

APN Climate Adaptation Seminar

23 October 2012

Siem Reap, Cambodia



APN & Climate Adaptation

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Ministry of Environment

APN



Background Information on the APN

1. Background Information on the APN



APN: An Overview

- ❑ Established in 1996, secretariat based in Kobe Japan since 1999
- ❑ Network of 22 member governments in the Asia Pacific region
- ❑ Supporting regional global change research and Enhancing scientific capacity in developing countries
- ❑ To improve decision-making in focus areas of global change and sustainable development



We define global change as the set of natural and human-induced changes in the Earth; in its physical, biological, and social systems that, when aggregated, are significant at a global scale.



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Member Countries

Pacific Island Countries and Singapore are approved countries whose scientists are eligible to receive funding under APN awards.



Australia



Bangladesh



Bhutan



Cambodia



China



Fiji



India



Indonesia



Japan



Lao DPR



Malaysia



Mongolia



Nepal



New Zealand



Pakistan



Philippines



Republic of Korea



Russian Federation



Sri Lanka



Thailand



USA



Viet Nam



APN

Financial Resources (US\$3M/year)

The APN is sponsored by the governments of:

- **Japan**

- Ministry of the Environment
 - Hyogo Prefecture

- **United States of America**

- National Science Foundation
 - US Global Change Research Program

- **Republic of Korea**

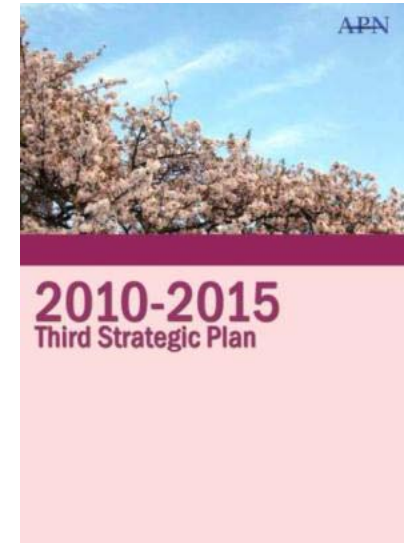
- Ministry of Environment

- **New Zealand**

- Ministry for the Environment



3RD STRATEGIC PHASE



APN GOALS



Supporting regional cooperation in global change research on issues particularly relevant to the region



Strengthening appropriate interactions among scientists and policy-makers, and providing scientific input to policy decision-making and scientific knowledge to the public



Improving the scientific and technical capabilities of nations in the region, including the transfer of know-how and technology

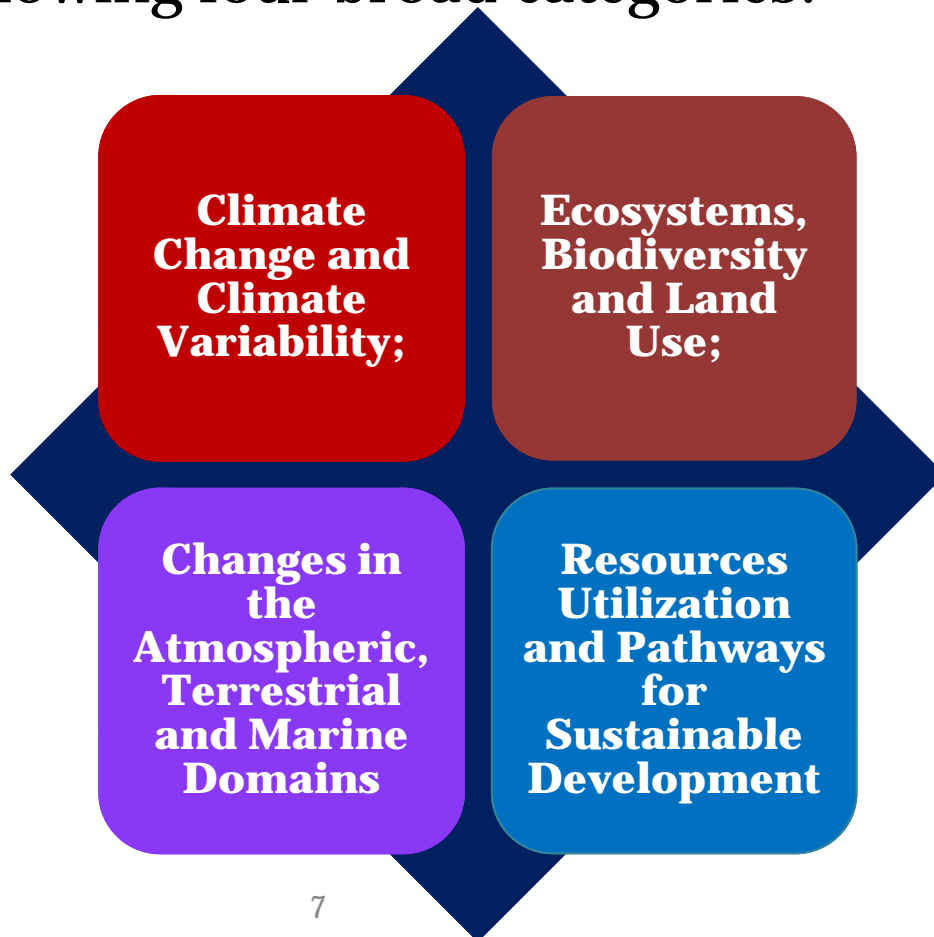


Cooperating with other global change networks and organisations

ARCP – Regional Research Programme

CAPaBLE – Capacity Building Programme

Under APN's Science, APN provides support that falls into the following four broad categories:



Approximately 90 projects ongoing through our competitive calls for proposals



Climate Adaptation and APN's Climate Synthesis

2. General Adaptation Activities and APN's
Climate Synthesis



Climate Adaptation Projects...where do I start?

Assessing the vulnerability of communities and understanding policy implications of adaptation response to flood related landslides in Asia

Training in science-policy interfacing to promote the application of scientific knowledge on adaptation of forests & forest management to climate change

Climate Change Variability Implications on Biodiversity – Youth Scenario Simulation

Enhancing climate change adaptation capacity of local government units and scientists in the Philippines.

Increasing adaptive capacity of farmers to extreme climate events and climate variability through enhancement of policy-science-community networking

Linking Climate Change Adaptation to Sustainable Development in Southeast Asia

Communicating Economic Implications of climate change impacts & adaptation measures to policy-makers for informed decision-making

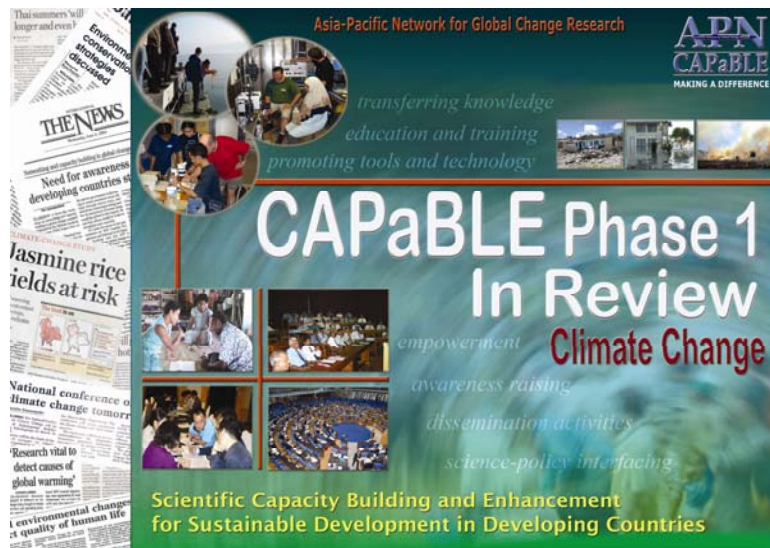
Removing Barriers to Capacity Building in Least Developed Countries: Transferring Tools and Methodologies for Managing Vulnerability and Adaptation to Climate Change

Climate Change in Southeast Asia and Assessment on Impacts, Vulnerability and Adaptation on Rice production & water resources

Cities at risk: Developing adaptive capacity for climate change in Asia's coastal mega cities

Scientific Activities in Climate Change – Vulnerability, Impacts & Adaptation – became a focus for APN in 2004

Capacity Development and Research in Climate Change under CAPaBLE Phase I



A review in 2008 highlighted that the CAPaBLE Programme had:

- ✧ **Trained over 300 scientists**
- ✧ **Raised awareness of over 4000 people**
- ✧ **Published over 50 peer-reviewed papers**

“In Review” highlighted CAPaBLE as

Policy relevant, conducting underpinning research, developing capacity, creating partnerships, raising awareness, promoting sustainable societies.

Climate Change Challenges that we took to SBSTA28 (2008)

- ✿ Climate change is the foremost concern particularly **vulnerabilities, impacts and adaptation**
- ✿ **lack of human & institutional capacity & limited financial resources** are the main challenges in implementing climate research
- ✿ **mainstreaming** climate research results into national policy



APN
Asia-Pacific Network for Global Change Research

supporting regional
global change research

enhancing scientific capacity
in developing countries to improve
decision-making in focus areas of global
change and sustainable development

Annual Report
2006/2007

www.apn-gcr.org

The **APN** is an inter-governmental network fostering **global change** research and links between **science** and **policy-making** in the Asia-Pacific region.



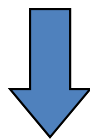
Climate Change Challenges that we took to SBSTA30 (2009)

Sectors Most at Risk

Agriculture, Water (floods, drought, security), Forests, Coastal zones, Mangroves, Maritime resources, etc



mainstreaming adaptation strategies most challenging



2009: APN's Response

Scientific Capacity Building for Climate Impact and Vulnerability Assessments under the CAPaBLE Programme & the APN Climate Synthesis of Activities



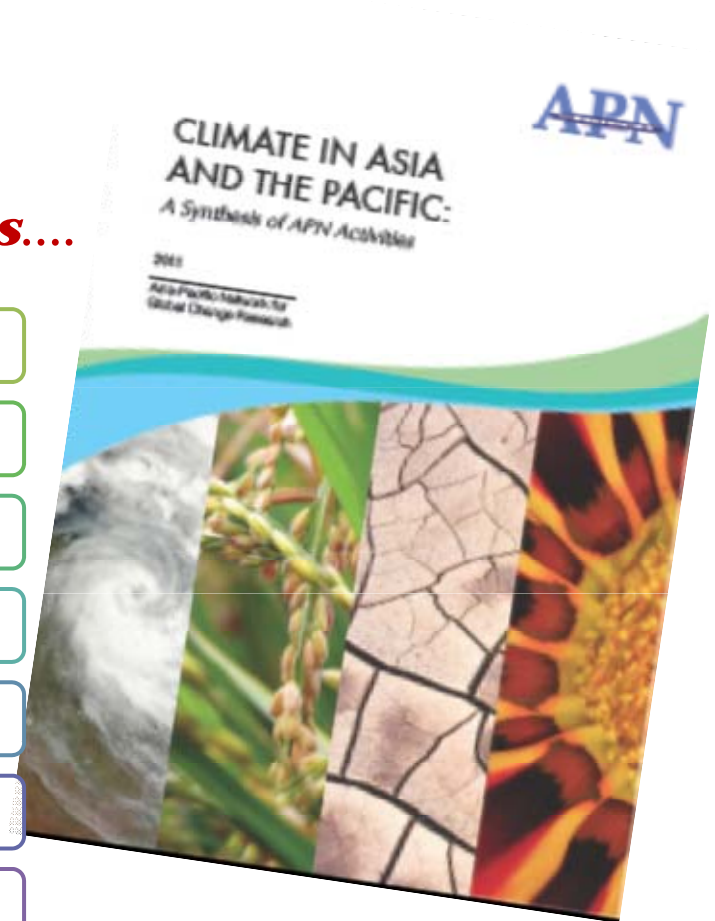
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APN Climate Synthesis Report

- ✧ Synthesis of climate-related research and capacity development over **10 years**
- ✧ **56** completed projects in an 78-page synthesis where “policy” is cited **143 times....**

Focus Chapters

- Food, Agriculture and Climate
- Seasonal Climate Prediction & Application
- Climate Variability, Trends and Extremes
- Regional Climate Change Modeling
- Vulnerability & Adaptation to Climate Change
- Climate Change Mitigation
- Climate Change Policy & Outreach



<http://goo.gl/gVW8M>

<http://www.apn-gcr.org/uploads/reports/2011/Climate%20in%20Asia%20a...>

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2011 Climate Synthesis Report on Climate Change Adaptation

Recommendations:

- ✧ **Community-based climate adaptation**, as well as reducing vulnerability and building resilience, requires *much more attention*....
- ✧ **Climate change and disaster risk management** must be mainstreamed into national development strategies....
- ✧ Critical to climate adaptation research, practice, and policy are **downscaled climate data**....
- ✧ Encourage APN member countries to increase the **capacity to formulate national strategies on adaptation**....
- ✧ Develop programmes to enhance the **capacity of major players** in adaptation planning and implementation; local universities and academic institutions, communities and local governments....
- ✧ Develop **localized climate change impact tools**, especially IAMs...



Some other Conclusions on Climate Modeling:

- ✧ Critical to climate adaptation research, practice and policy are downscaled climate data.
- ✧ Developing Regional Climate Models (RCMs) in Asia helps provide more detailed information on monsoon circulation.
- ✧ High-resolution regional/local information from RCMs can be used in impact, vulnerability and adaptation studies.
- ✧ There is a need for RCMs and statistical downscaling methods to help localise GCM results.
- ✧ Especially problematic in the Asia-Pacific are small islands states, Southeast Asia and areas in South Asia with rough and steep terrain like the Himalayas.



Key Messages for Adaptation.....

- ✧ Adapt now!
- ✧ Enable adaptation
- ✧ Integrate adaptation with development
- ✧ Increase knowledge



- ✧ Strengthen institutions
- ✧ Protect natural resources
- ✧ Provide financial assistance
- ✧ Involve those at risk
- ✧ Use place-specific strategies



New Climate Adaptation Programme (IGM17 & SBSTA36)

Regional scale Research

Downscaled modeling technologies

Information and knowledge sharing

Disaster risk management
(contributing to loss and damage)

Systematic training and capacity
building for **scientists / practitioners**

Science-Policy dialogues in AP region



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APN's Adaptation Policy Brief



3. APN's Adaptation Policy Brief



Climate Adaptation Messages

Climate Change Modelling in Mangrove Ecosystems

**Mr. Kashif Majeed Salik
(Pakistan)**

“Robust and collective global to regional responses for climate change adaptation can be achieved through joint research and policy actions by sharing of technology, knowledge and experiences.”



Climate Adaptation Messages

Mainstreaming Climate Change Adaptation into Water & Agriculture Sectors



Dr. S.V.R.K.
Prabhakar
Institute for Global
Environmental
Strategies (IGES)

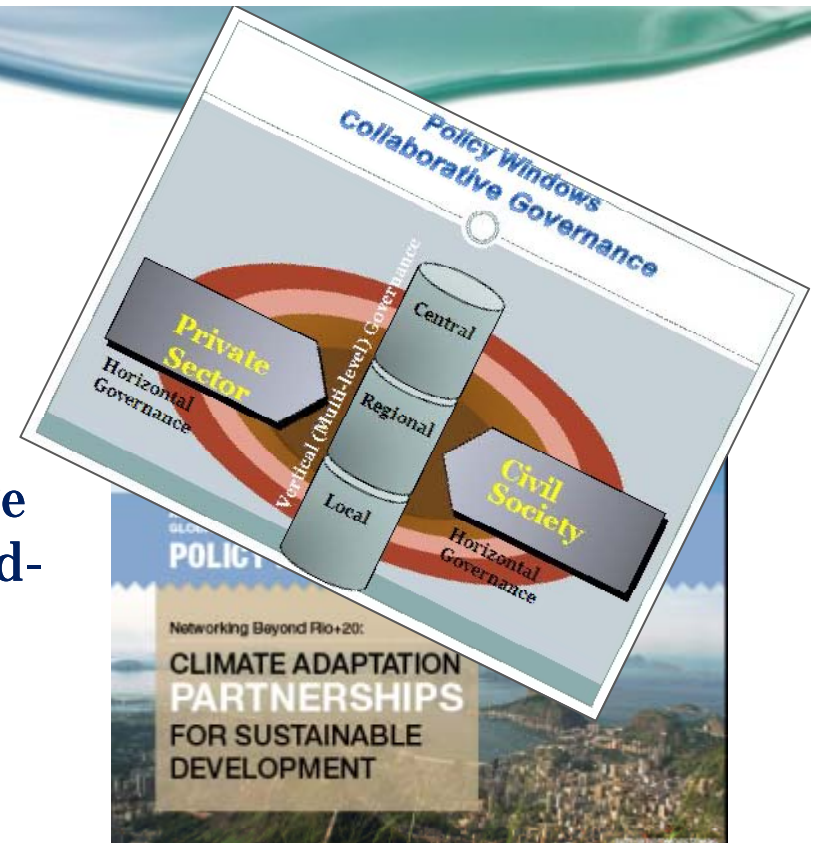
**Professor Joy Pereira (Malaysia):
“Means to reach and address
issues at the local level are still at
nascent stages. There is also a
need to strengthen the channels
that connect various stakeholders
to the local level.”**



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Climate Adaptation Messages

- ✿ "Encourage horizontal and vertical institutional collaboration"
- ✿ "Promote two approaches in climate change adaptation: science-driven and society need-based approach (community-based)"
- ✿ "Great demand and potential to update knowledge dissemination and research through University higher education networks. Financing these efforts remain the main challenge."
- ✿ "Robust and collective global to regional responses for climate change adaptations can be achieved through joint research-policy-action by sharing of technology, knowledge and experiences."



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BACKGROUND

The need for climate change adaptation is increasingly being recognized by communities, with an initial focus on assessing vulnerabilities and identifying adaptation options. The complexity of adaptation due to the multidisciplinary nature of the required solutions and the lack of long-term data pose a great challenge, particularly in the Asia-Pacific region. Approaches at the grassroots levels that involve communities and local governments to incorporate climate change adaptation practices into development planning will be needed, and Integrated Assessment Models (IAMs) will need to be customized for local to regional and sectoral levels.

In the lead-up to the Rio+20 conference, the Asia-Pacific Network for Global Change (APN) organized a session at the Climate "Adaptation Futures" Conference held on 29-31 May 2012 at The University of Arizona, USA. The session focused on the importance of partnerships and networking to facilitate the adoption of local, national and regional adaptation strategies. The present policy brief builds on the collective messages that arose from the session, and is published to convey these messages at Rio+20 and beyond.



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4



APN Scoping Workshop for an Adaptation Framework

4. APN Scoping Workshop for an
Adaptation Framework

Climate Adaptation Framework Scoping Workshop



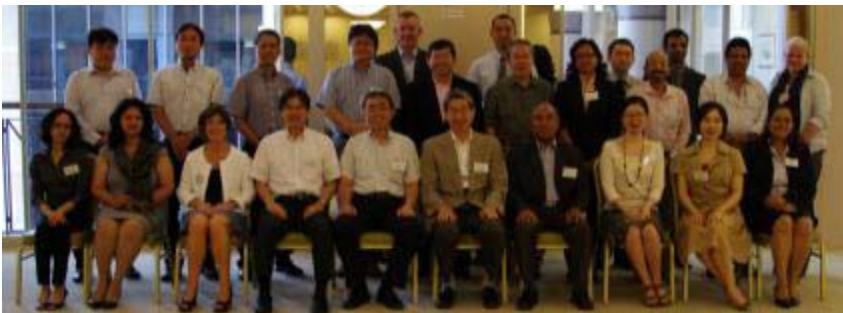
KEY OBSERVATIONS

- ✿ Climate Adaptation is mainstreamed into science and technology policy, but not into environment policy (even in developed countries).
- ✿ In some developed countries, local governments established adaptation frameworks and plans, but it is not clear whether science-based climate risk assessments are implemented for public projects.



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Suggestions for Future APN Strategic Programme to Enhance Climate Adaptation in the Asia-Pacific Region



✿ As a result of the discussions at Scoping Workshop the APN hopes to establish a multi-year strategic programme focusing on climate adaptation from FY2013 (April 2013) pending resource availability

✿ The new programme aims to enhance science-based adaptation activities of APN developing countries and comprises the following components:

- ✿ regional research programme that has a capacity building element,
- ✿ capacity building programme (including projects at national and sub-national scales),
- ✿ activities jointly conducted with organizations and networks

Based on needs, gaps and lessons for climate adaptation in the Asia-Pacific region APN activities will contribute to improving user knowledge in:

- Development of observational, model and downscaled datasets with high-resolution that can contribute to filling data gaps;
- Sharing of needs-oriented data
- Calibration and validation of regional climate models; and analysis of projections and assessment of uncertainties
- Development and utilization of impacts, vulnerability, risk and economic assessments;
- Improvement of communication skills of scientists and practitioners with stakeholders including local government, community, private sectors and civil society, for encouraging policy-makers to formulate and implement adaptation plans based on the latest scientific knowledge;
- Utilization of available information including climate data in applications for adaptation

Climate Adaptation Framework - Partnerships

It is recommended that the APN will enhance partnerships with local, national, regional and international organisations and networks under the new program, including:

- ✧ **ADB** - Climate Change Consortium – Climate Knowledge Platform for Asia
- ✧ **APAN** - Networking in Climate Adaptation & Proposal Development
Training Workshops
- ✧ **ICAS** – Training, Research and Networking
- ✧ **MAIRS** – Research in Regional Climate Modeling
- ✧ **UNU (UN-CECAR)** - Training in regional climate modeling, VIA, tc
- ✧ **START** - Capacity building, training, Science-Policy Dialogues
- ✧ **UNFCCC** - Loss and Damage
- ✧ **WCRP** - Collaboration in general but more recently with the CORDEX-Asia on capacity development on downscalingad infinitum

It is recommended to further develop APN's climate adaptation programme **and expand its partnerships with organizations and networks through relevant platforms** in accordance with the Programme of Work and Budget as well as the APN Strategic Plan and Framework Document.

**OUR HOPE IS FOR APN to
GROW AND STRENGTHEN
its PARTNERSHIPS FOR
CLIMATE CHANGE ADAPTATION**

