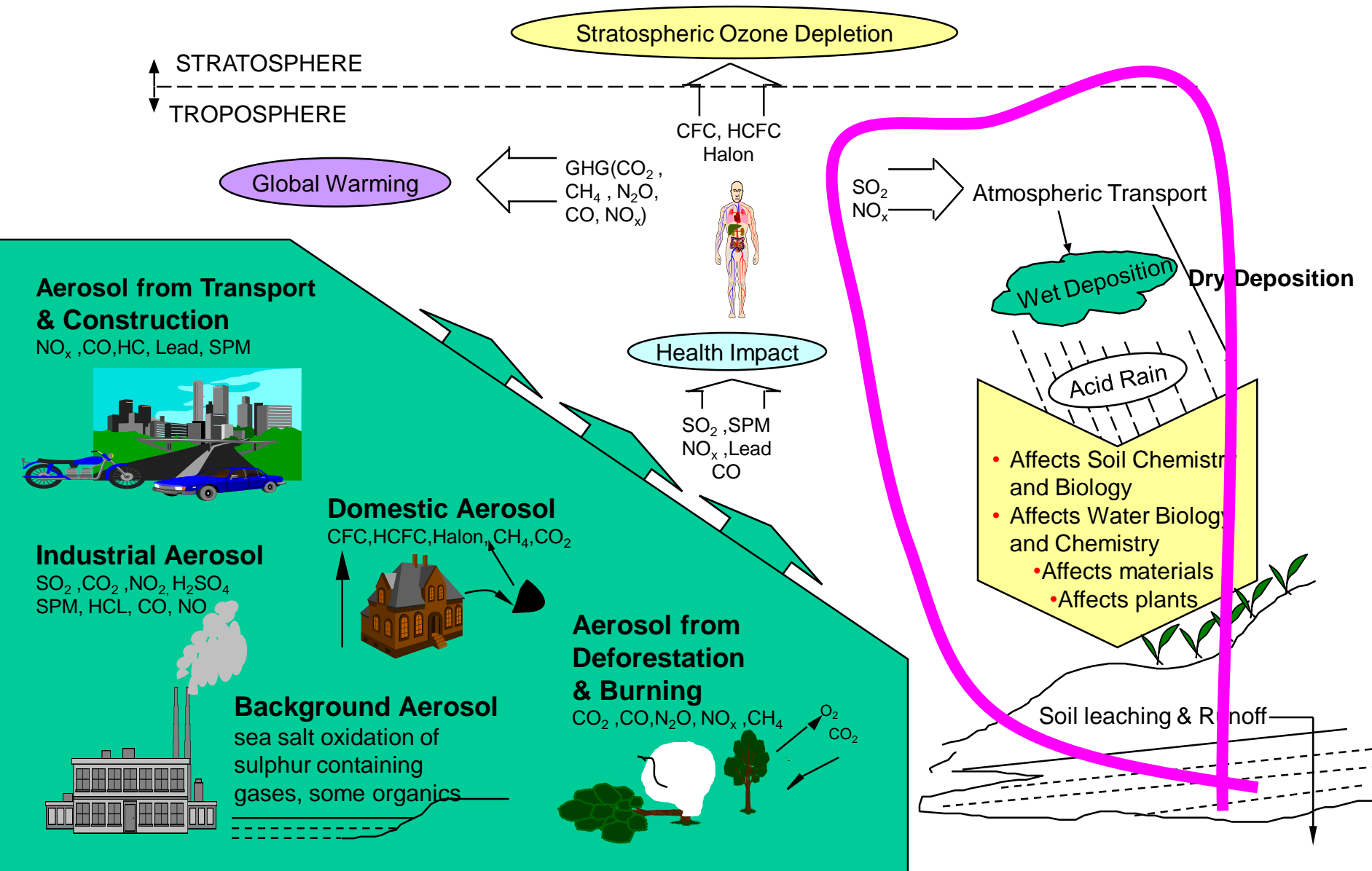
### Sub-regional approach:

**Policy Dialogue and Networking**  
**Science and capacity building**  
**Information for policy making**





# Atmospheric Issues





# Malé Declaration: Conceptualization

POLICY DIALOGUE ON REGIONAL AIR POLLUTION ISSUES  
19-20 March 1998

## Main Aims

Create a broader dialogue of the air pollution issues in Asia

Promote the policy cycle in South Asia by:

- (i) re-affirmation that transboundary air pollution is a priority issue for South Asia;
- (ii) agreeing upon a draft action plan for inter-governmental activities at the policy dialogue.

## Participants

Target countries for the phase I (South Asia)  
Bangladesh  
Bhutan  
India  
Maldives  
Nepal  
Pakistan  
Sri Lanka  
ADB, ASEAN, SACEP  
AIT, ERTC  
Sida, SEI, UNEP

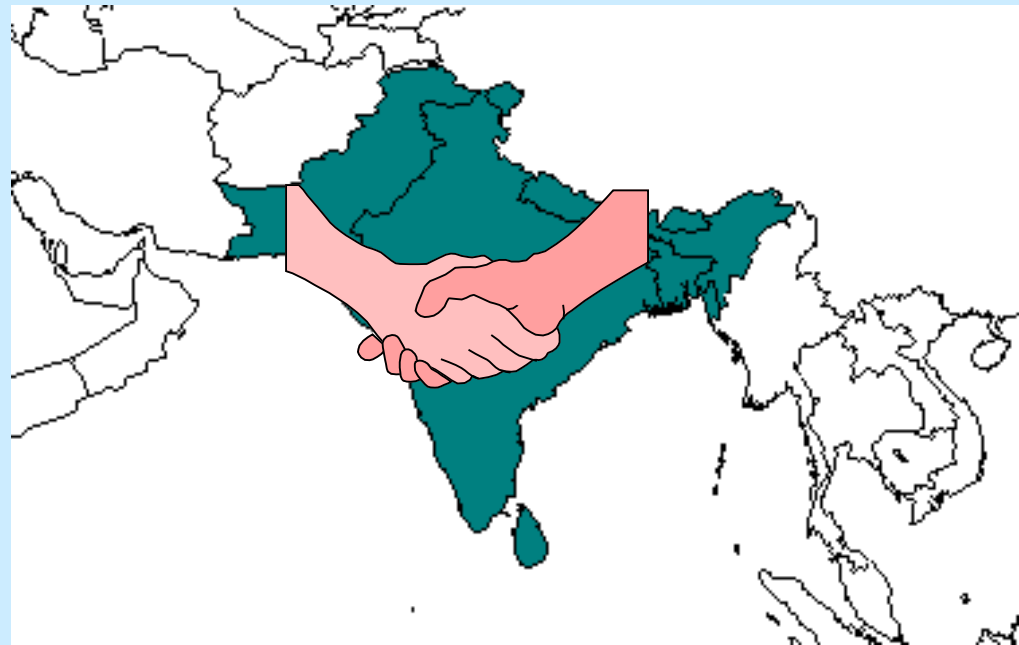


## Malé Declaration: Adoption

**Adopted at SACEP GC Held  
on 22 April 1998 in Malé,  
Maldives.**

**Inaugurated by His  
Excellency Mr. Maumoon  
Abdul Gayoom, President of  
Maldives**

**Attended by ministers and  
high level policy makers  
from South Asian  
Environment ministries.**





## Malé Declaration: Implementation

**PHASE I: Awareness and preparation of the baseline information**

**PHASE II: Local capacity development for monitoring and analysis**

**PHASE III: Provide scientific information; assist in activities to reduce pollution**



# Baseline studies and network

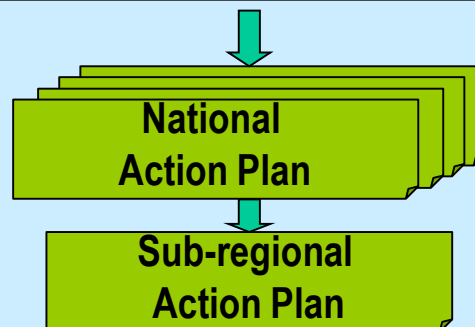
## Network Establishment

Identification of NEAs  
Establishment of NEAs  
Network&Database of Experts/Institutions

## Baseline Studies

Guidelines for the Baseline Studies  
Preparation of Baseline Studies  
Baseline Studies & Database

## Action Plans







# National Implementing Agencies

Iran

DoE

Pakistan

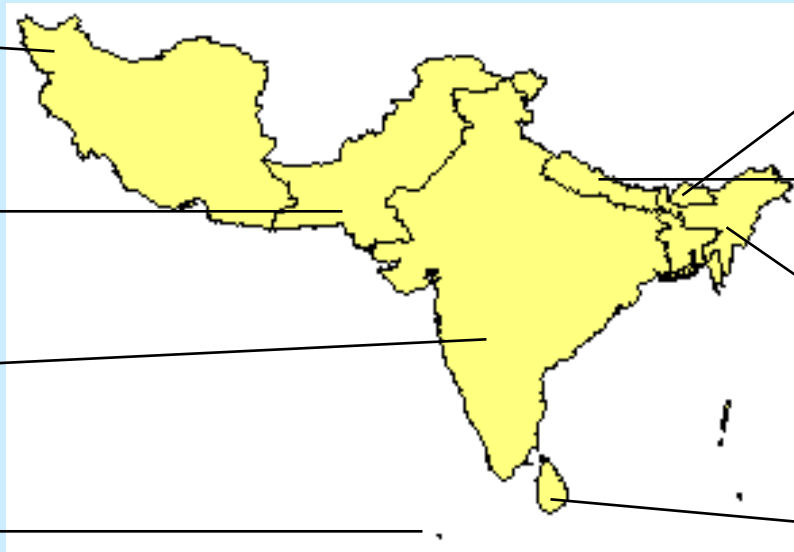
Pak-EPA

India

CPCB

Maldives

MEEW/DoM



Bhutan

NEC

Nepal

MoPE/ICIMOD

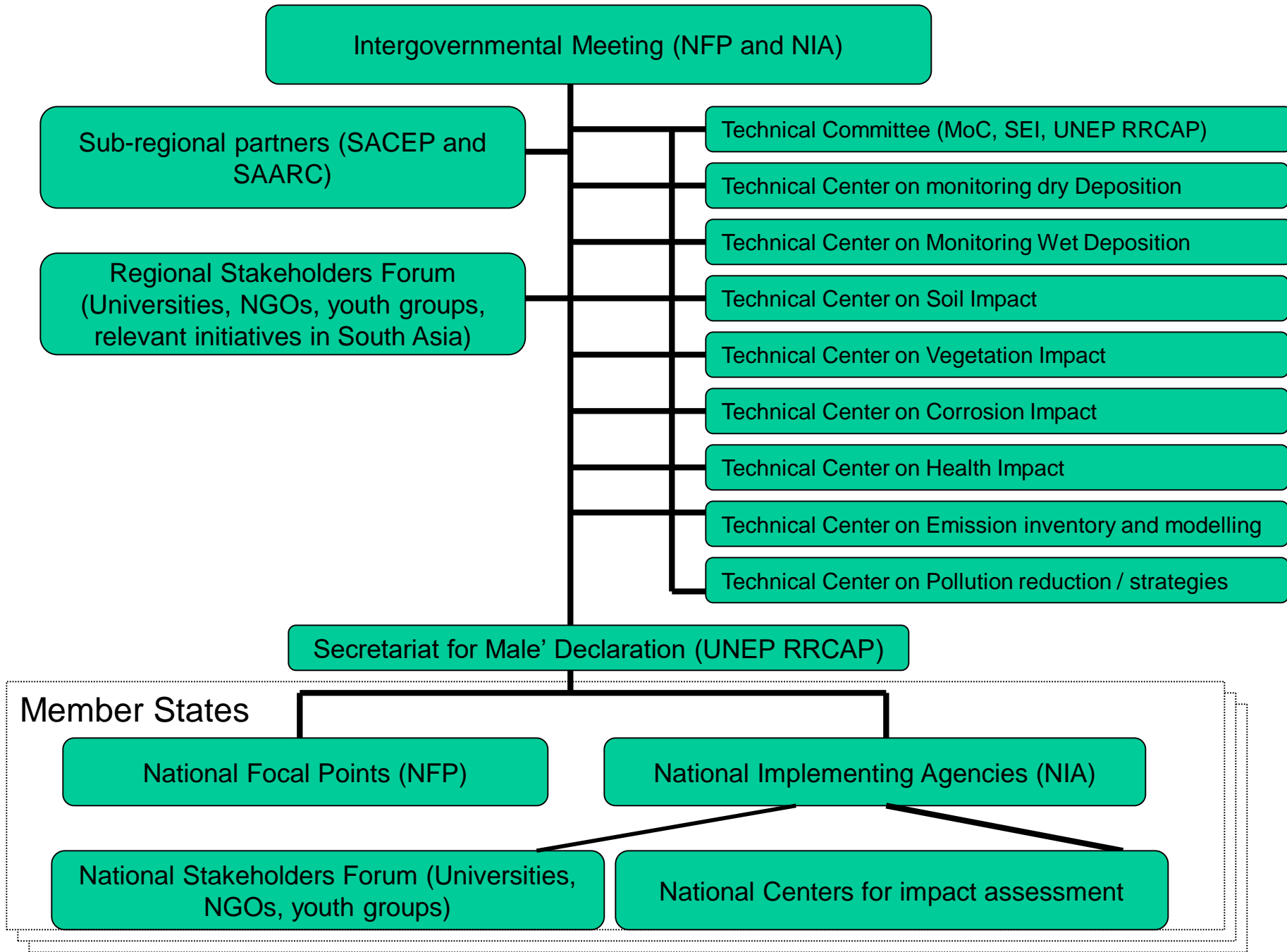
Bangladesh

MoEF

Sri Lanka

CEA

# ORGANIZATIONAL CHART OF MALE' DECLARATION





# Malé Declaration Network

September 06





# Monitoring: guidelines

**Technical Manual**

**Training materials**

**Equipments (site and lab)**

**Consumables (site and lab)**

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

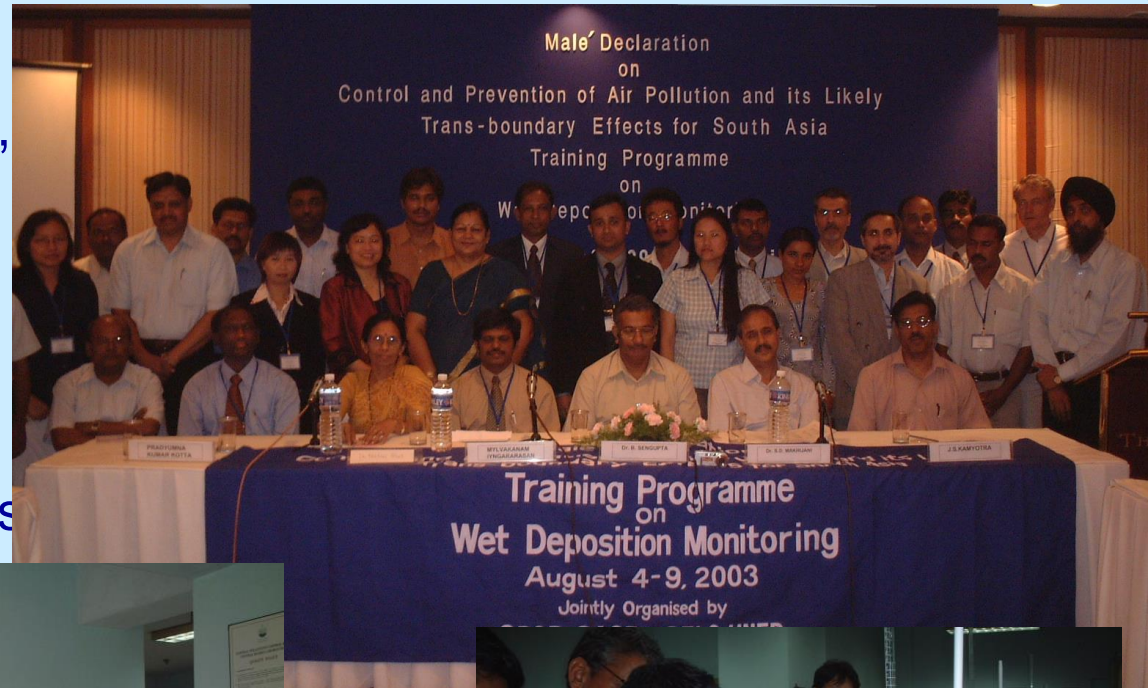


**June 2003**



# Monitoring: Training Programs

- 4-9 Aug 2003, CPCB, Delhi
- To familiarize the participants on analyzing rainwater for anions and cations





# Monitoring: Equipment Details

Sampling

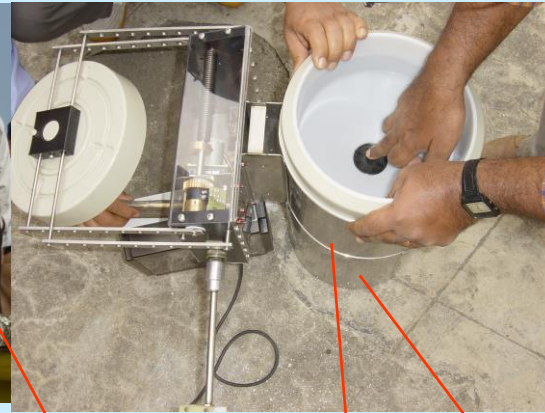
Analysis

HVS

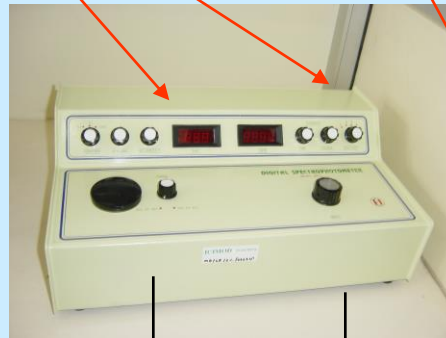
Diffusive

Wet only Col.

Bulk Col.



PM<sub>10</sub>  
0

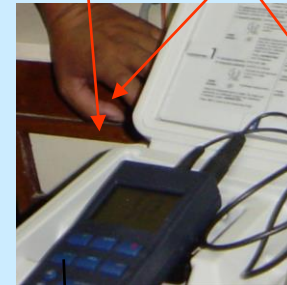


SO<sub>2</sub>  
2

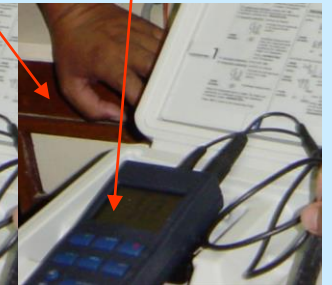
NO<sub>x</sub>  
x

IVL

SO<sub>2</sub>  
NO<sub>2</sub>



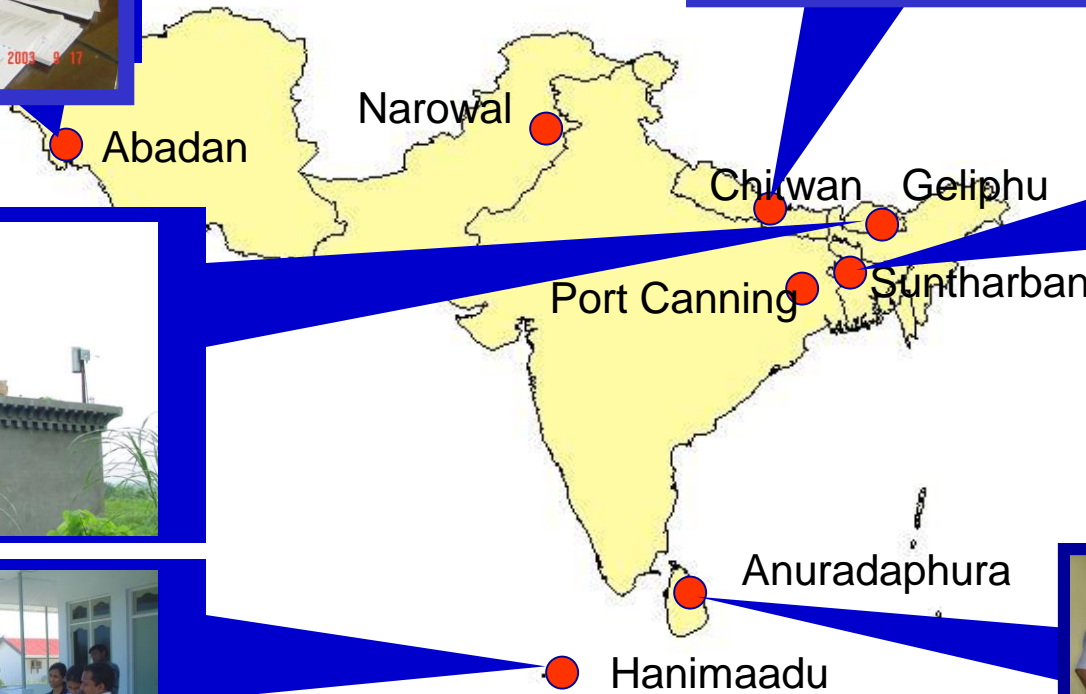
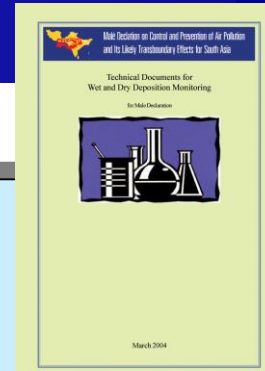
EC



pH



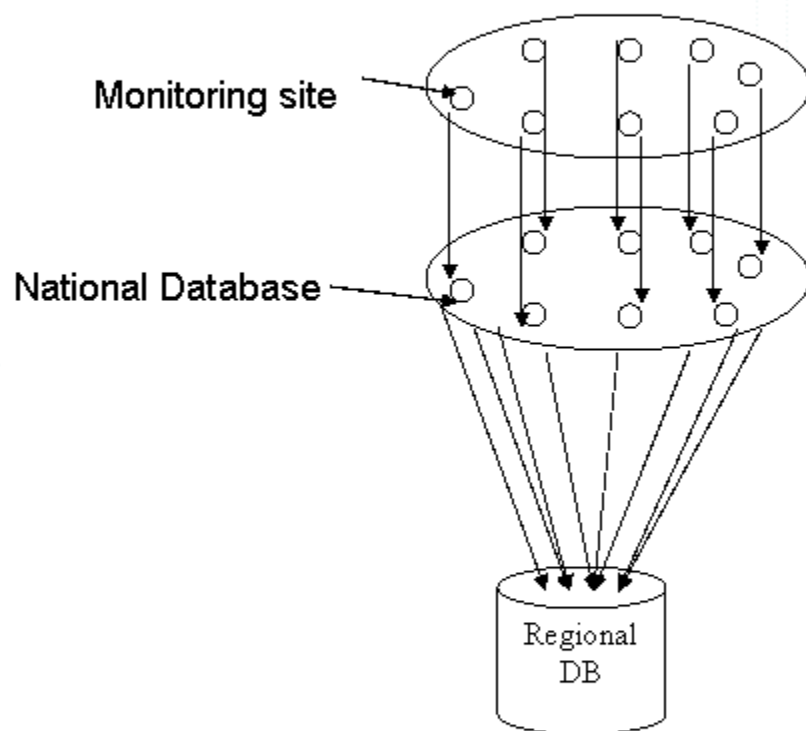
# Monitoring: monitoring sites



Trained national institutions.  
Established monitoring stations.



## Ob2: Capacity Building on Monitoring ...



- **Central compilation, evaluation, and storage of data**
  - Data report 2005/06
  - Regional data base is available online for the NIAs:  
[www.rrcap.unep.org/md/](http://www.rrcap.unep.org/md/)

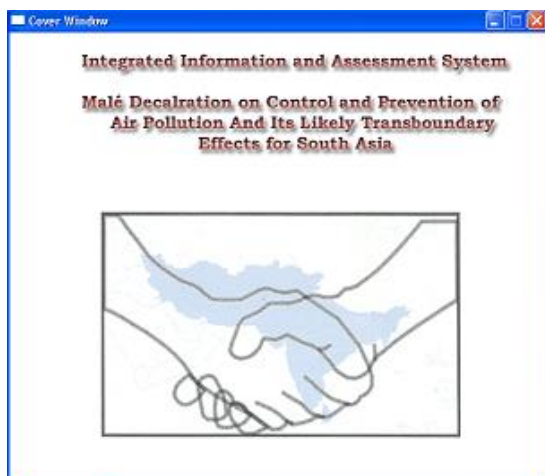




# Emission inventory and modeling



Training workshop; July 2006, RRCAP



Integrated Information and Assessment System (IIAS)

Newsgroups:

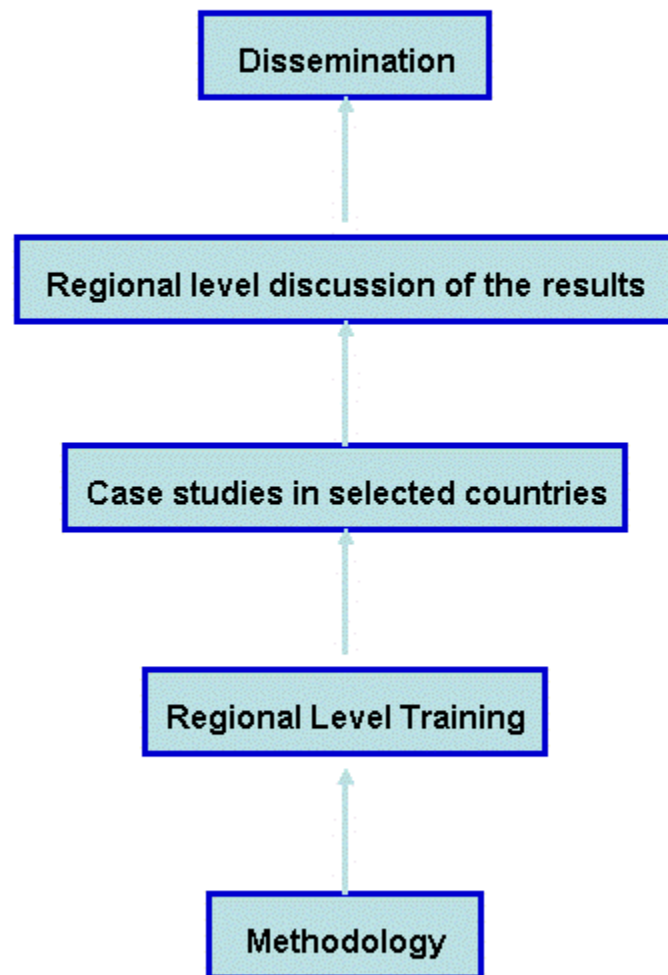
MD\_IIAS@rrcap.unep.org

## Training workshop on emission inventory, scenario development, and Integrated modeling

- Emissions inventory manual accompanied by a workbook (Excel) for compilation
- Input for the development of a comprehensive manual for the development of emission scenarios
- Introduction of MATCH model for atmospheric transport/transformation and deposition, and HYSPLIT model for air mass trajectory computation
- An integrated information and assessment system (IIAS) and Users' Manual
- Trained personnel from all the participating countries on emission inventory and integrated assessment model



# Ob4: Capacity Building on Impact Assessment



## Focus areas

- Develop urban integrated assessment capacity
- Strengthen knowledge on human health impact assessment
- Strengthen knowledge on crops impact assessment
- Strengthen knowledge on corrosion impact assessment, model

## On going case studies:

- Urban integrated assessment: Nepal
- Human Health: Bangladesh
- Crop: Bhutan, India, Iran, Pakistan, Sri Lanka
- Corrosion impact: Bangladesh, India, Iran, Maldives, Nepal and Sri Lanka



## Stakeholders Participation

- This is part of the expansion of the network
- The Objectives are
  - Increase awareness
  - Share views and ideas on implementation of the “Male” declaration
  - Improve exchange of information between those who manage sources of pollution and those affected by it



## Who are Stakeholders

- In Air pollution they are
  - Those **responsible** for air pollution
    - Manufacturers and users of Automobiles, Industrialists, etc.
  - Those who are **affected** directly or through assets
    - Pedestrians, Cyclists, Police man, Women, Tribals, Householders, Slum dwellers, etc.
  - Those who have **interest or influence**
    - Governments, Local bodies, Technologists, Experts, NGOs and Doctors



## Stakeholder's participation



National Stakeholder meeting was held in Maldives



National Stakeholder meeting was held in Delhi on 24 September 2002.



Regional Stakeholder's Forum 8 Oct 03; Dhaka, Bangladesh

# Information Exchange and Rise Awareness



<http://www.rrcap.unep.org/malewebboard>

## (i) Publication on Male' Declaration

- Completed the first draft
- Draft will be reviewed by the IG8

## (ii) Newsletter and Brochure

- 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

## (iii) Information sharing

- Among the countries and other networks

## (iv) Networking with youths

- Established link with South Asia Youth Environment Network (SAYEN).



# Promote prevention



Eco village was opened by the President of Sri Lanka in March 2006



## (i) Case studies

- Provided technical support for an eco-village demonstration project in Sri Lanka

## (ii) Good practices

- Identify the areas for pollution control and abatement in each of the participating countries;
- Collate success stories (for pollution control and abatement);
- Dissemination of success stories in the participating countries.