



Male' Declaration



by
Secretariat
UNEP

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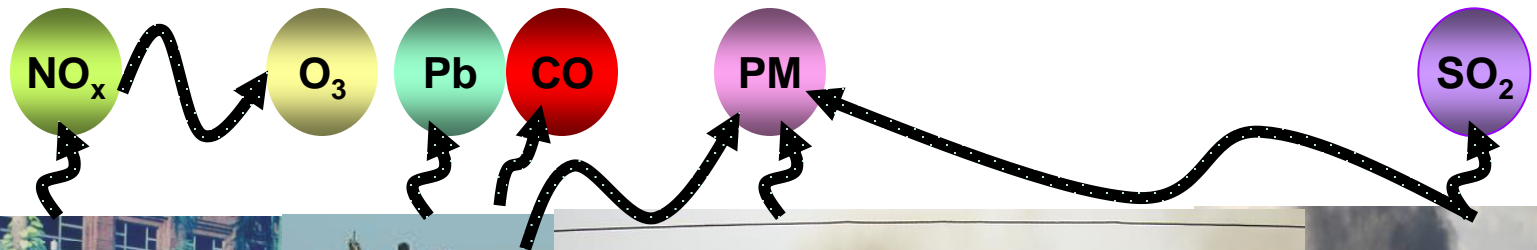
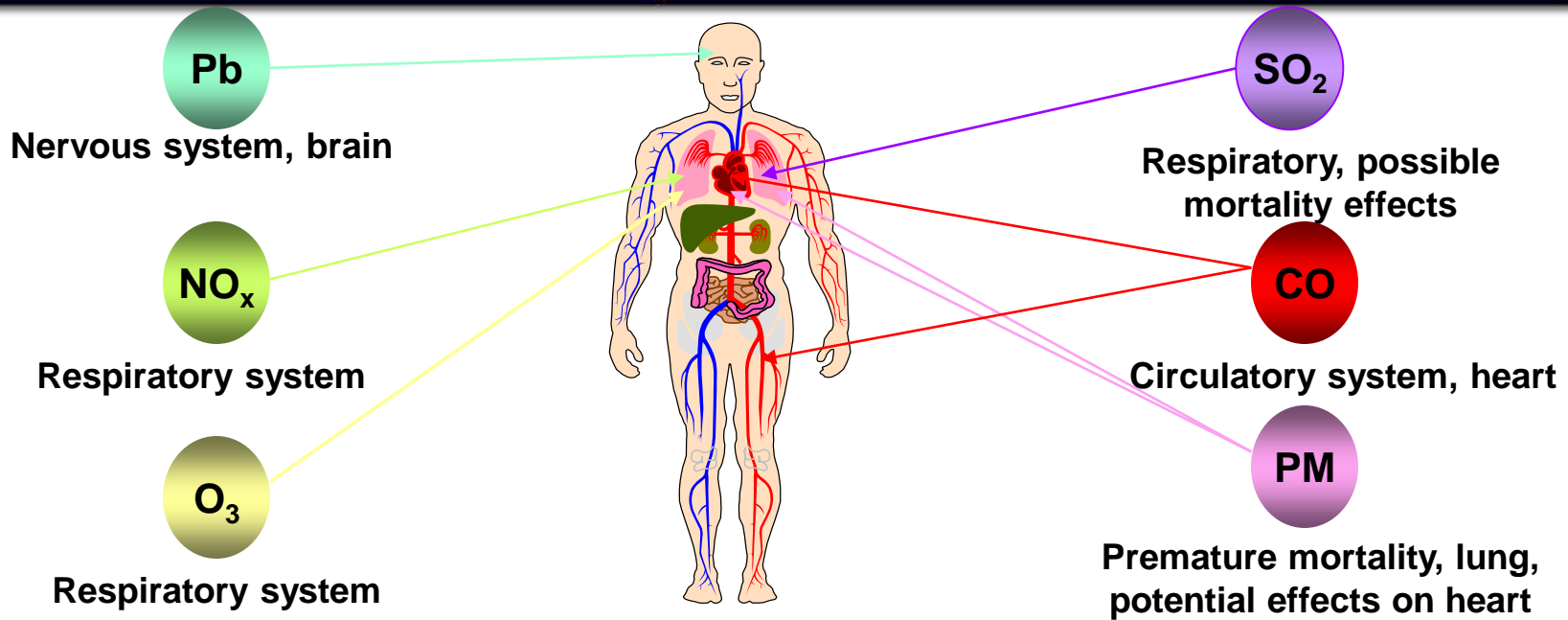
Air Pollution

Existing Regional Cooperation

Male' Declaration

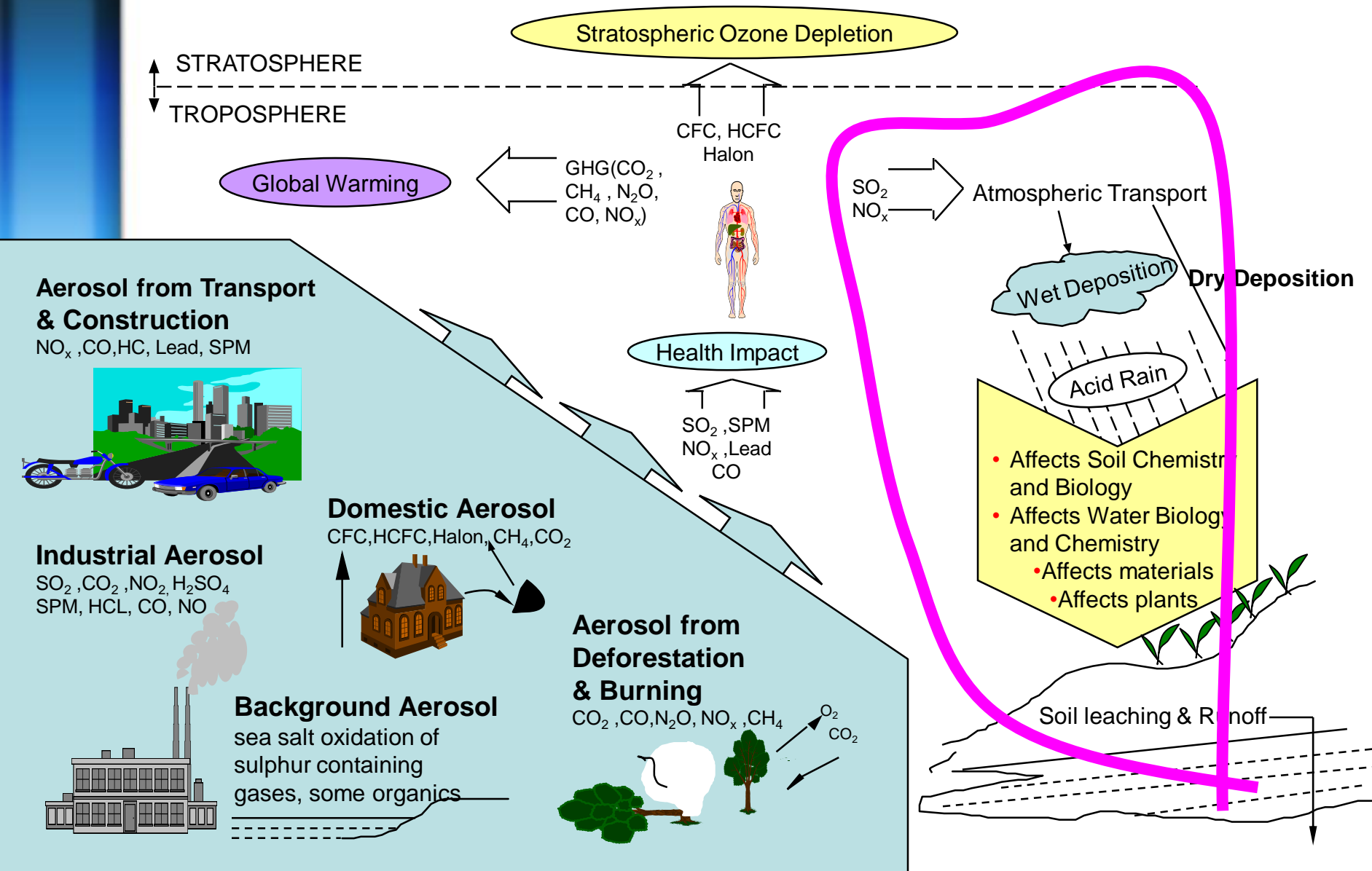
Implementation of Male' Declaration

Air Pollution



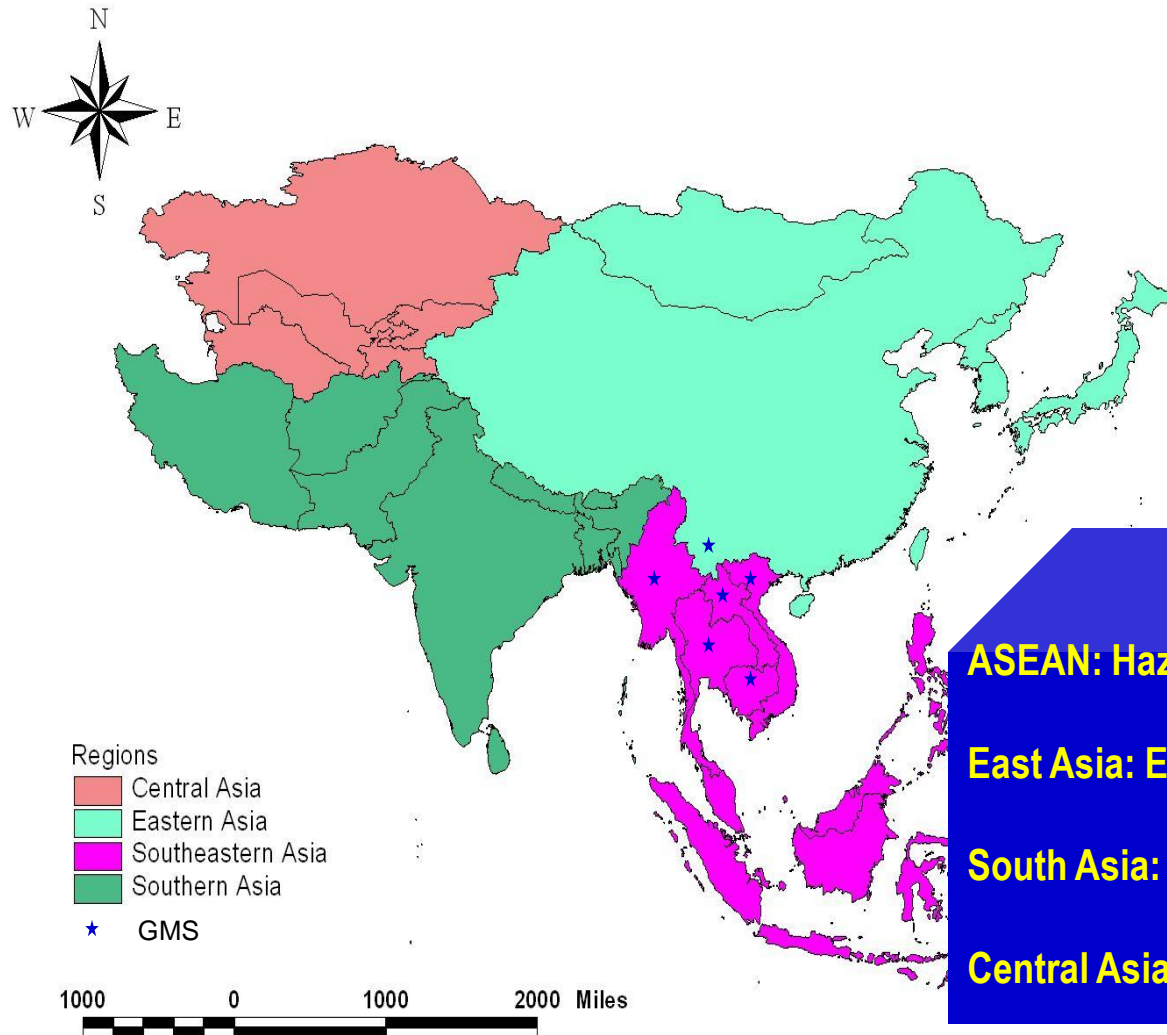


Transboundary Air Pollution





Existing Regional Cooperation in Asia



ASEAN: Haze agreement

East Asia: EANET

South Asia: Male' Declaration

Central Asia: Environment Convention



Where we want to be?

Clean air

Steps

- Awareness among policy makers
- Capacity building and development of science
- Information for control and prevention of air pollution



Malé Declaration: Policy Dialogue

POLICY DIALOGUE ON REGIONAL AIR POLLUTION ISSUES
19-20 March 1998, UNEP RRC.AP, Bangkok, Thailand

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 transboundry 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

India

Nepal

Pakistan

Sri Lanka

ADB, ASEAN, SACEP

AIT, ERTC

Sida, SEI, UNEP

Composition

Policy Makers
Scientists

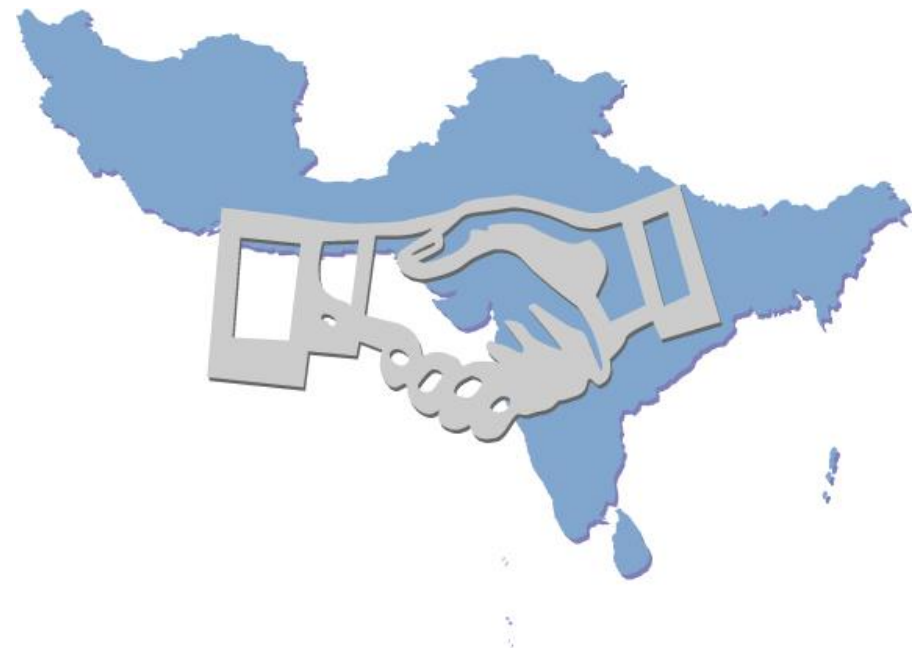


Malé Declaration: Adoption

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

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

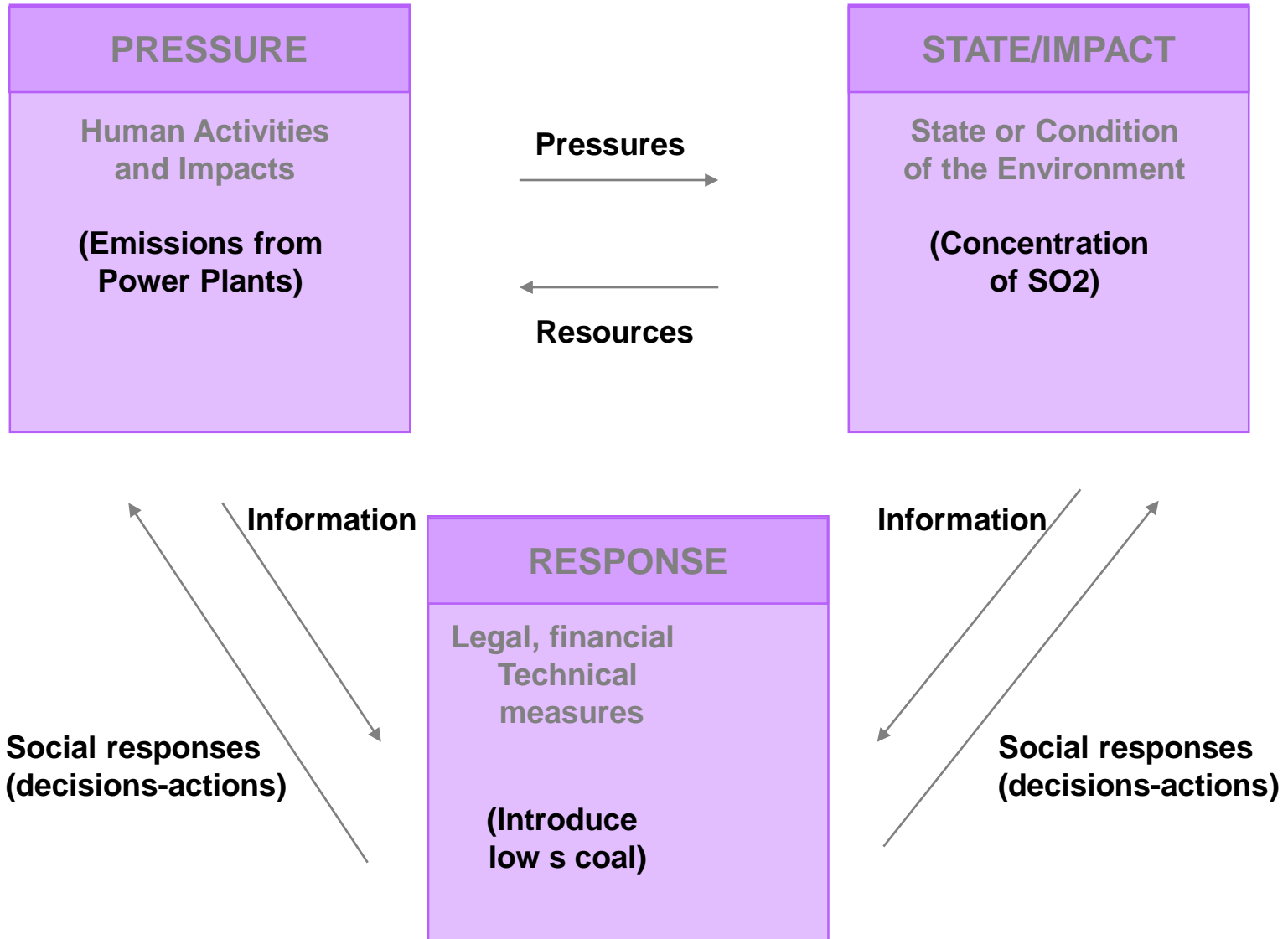
Attended by ministers and high level policy makers from South Asian Environment ministries.





Male' Declaration Implementation

PSIR Model

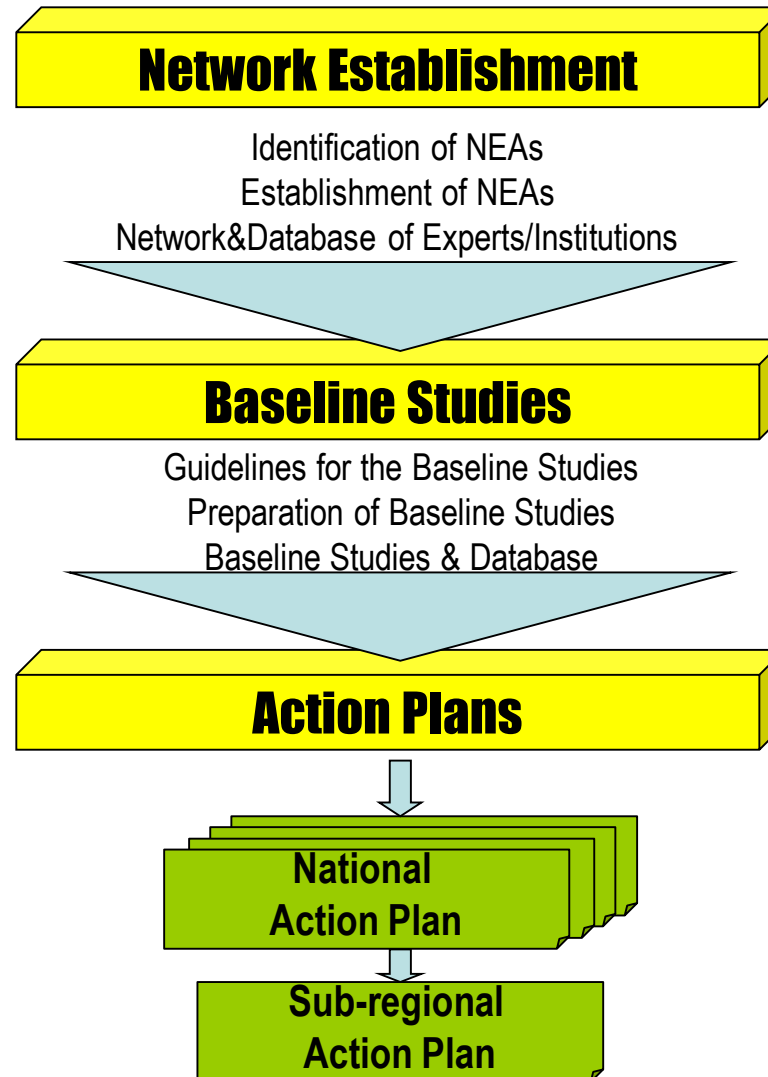




PHASE I: Implementation

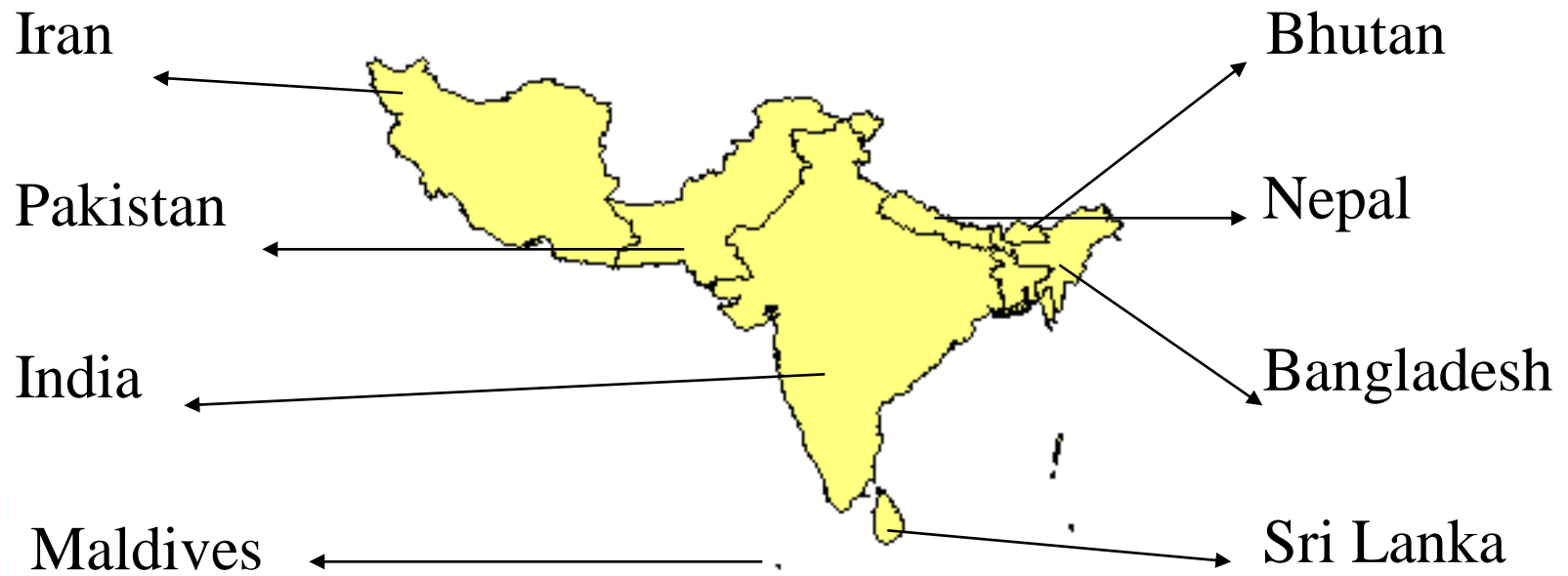


Malé Declaration: Phase I Implementation



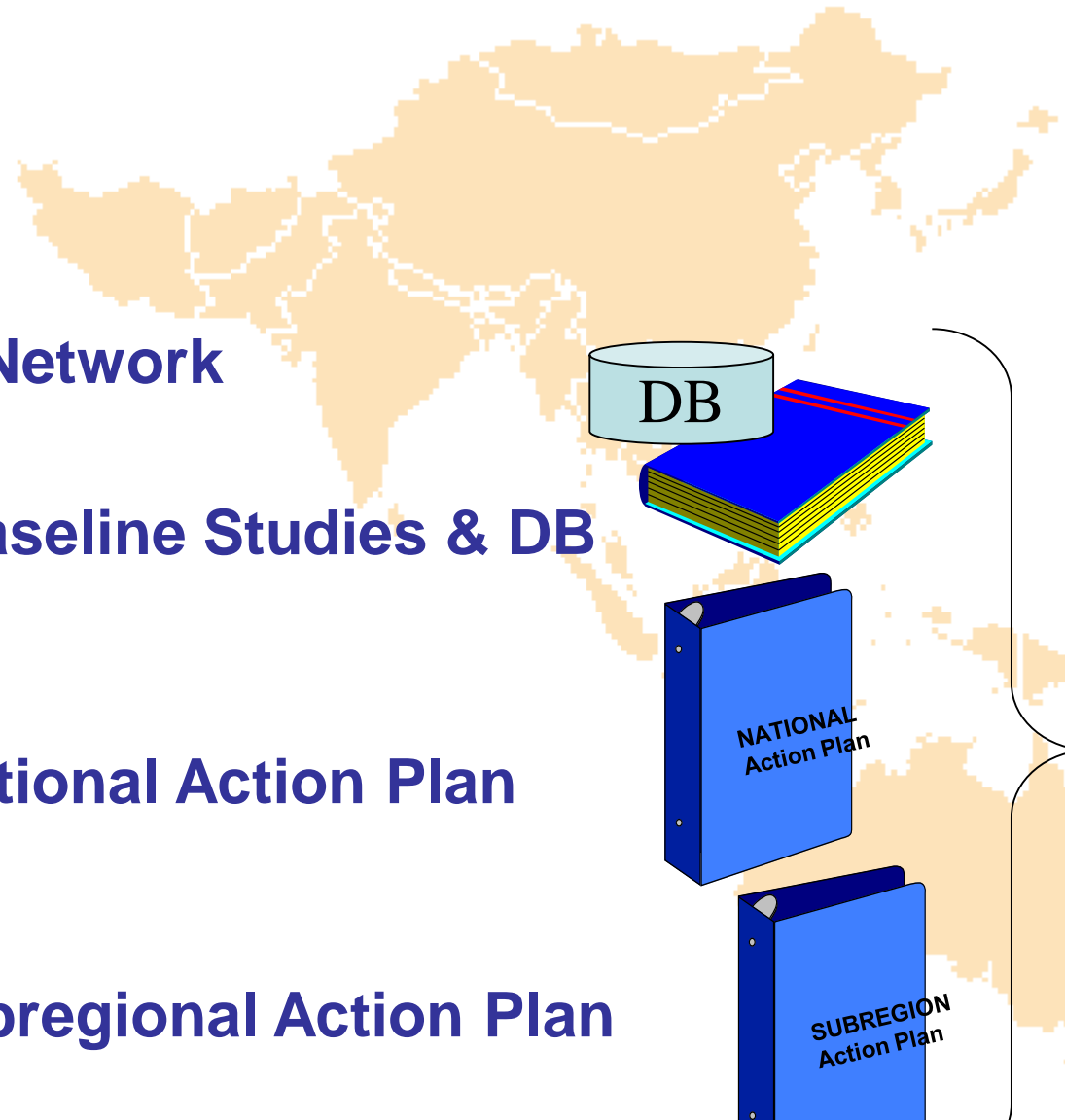


Malé Declaration: National Implementing Agencies

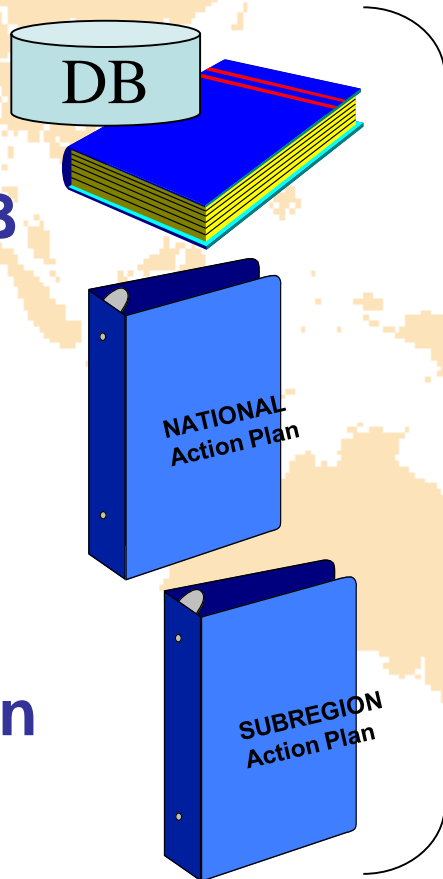




Baseline information and National Action Plans



- Network
- Baseline Studies & DB
- National Action Plan
- Subregional Action Plan



Background
for the
phase II
implementati
on



PHASE II: Implementation



Capacity building: Equipment Details

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



Capacity building: Equipment Details

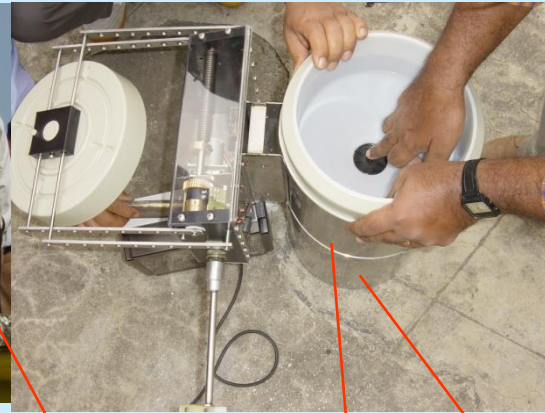
Sampling

HVS

Diffusive

Wet only Col.

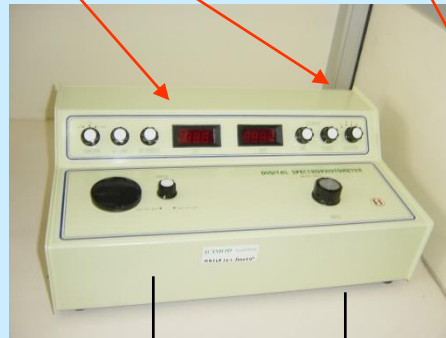
Bulk Col.



Analysis



PM₁
0

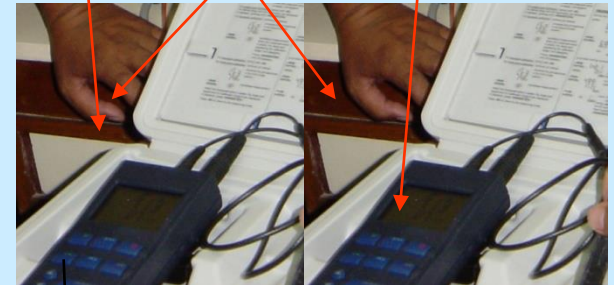


SO₂
2

NO_x
x

IVL

SO₂
NO₂

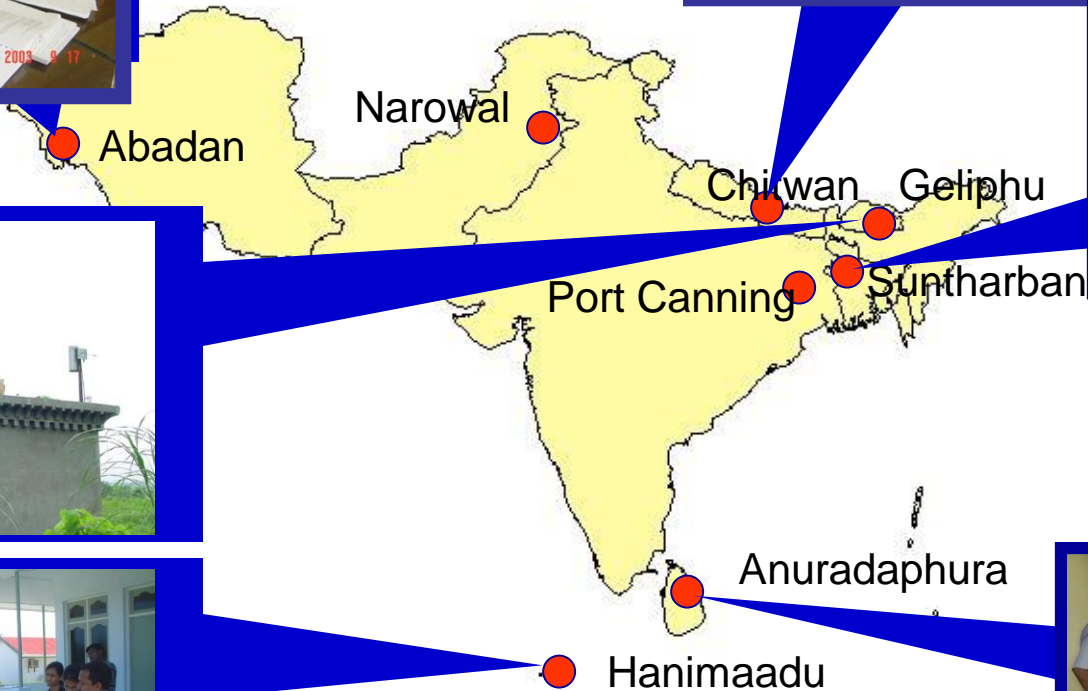
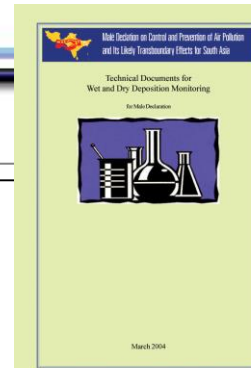


EC

pH



Monitoring

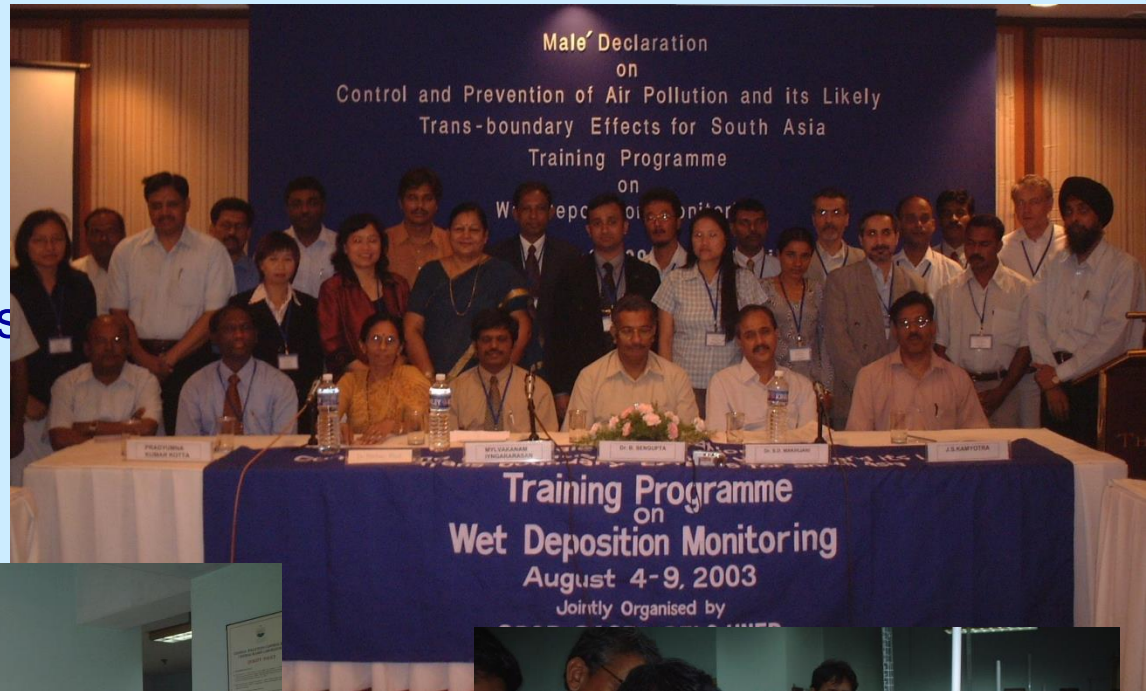


Trained national institutions.
Established monitoring stations.



Capacity building: Regional Training Programs

- To familiarize the participants on analyzing rainwater for anions and cations





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



PHASE III: Implementation



UNEP



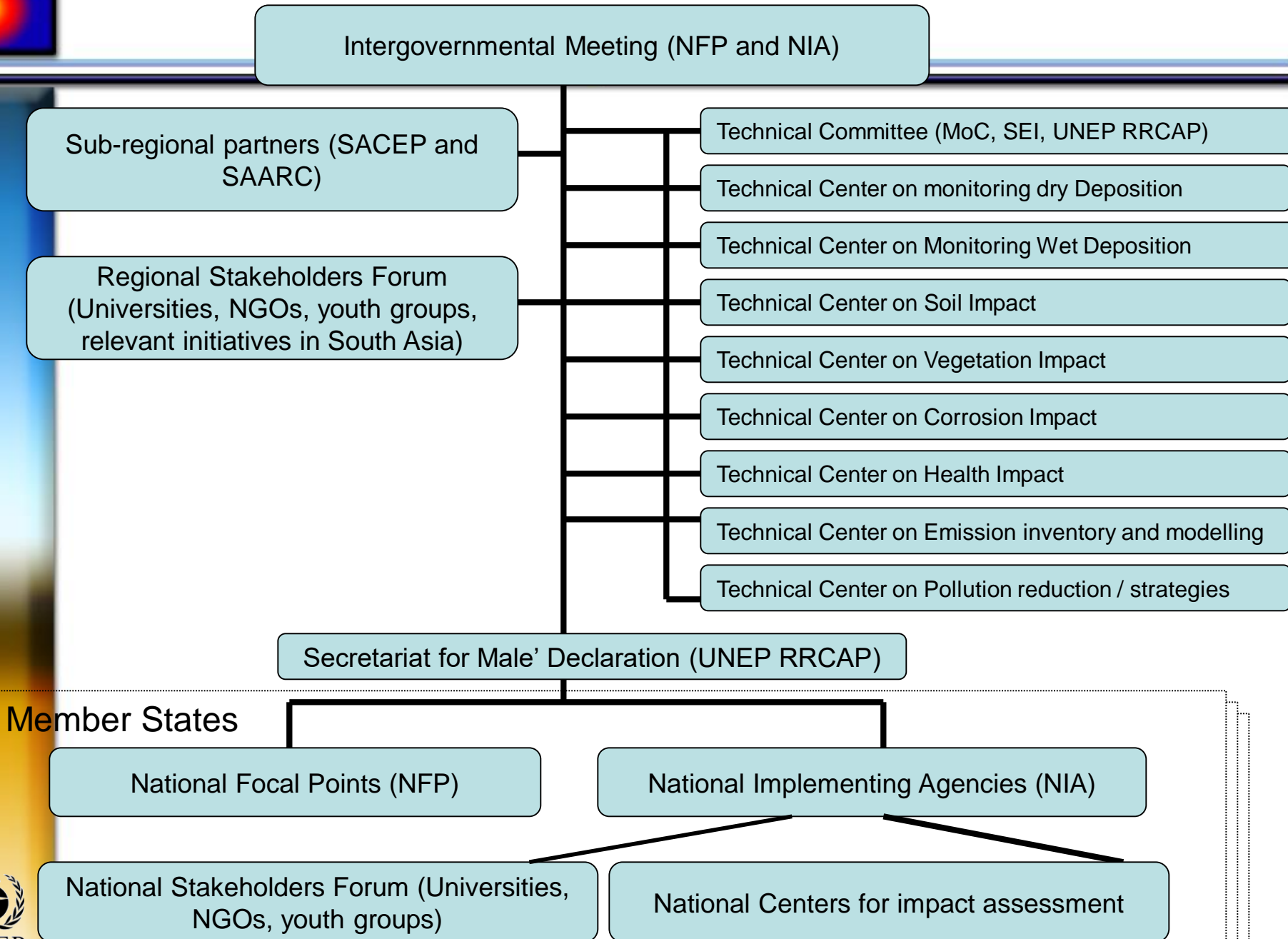
Phase III Objectives



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

ORGANIZATIONAL CHART OF MALE' DECLARATION





Ob2: Capacity Building on Monitoring ...



Regional Training Programme; March 2006, RRCAP, Bangkok

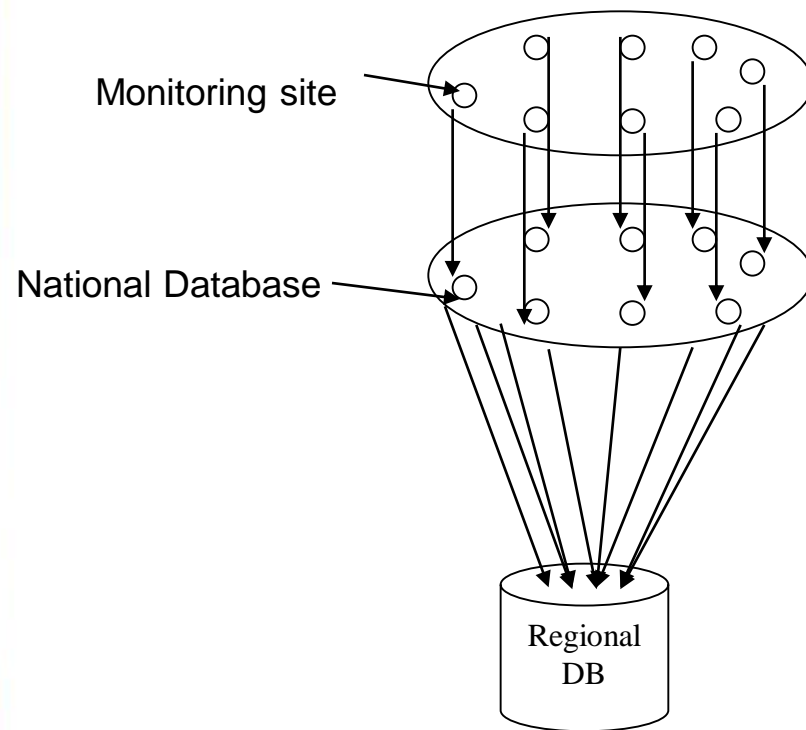


In-country February 2006; Kulna, Bangladesh

- **Regional Training Programme**
 - Fourth Regional training programme:
 - introduced the QA/QC;
 - Provided recommendations for the review of monitoring methods
- **National Training programmes**
 - Four technical personnel from the Department of Meteorology and eight technical personnel from Pak-EPA were trained on sampling and analysis of air pollutants.
 - Nine technical personnel from DoE, Bangladesh were trained on operating AAS



Ob2: Capacity Building on Monitoring ...



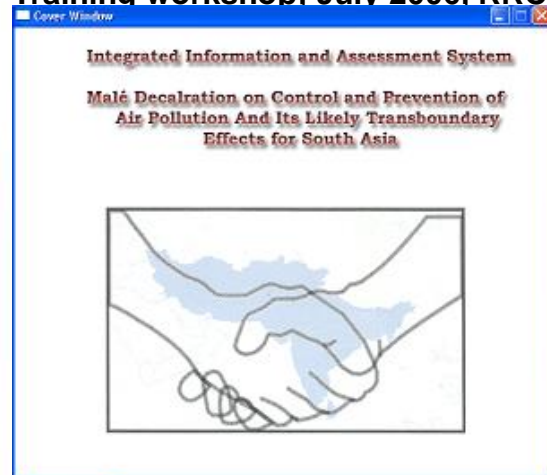
- **Central compilation, evaluation, and storage of data**
 - Data report 2005/06
 - Regional data base is available online for the NIAs:
www.rrcap.unep.org/md/



Ob3: Capacity Building on Inventory and Modeling



Training workshop: July 2006. RRCAP



Integrated Information and Assessment System (IIAS)

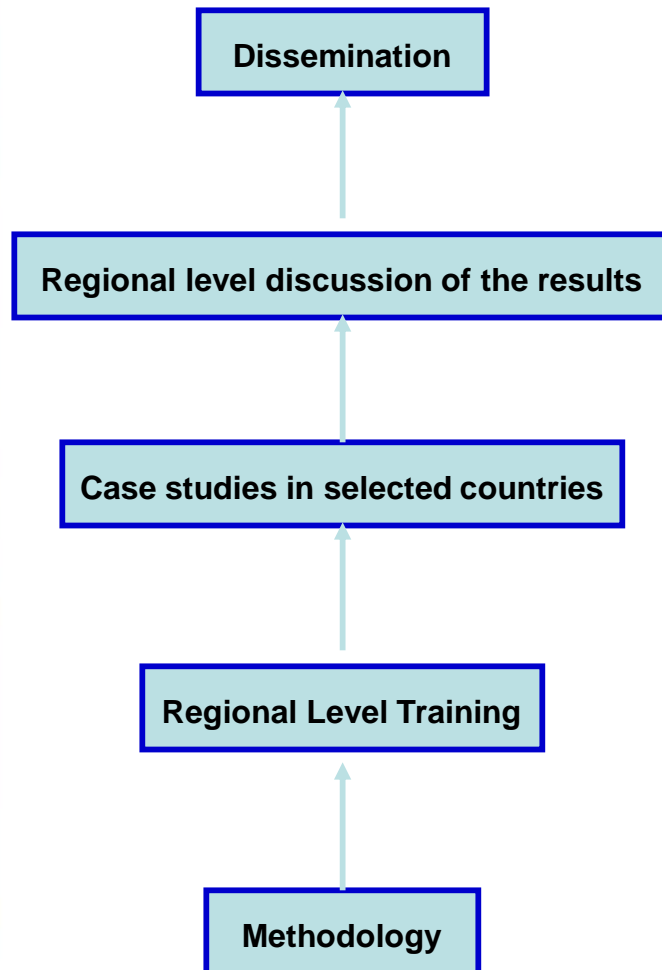
3 Training workshops on emission inventory, scenario development, and Integrated modeling (July 06; Feb 07; Jan 08)

- 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



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 Programme in Nepal;
November 2006**

National Training on Rapid Urban Assessment; November 2006

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

Case study
Kathmandu, Nepla



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



Ob5: Decision Support Information

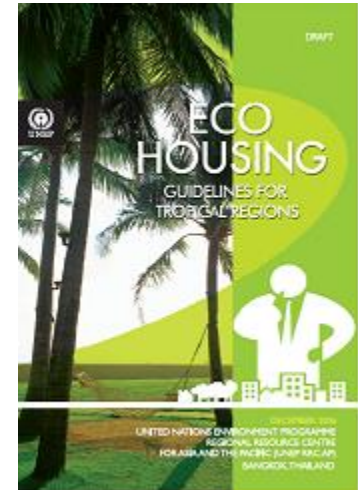


Eco village was opened by the President of Sri Lanka in March 2006



(i) Technical support for demonstration

- Provided technical support for an eco-village demonstration project



(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.

Ob6. Rise Awareness



(i) Publication on Male' Declaration

- Draft was adopted the IG8
- will be published in 2008

(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

(iv) Networking with youths

- South Asia Youth Environment Network (SAYEN) is participating in the awareness activities.

(v) National Level Awareness- Bangladesh

- TV programmes
- Stage drama
- Posters

IG 9 Adopted plan for the next 3 years

Objectives

- 1. Strengthen regional cooperation and move towards development of a regional agreement;**
- 2. Strengthen the air pollution monitoring network and conduct regular monitoring of high quality;**
- 3. Enhance the impact assessment capacity of the national institutions and assess the impacts of air pollution in the participating countries;**
- 4. Enhance the capacity of NIAs regarding emission inventory development, atmospheric transfer of pollutants and Integrated Assessment Modeling;**
- 5. Assist the member countries of the Male' Declaration with air pollution reduction policies**
- 6. Raise awareness for action through targeted dissemination**

Activities in Asia

Governmental Meeting on Urban Air Quality Management in Asia

Yogyakarta Summary

Long term vision on Urban Air Quality Management

Convene meetings of initiatives on regional air pollution

Closer co-operation and joint action among sub-regional networks in Asia

Technology transfer and methodology harmonization on monitoring, impact assessment, Inventory compilation

Standardized guidelines and joint programmes