

Asia-Pacific Network for Global Change Research

Capacity on Climate Change Adaptation,
Vulnerability & Assessment

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(<http://www.apn-gcr.org>)

15th Asia-Pacific Seminar on Climate Change

11-15th September 2005, Yokohama, Japan

Outline of Presentation

- APN - Brief Overview
- Climate, Adaptation, V&A
- CAPaBLE Projects

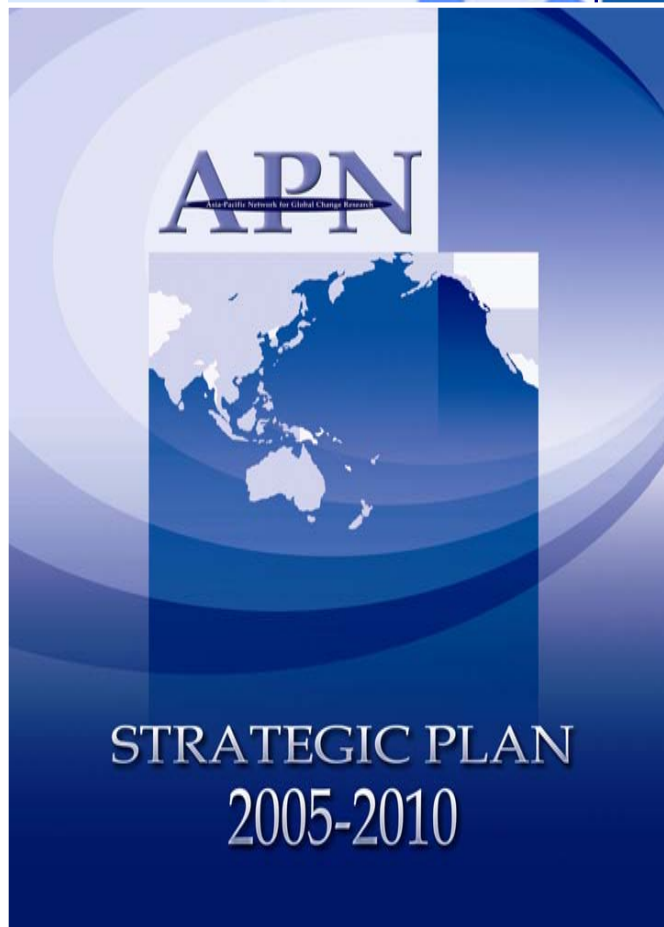
APN – A Brief Overview

**(Established in '96, 21 member countries)
Inter-governmental network in the Asia-Pacific Region whose mission is to:**

- Identify, explain and predict changes in the context of both natural and anthropogenic forcing
- Assess potential regional and global vulnerability of natural and human systems
- Contribute, from the science perspective, to the development of policy options for appropriate responses to global change that will also contribute to sustainable development



Learn more about the APN



The Asia-Pacific Network for Global Change Research (APN) is an inter-governmental network for the promotion of global change research and links between science and policy making in the Asia-Pacific Region.

15 March 2005
Announcement of the Public Forum "Global Change, Research and Environmental Education: APN's Expected Roles", in celebration of the 10th Anniversary, 11 April, 2005.

2 March 2005
Updated Calendar

4 February 2005
Updated APN Newsletter, Vol. 11 No. 1 (Jan. 2005)

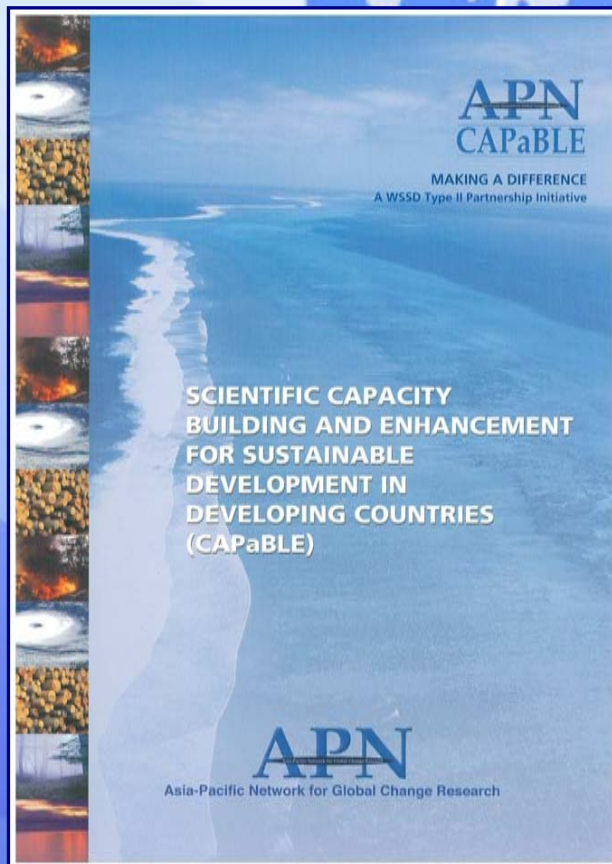
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CAPaBLE

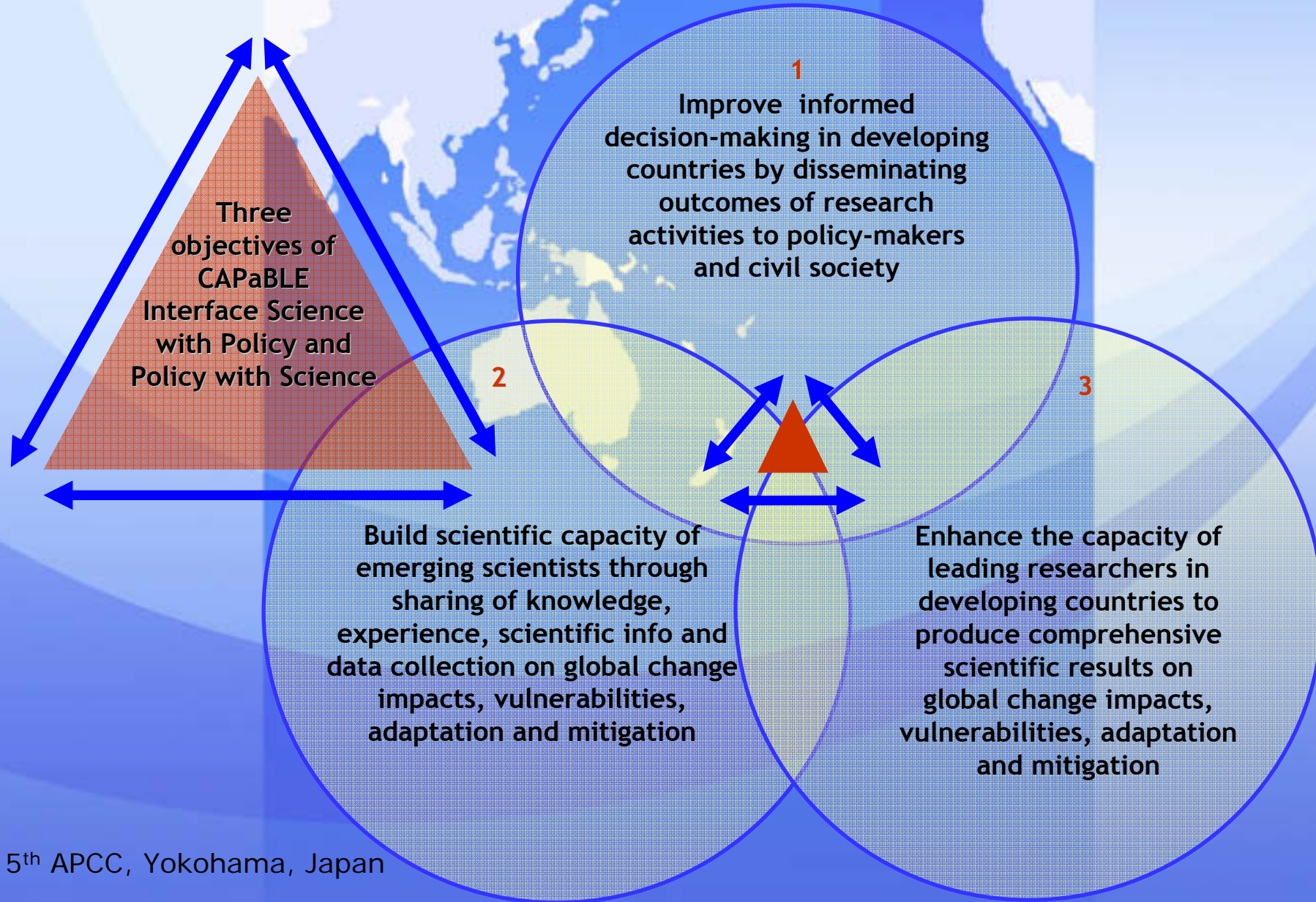
Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries



The **CAPaBLE** Programme is a concrete initiative to realize parts *107 to 114* of the WSSD's JPOI

The CAPaBLE programme is developing and enhancing scientific capacity in developing countries to improve their decision-making in the target areas related to **climate change and water and food security that are directly linked to their sustainable development.**

Objectives of CAPaBLE



Sensitive Systems

- Water resources
- Agriculture, forestry, fisheries
- Human settlements
- Industry, energy, financial services

Vulnerabilities

- Food and water security
- Incomes and livelihoods
- Human health
- Infrastructure



Climate Change Vulnerability



Socio-economic sectors including water resources, agriculture, forestry, fisheries, human settlements, etc., are highly climate sensitive

Climate Change Vulnerabilities

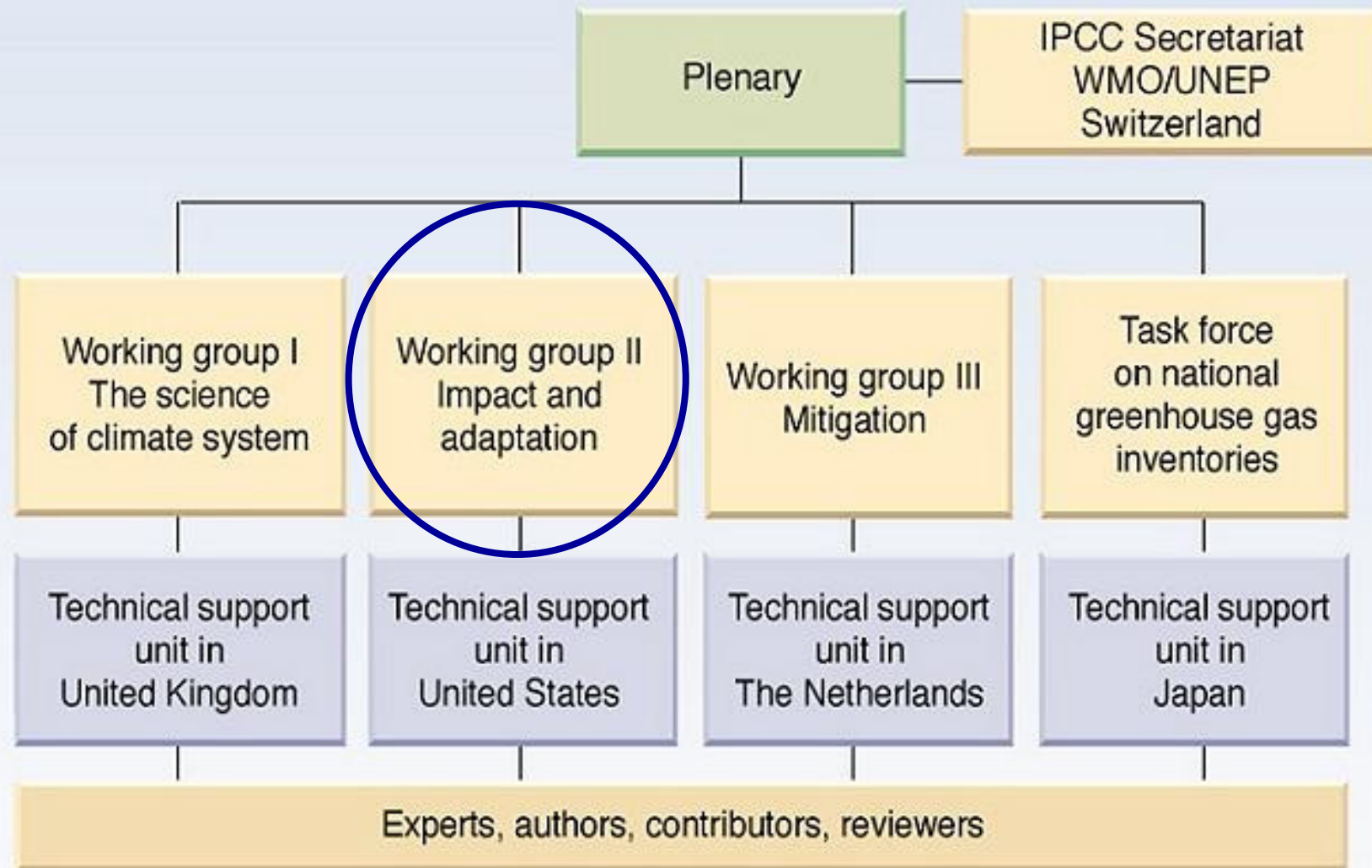


Bangladesh, October 2000

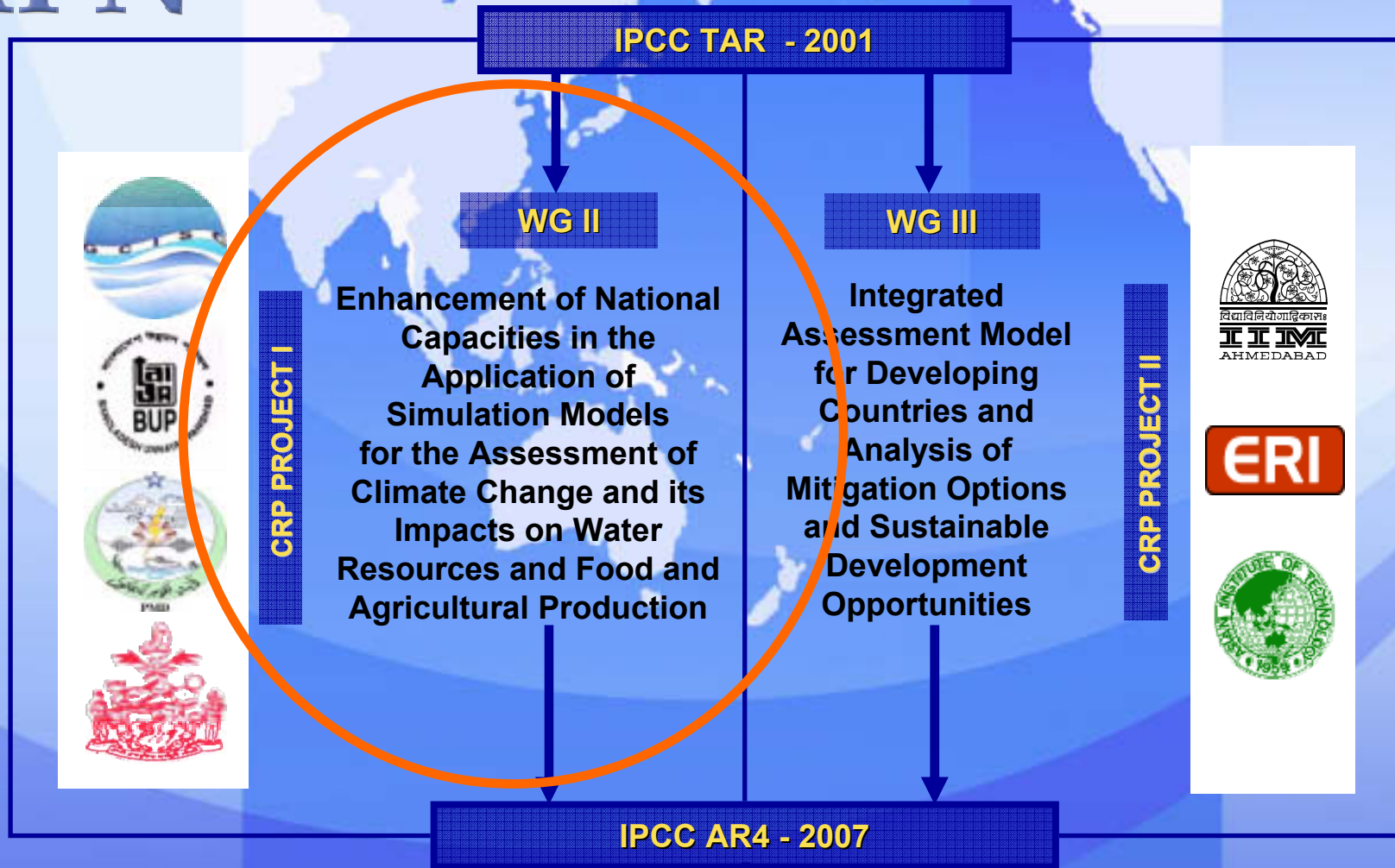
Responding to Climate Change Adaptation and V&A through WSSD & IPCC



Intergovernmental Panel on Climate Change (IPCC)



Comprehensive Research Projects



Capacity enhancement of leading researchers in developing countries to produce comprehensive scientific results on climate change impacts, vulnerabilities, adaptation and mitigation strategies

IPCCTAR: Working Group II

Enhancement of National Capacities in the Application of Simulation Models for the Assessment of Climate Change and its Impacts on Water Resources and Food and Agricultural Production

1

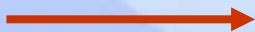
Enhance climate change-related research capacity of Bangladesh, Nepal and Pakistan in the areas of Regional Climate Modelling, Crop Simulation Modelling and Watershed Modelling

2

Formulate climate-change scenarios, assess the corresponding impacts on water resources and agricultural production, and identify appropriate adaptation measures to cope with the adverse impacts

Enhance climate change-related research capacity of Bangladesh, Nepal and Pakistan in the areas of Regional Climate Modelling, Crop Simulation Modelling and Watershed Modelling

1



Three Training Workshops:

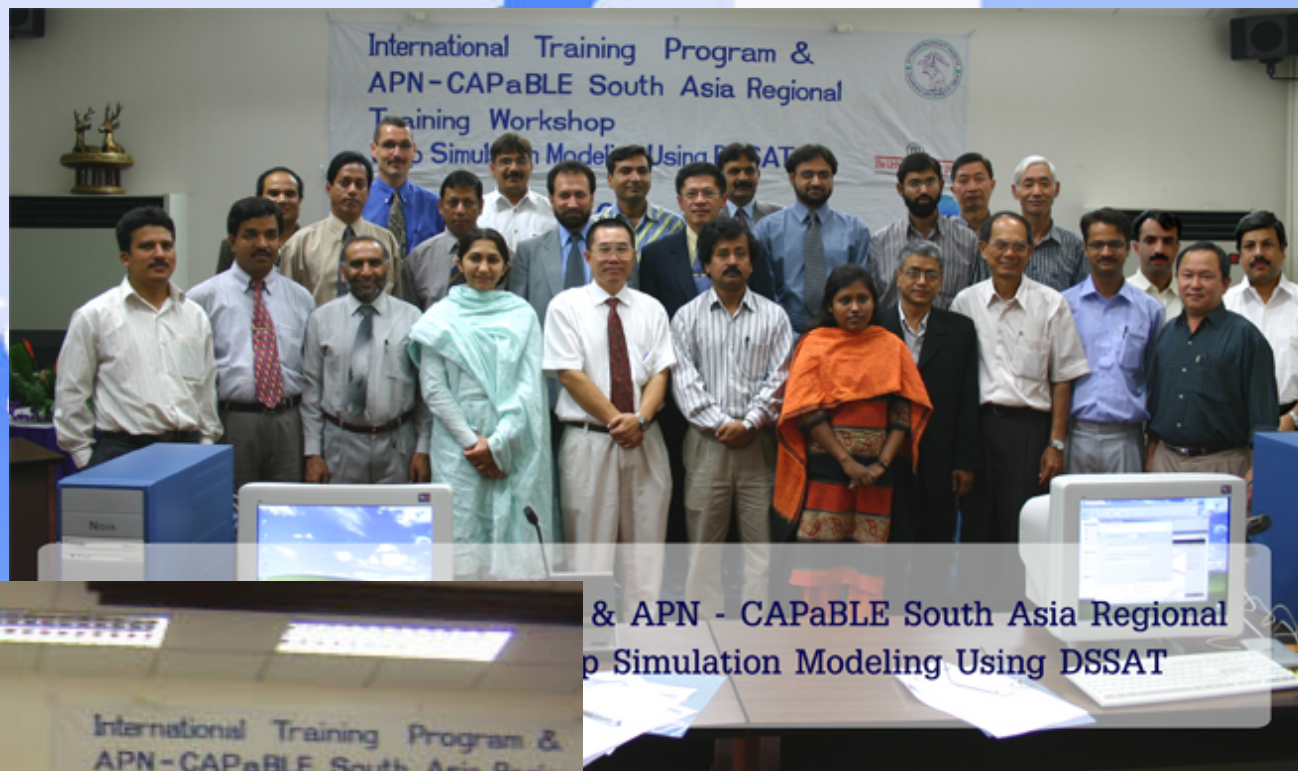
- **Climatology (RegCM3)**
- **Agriculture (DSSAT, CERES etc)**
- **Water (DHSVM)**

2 →
formulate climate- change scenarios, assess the corresponding impacts on water resources and agricultural production, and identify appropriate adaptation measures to cope with the adverse impacts

Ongoing Research Activities

Climatology:

- **Statistical analyses of historical climate data**
- **Validation of RegCM in SA**
- **Development of RegCM based on IPCC A2, B2 scenarios from selected GCMs**



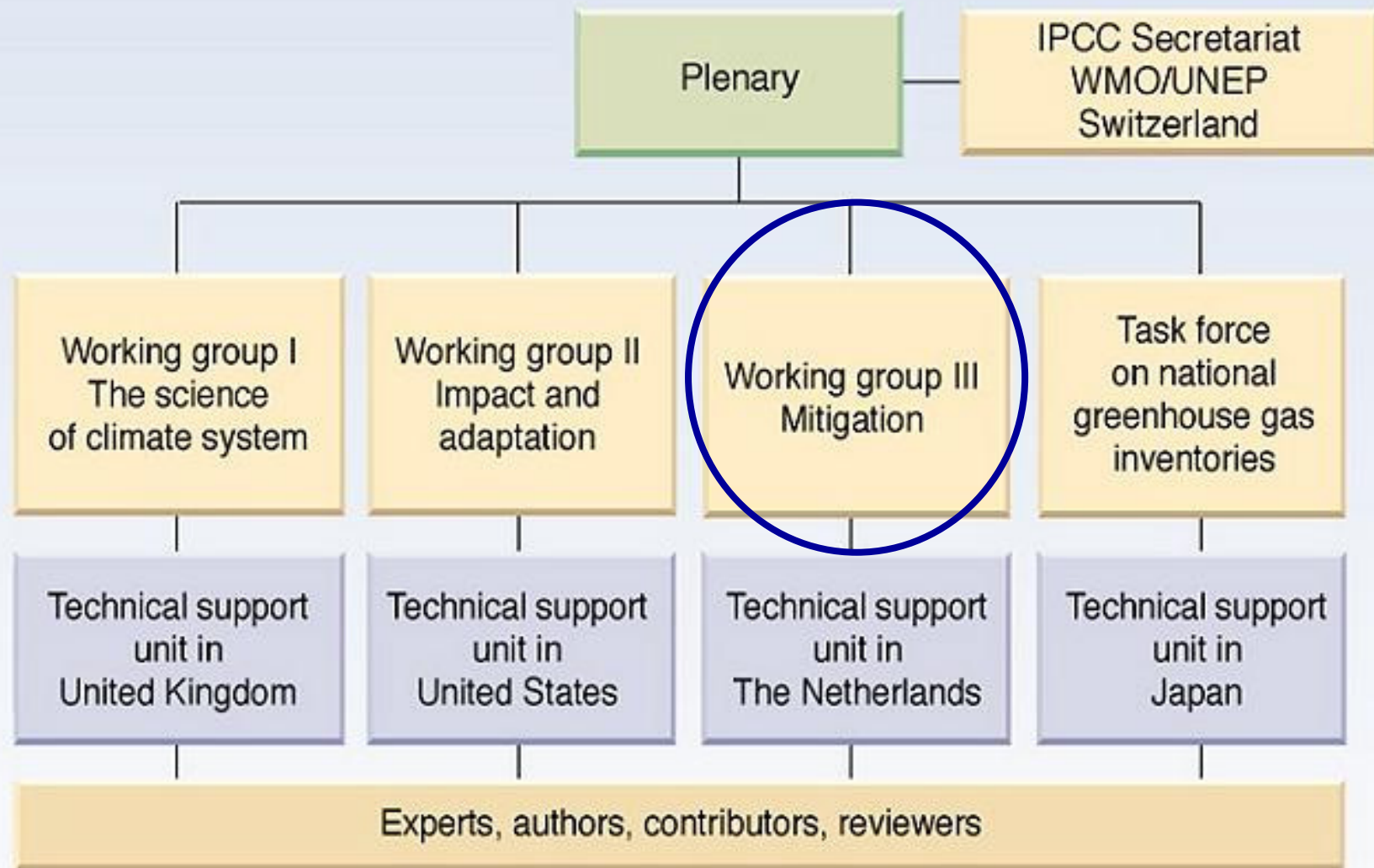
& APN - CAPaBLE South Asia Regional
Workshop on Crop Simulation Modeling Using DSSAT



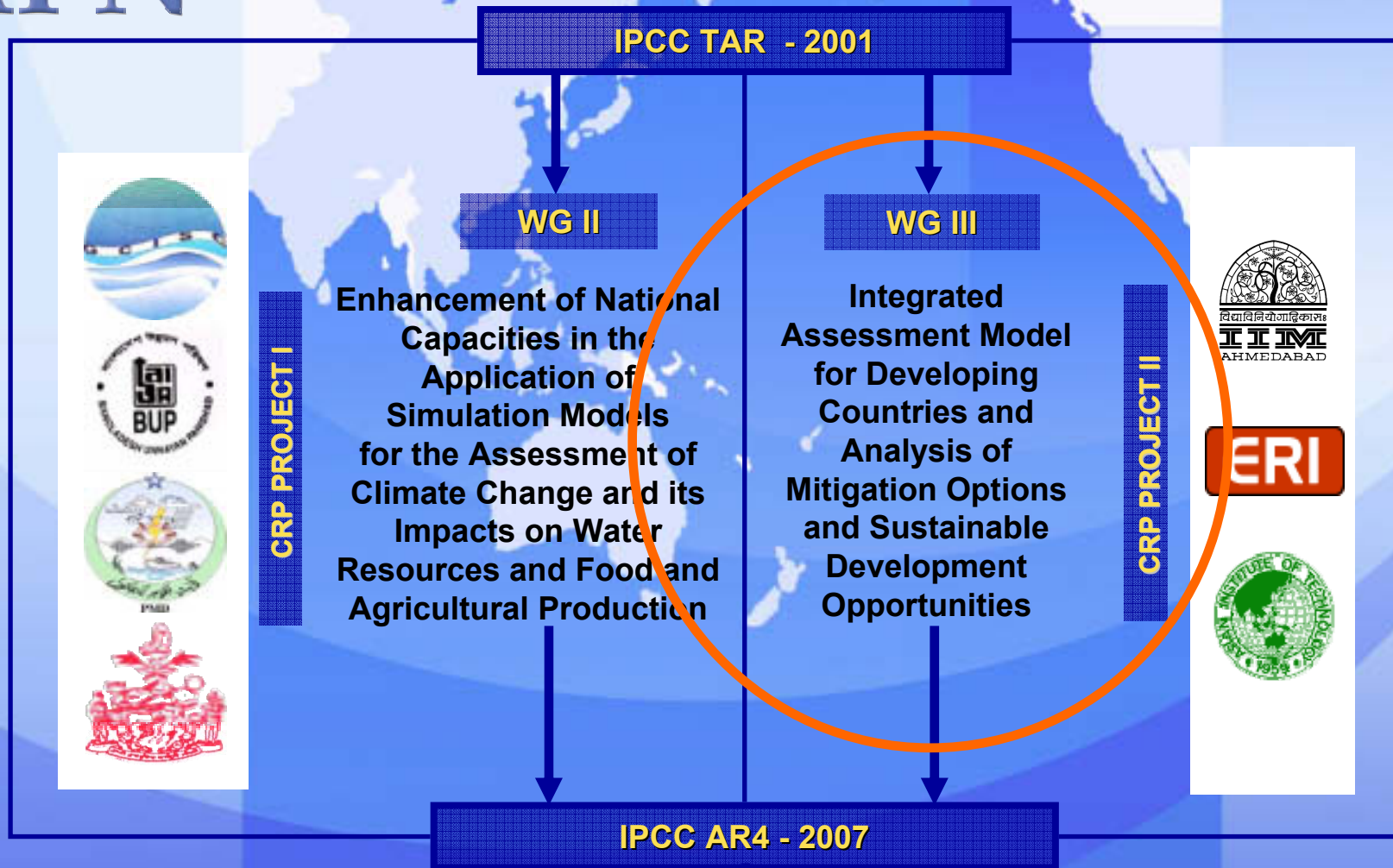
APN-CAPaBLE Training Workshop on Crop Simulation Modelling (DSSAT)

**June 28 - July 9, 2004,
Chiang Mai**

Intergovernmental Panel on Climate Change (IPCC)



Comprehensive Research Projects



Capacity enhancement of leading researchers in developing countries to produce comprehensive scientific results on climate change impacts, vulnerabilities, adaptation and mitigation strategies

IPCCTAR: Working Group III

Integrated Assessment Model (IAM) for Developing Countries and Analysis of Mitigation Options and Sustainable Development Opportunities

1

Develop tools for policy analysis for integrating climate change and sustainable development concerns of policy-makers.

2

Enhance capacity of developing countries for integrated assessment of climate change mitigation options in the context of sustainable national development priorities and policies.

1 →
**Develop
policy
analysis
tools for
integrating
climate
change and
sustainable
development
concerns
of policy-
makers**

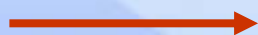
Three themes:

- Model Framework Design**
- Database Development**
- Applications at Country Level**

Specific areas of work include:

- Developing national scenarios while benchmarking international best practices**
- Including specific developing country dynamics in the modeling framework**
- Initiating national modeling exercises**
- Developing national databases**

2



■ Enhance capacity of developing countries for integrated assessment of climate change mitigation options in the context of sustainable national development priorities and policies.

Through stakeholder/expert consultations, capacity building of regional researchers and disseminating the outcomes

Interactions:

- Between stakeholders groups, researchers & policy-makers (9 developing countries); & APN UNEP, UNDP, ESCAP

Outcomes:

- Identified stakeholders needs in IAMs; identified gaps related to developing country dynamics not captured in current integrated assessment models



**Workshop on IAMs
for Developing
Countries
Sustainable
Development and
GHG Mitigation
Opportunities,
August 2004,
Bangkok**

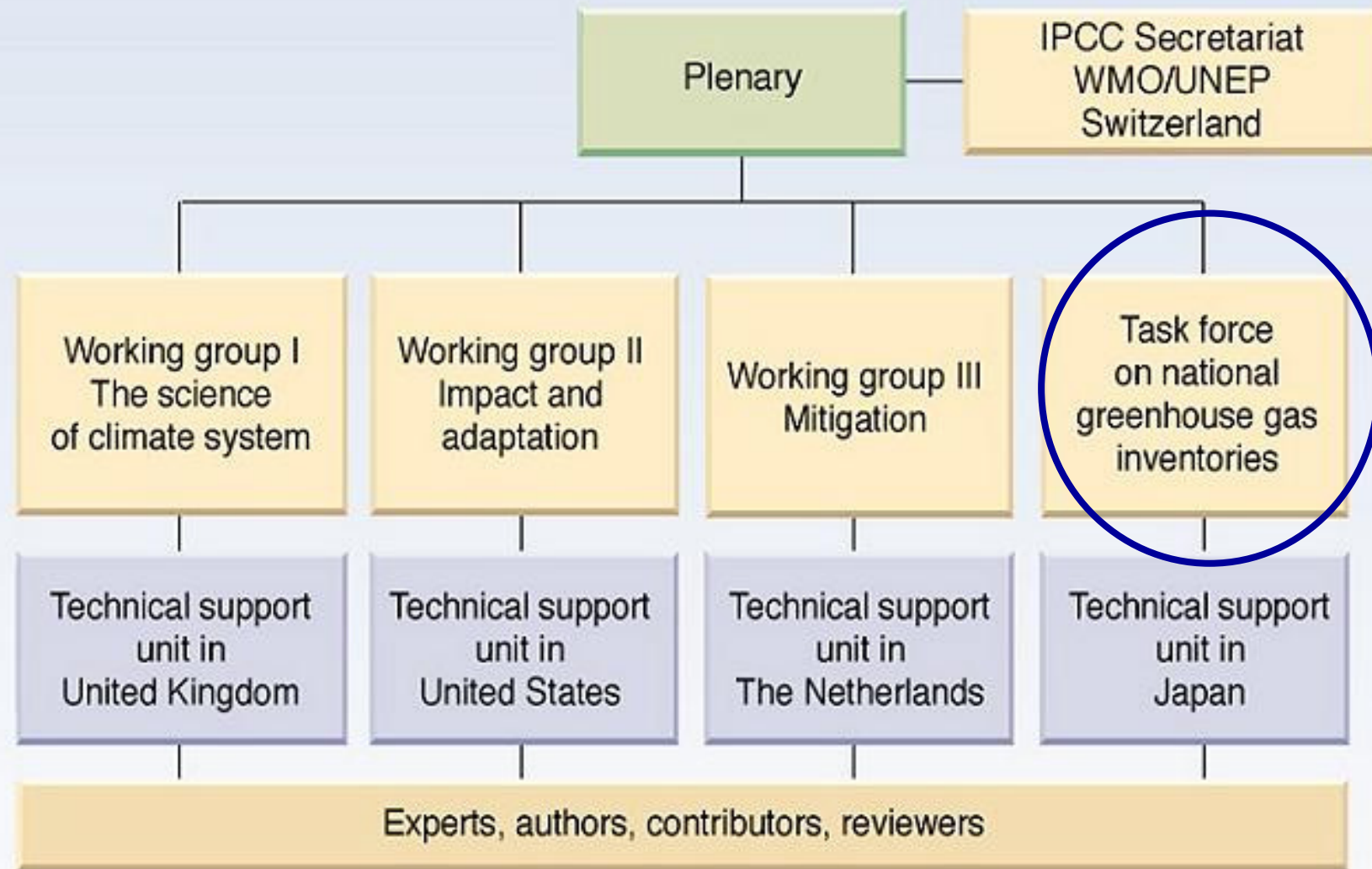
Designing Integrated Assessment Model Framework

Workshops and meetings identified that:

- For assessments in developing countries, the current IAM paradigm should be enhanced by explicit inclusion of socio-economic and resource dynamics of developing countries like the rural to urban transformation, institutional reforms and structural changes in the economy
- IAMs should have explicit links with national sustainable development goals
- Strategic database should be developed to support IAM applications at regional and national levels, and
- Networking with other experts and regions should be encouraged & strengthened; including using the project website < e2models.com >

| | |
|--------------|---|
| CB-01 | Building Capacity of Mekong River Countries to Assess Impacts from Climate Change |
| CB-02 | Training Institute on Climate and Extreme Events in the Pacific |
| CB-03 | Capacity Building for GHG Inventory Development in Asia-Pacific Developing Countries |
| CB-04 | Creating Climate Knowledge Networks through Strategic, Global Linkages (with IAI) |
| CB-05 | Climate Change Mitigation with Locally Owned Technology and Systems |
| CB-06 | UNFCCC Training Workshop on National Communications, Manila, April 2004 |
| CB-07 | National CB Workshop on GC Research (Pakistan) |
| CB-08 | Regional Climate Models /CLIVAR Workshop |

Intergovernmental Panel on Climate Change (IPCC)



**IPCC/TAR: Task Force on
National GHG Inventories**

**Capacity
Building for
GHG
Inventory
Development
in Asia-Pacific
Developing
Countries**

1

**Methodology to
effectively
improve
inventories of
countries in the
region**

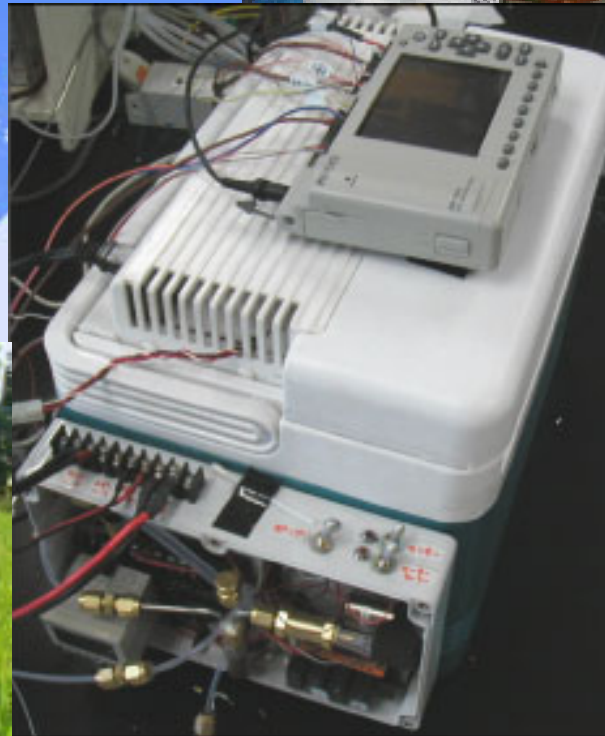
2

**Enhance the
regional
contribution to
the relevant
international
efforts such as
those of the IPCC**

Training in Cambodia



Sensor in use Thailand



Measurements in Thailand

Specifically targeting
Objectives two and three of
CAPaBLE

**Reducing
Vulnerability to
Climate-Related
Extreme Events
in the Pacific:
Pacific Islands
Training
Institute on
Climate and
Extreme Events**

1

Enhance the regional network of scientists, forecasters, disaster management officials and resource managers skilled in the development and use of climate information to increase the resilience of Pacific Island nations in the face of climate-related extreme events.



Reducing Vulnerability to Climate-Related Extreme Events in the Pacific: Pacific Islands Training Institute on Climate and Extreme Events, June 2004, Fiji



Reducing Vulnerability to Climate-Related Extreme Events in the Pacific: Pacific Islands Training Institute on Climate and Extreme Events, April 2005, Samoa



**vulnerability assessment
and adaptation at the
“grass roots” level**

Partnerships Creating Capacity



Training Institute on Climate and Extreme Events in the Pacific



Capacity Building for Greenhouse Gas Inventory Development in Asia-Pacific Developing Countries

APN/UNFCCC Training Workshop for the National Climate Change Focal Points in the APN Region on the Guidelines for National Communications of Non-Annex I Parties



WCRP Modelling Workshop / CLIVAR Conference

National Capacity Building Workshop on Global Change Research



GLOBAL CHANGE
I G B P



Capacity Building Workshop on Climate Change Mitigation with Locally Owned Technology and Systems



Creating Climate Knowledge Networks through Strategic, Global Linkages

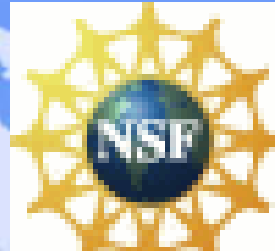


Building the Capacity of Mekong River Countries to Assess Impacts from Climate Change - Case Study Approach on Assessment of Community Vulnerability and Adaptation to the Impacts of Climate Change on Water Resources and Food Production

“As a regional forum bringing together policy-makers and researchers on practical, policy-relevant research and capacity building, the APN is making an invaluable contribution to our ability to respond to climate change.”

Howard Bamsey, CEO, Australian Greenhouse Office, March 2004

The CAPaBLE Programme is sponsored by the governments of Australia, Japan, New Zealand and the U.S.A.





Thank you