





#### WHAT IS APN?

- Inter-governmental Network to foster global change research in the Asia-Pacific region
- Established in '96 as a result of the '90 White House Conference on Science & Economics Research Related to Global Change
- 22 Member countries
- Full time Secretariat in Kobe, Japan since '99
- Major activities
  - Funding research projects (ARCP)
  - Funding capacity building projects (CAPaBLE)
  - Science-policy linkages



### What do we mean by "Global Change"?

- The set of <u>natural and human-induced changes in the Earth; in its physical and biological systems</u> that, when aggregated, are significant at a global scale......
- Global Change Research is research regarding global change and its implications for sustainable development in the Asia-Pacific region



### **APN MEMBER COUNTRIES**



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



### FINANCIAL RESOURCES





The APN is sponsored by the governments of:

- ☐ Japan (Ministry of the Environment and Hyogo Prefecture)
- New Zealand (Ministry for the Environment)
- Republic of Korea (Ministry of Environment)
- United States of America (National Science Foundation, US Global Change Research Program)















## **MISSION**

### The APN supports investigations that will:



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, and



Contribute, from the science perspective, to the development of policy options for appropriate responses to global change that will also contribute to sustainable development





2010-2015 Third Strategic Plan

## 3RD STRATEGIC PHASE



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

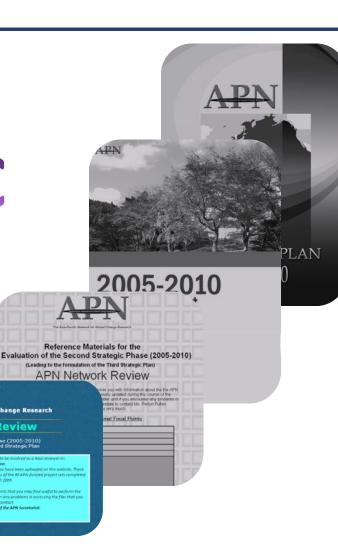


# HIGHLIGHTS OF THE 2<sup>ND</sup> STRATEGIC PHASE





# HIGHLIGHTS OF THE 2<sup>ND</sup> STRATEGIC PHASE





APN-funded projects
overall had very
good success in
terms of meeting the
five goals stated in
the APN Second
Strategic Phase
(2005-2010).

Evaluation of Projects under the ARCP and CAPaBLE Programmes







- Many projects reviewed were policy relevant
  - Successful and highly rated projects:
    - ✓ focussed on specific impacts on the environment and society
    - √ identified relevant problems
    - ✓ proposed well-developed methodologies to achieve outcomes beneficial to either a scientific community or the public at large



- Projects improved regional and national networking of scientists in specialised fields of research, which resulted in improved collaboration
- Research outcomes resulted in **better understanding of the impacts of climate change in the region and an increased awareness of these issues** by policy-makers and resource managers
- All projects were designed to **meet the needs for scientific information** relevant to regional issues





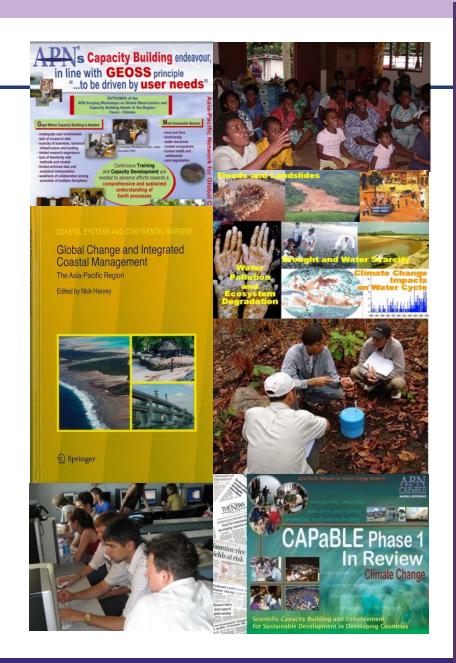
- Capacity building provided opportunities for young scientists to discuss relevant issues on global change and developed professional networking for future collaborative efforts
- Workshops and meetings provided excellent fora for interactions between scientists and policy-makers as well as enhanced the knowledge base of information relevant to regional climate change impacts
- Projects augmented technical training of scientists and science support personnel and produced some well-designed educational and training materials for local application.

  Local outreach through workshops was very effective in disseminating information



Key Highlights
of the APN's
Scientific
Activities

ACHVILLES





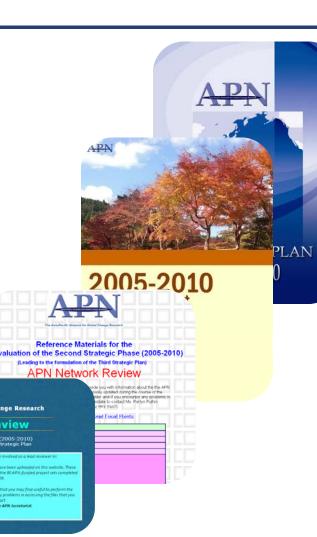
Incorporated the CAPaBLE Programme as an integral part of APN's activities
<b>Financially supported/managed 143 projects</b> and streamlined the proposals submission and review process under the ARCP and CAPaBLE annual Calls for Proposals
Devised and implemented an <b>external mail review system</b> as part of the proposals review process
Launched Phases II (focussing on Water and Food Security) and III (focussing on Climate Change Impacts, Adaptation and Vulnerability) of the <b>comprehensive research element of CAPaBLE</b> ; six projects are being implemented
Published APN's first book: <i>Global Change and Integrated Costal Management: The Asia Pacific Region</i> (Springer edition). <i>Chapters from this book and a number of outputs such as peer-reviewed papers from selected APN-funded research and capacity building projects and activities were cited in the Intergovernmental Panel on Climate Change (IPCC)</i> 4 <sup>th</sup> Assessment Report (AR4).



- Initiated and conducted in-house seminars and capacity development activities, including two scoping workshops in Global Earth Observations, three international seminars on biodiversity supported by Hyogo Prefectural Government, Japan, and four proposal-development training workshops
- Evaluated 18 activities conducted during Phase I of CAPaBLE, which focussed on Climate Change and ran from April 2003 to March 2006, the results of which indicated that the CAPaBLE Programme is timely and crucial for the Asia-Pacific region. Three publications were devised and distributed throughout the global change community and showcased at various international for a
- Launched a Special Call for Proposals for a Focused Activity: Scientific Capacity Building for Climate Impact and Vulnerability Assessments (SCBCIA); Seven projects are being implemented



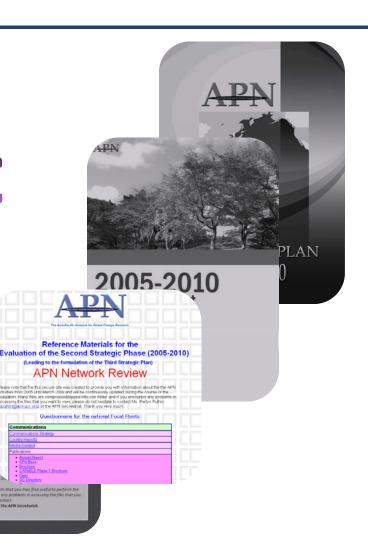
# HIGHLIGHTS OF THE 2<sup>ND</sup> STRATEGIC PHASE





# HIGHLIGHTS OF THE 2<sup>ND</sup> STRATEGIC PHASE

APN Scientific





The APN has steadily improved and expanded its interactions with policyand decision-makers, thus helping to provide a sound scientific basis for policyand decision-making related to global change in the region.

Overall evaluation of the APN as a Network





- □ Continued and increasing involvement of member countries in APN's activities resulting in a greater sense of ownership among the member states, particularly evidenced by increased contributions, both in-kind and financially
- ☐ Marginally increased its budget despite economic difficulties and the strain on government budgets throughout the period of the second strategic phase
- **☐** Enhanced communication and outreach tools/strategies
- ☐ Increased visibility in the region, coupled with new and stronger linkages with other organisations and strengthened alignment of its programmes with the global change scientific community



Unique structure that is effective and useful in the efficient management of its organs
Operating Plan has been an effective tool in ensuring that APN's activities are implemented to meet the goals of the strategic plan
Steadily improved and expanded its interactions with policy-and decision-makers, thus helping to provide a sound scientific basis for policy-and decision-making related to global change in the region
<b>Effective management of the network's programmes and activities</b> that has not only built the research base in the region, but also increased the scientific research capabilities of the developing countries in the Asia-Pacific region



Key Highlights of Institutional Development





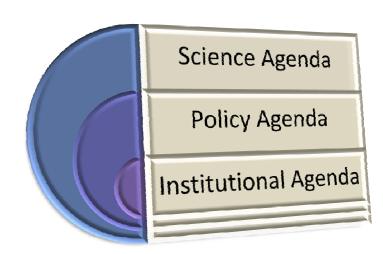
- Increased membership and further developed the APN Framework document
- ☐ Initiated *Country Reports* submission which have been used to streamline and plan the APN's strategies
- Established Southeast and South Asia Sub-Regional Committees that improved the flow of information among members of the APN at the sub-regional level and strengthened collaboration with key partners







- Engaged at numerous international fora organised by the global change community and other institutions including the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties and Meeting of the Parties (COP/MOP) and Subsidiary Body for Scientific and Technological Advice (SBSTA) and also in a number of outreach activities
- Devised Communications and Resources Development Strategies
- □ Completed the review process of all three APN agendas based on the strategies outlined in the 2<sup>nd</sup> Strategic Plan and formulated the 3<sup>rd</sup> Strategic Plan





#### **COMMUNICATIONS and DEVELOPMENT**





### **Strategies for communications**

and recent developments

- Continue to produce and improve the information materials translated in vernacular language of member countries and various communication tools
- Develop special publications: synthesis reports, book, policy-relevant document
- Attract favourable media attention and increase visibility through news/press releases and proactive communication with editors at the newspapers, magazines, radio stations, television stations and/or television networks in APN member countries





# Strategies for communications and recent developments

- Continue to improve the website with dynamic features
- Encourage involvement of more stakeholders in APN outreach activities and of country representatives
- Strengthen collaboration with the Core Projects of the global change programmes
- Expand more substantive APN activity to and supportive of policy-making
- □ Continue to empower the members by using appropriate platforms in engaging them to be more actively involved in APN activities.





#### **ENGAGEMENT OF THE GC COMMUNITY**



























# Strategies for engagement of the Global Change Community and the wider global change audience

- Invite other global change research organisations to be involved in APN meetings and committees and for the APN to be represented at relevant meetings organised by others
- Exchange publications with relevant organisations
- Set common agendas and initiate cooperative arrangements where appropriate
- □ Communicate and collaborate closely with organisations in the global change community to achieve shared goals through: a) joint research projects; b) scientific capacity development activities; c) science-policy interfacing; d) enabling Asia-Pacific participation at international conferences; e) scoping workshops; f) developing and strengthening networks of scientists and policymakers

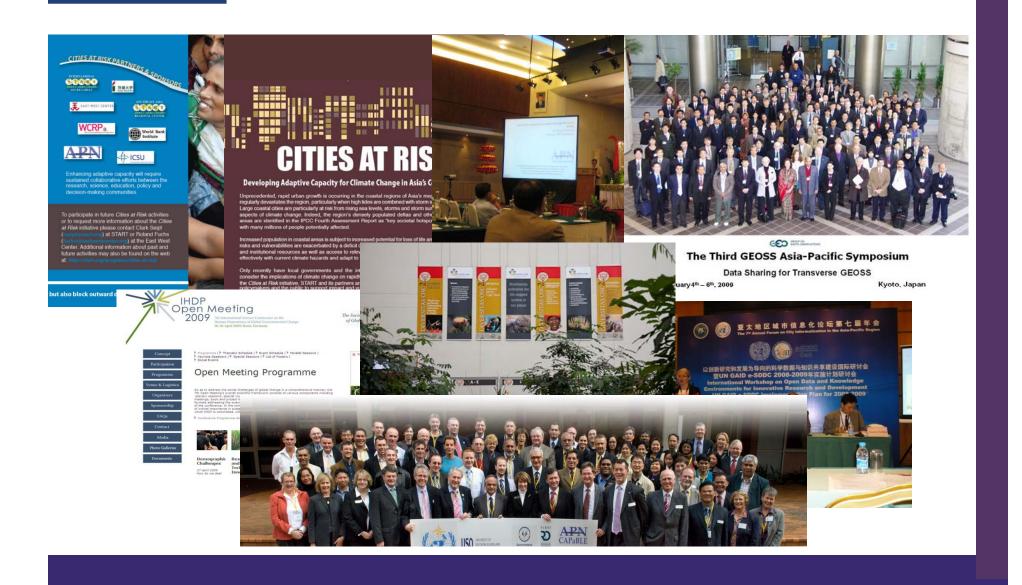


# Strategies for engagement of the Global Change Community and the wider global change audience

- Encourage APN-initiated and APN-funded projects to proactively seek collaboration with institutes and organisations that provide cosponsorship and in-kind contributions; APN will also seek the active involvement of host institutions;
- Consider entering into formal arrangements with partners, where appropriate
- Consider establishing partnerships with institutions outside the Asia-Pacific region that have an interest in global change research and scientific capacity development being conducted inside the region



#### **APN ACTIVITIES INVOLVING GC COMMUNITY**





#### **APN ACTIVITIES IN GEOSS**

APN Scoping Workshops on Global Earth Observations and the Capacity Building Needs of the Region: Focus Climate

Key Financial Sponsors: MOEI (JAPAN): NSF/USCCSP (USA)

#### **Key Objectives:**

- identify capacity building needs for research in global earth observations and climate change and



Senior Vice-Minister Shulchi Kato of the MOEI (EOS II, 2004); "Japan will continue to work to strengthen its support of copacity building in the area of earth observations through the framework of APN."

#### **Key Constraints:**

- Lack of observational data (meteorological, oceanographic, socio-economic, etc.) inaccessibility to existing data
- Scarcity of experienced scientists and lock of adequate scientific infrastructure Lack of familiarity with relevant methods and models

#### Overarching Capacity Needs:

- Continuous training and capacity development to advance efforts towards
- comprehensive and sustained understanding of the Earth's processes
- Research on climate modelling and socio-economic impacts and
- Collection, rescue and analysis of historical data
- Linking earth observations and climate modelling





Vulnerable Sectors food and fibre: blodiversity, water resources; coastal econystems; human health and settlements: land degradation

#### Key Outputs and Impacts:

- Scoping workshop outputs published as early achievement in the GEO Publication First One Hundred
- Steps to GEOSS
  AFN funding for a number of activities under the GEOSS Asian Water Cycle Initiative (AWC)
- Alignment of GEO and APN goals for the region and strengthened collaboration

585TA 24 (2006), Dr. Amfrow Matthews, APN SPG Member and nFP for New Zasland noted "Accessing EO data requires promoting political commitment to data sharing and removing practical barriers by enhancing electronic Interconnectivity and occessibility to metadata."



#### Identify the role of the APN in such research

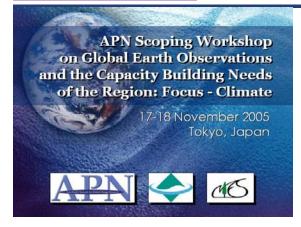




line with GEOSS principle



#### **APN ACTIVITIES IN GEOSS**



The First Joint GEOSS/AWCI/APN Scoping Workshop
(The Second AVCI International Contribution Orace (ICC) Meeting)

National Manager of Emerging Second and Innovation, Tutys, Japan

1st Joint APN & GEOSS/AWCI Scoping
Workshop (April 2008)

APN's Exhibition at GEO VI Plenary



17-18 November 2009

Two scoping workshops were conducted in November 2005 and March 2006



The Third GEOSS Asia-Pacific Symposium

Data Sharing for Transverse GEOSS

February 4" - 6", 2009

Kyoto, Japan



The 5<sup>th</sup> International Coordination Group (ICG) Meeting GEOSS /AWCI Tokyo, Japan, 15-18, December 2009



APN's Exhibition at GEO III 28-29, November 2006, Bonn, Germany



#### **APN ACTIVITIES IN GEOSS**

#### **COMPLETED and ON-GOING APN-FUNDED PROJECTS**

- ☐ Integrated Water <u>Data Access</u> and <u>Transfer</u> in Asia (IIWaDATA) Project; Project Leader: Toshio Koike
- The Global Earth Observation System of Systems Asian Water Cycle Initiative Observation Convergence and Data Integration (GEOSS/AWCI/OCDI); Project Leader: Chu Ishida
- Capacity Building for Drought Monitoring and Studying in Monsoon Asia under AWCI; Project Leader: Ailikun
- ☐ Flood Risk Management Demonstration Project (Phase 1) under the AWCI/GEOSS (FRM/AWCI/GEOSS) Project Leader: Kazuhiko Fukami
- Inter-Agency Collaborative Technologies in Earth Observations (EO) for Global Change Research in the Asia-Pacific Region: Full Proposal submitted following conditions of APN Seed Grant CBA2008-13NSG-Li Project Leader: Dr. Guoqing LI

#### **NEW APN-FUNDED PROJECTS**

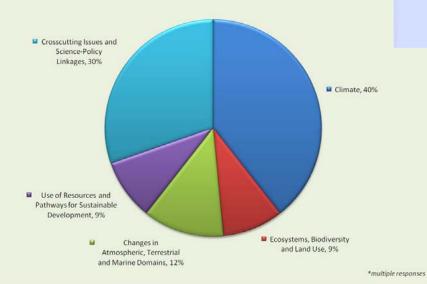
- ☐ River Management System
  Development in Asia Based on Data
  Integration and Analysis System
  (DIAS) under the GEOSS; Project
  Leader: Toshio Koike
- Climate Change Impact Assessment on the Asia-Pacific Water Resources Under AWCI/GEOSS; Project Leader: Prof. Deg-Hyo Bae, Sejong University
  - Promoting a Data Sharing
    Environment within the Earth
    Observation System of Systems: The
    Asia-Pacific Perspective; Project
    Leader: Dr. Robert S. Chen,
    CODATA/CIESIN, Columbia University,
    USA

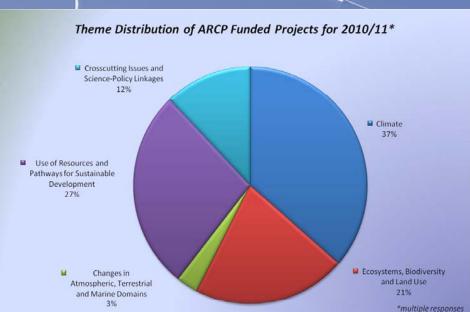


## New projects and activities for 2010/11













#### **2010-11** Research Projects under the ARCP Programme

ARCP2010-01CMY-Sthiannopkao: Collaborative Research on Sustainable Urban Water Quality Management in Southeast Asian Countries: Analysis of Current Status (comparative study) and Development of a Strategic Plan for Sustainable Development
<b>ARCP2010-02CMY-Phua:</b> Integrated Prediction of Dipterocarp Species Distribution in Borneo for Supporting Sustainable Use and Conservation Policy Adaptation
<b>ARCP2010-03CMY-Marambe:</b> Vulnerability of Home Garden Systems to Climate Change and its Impacts on Food Security in South Asia
ARCP2010-04CMY-Wang: Building Asian Climate Change Scenarios by Multi-Regional Climate Models Ensemble
<b>ARCP2010-05CMY-Luck:</b> The Effects of Climate Change on Pests and Diseases of Major Food Crops in the Asia Pacific Region
ARCP2010-06CMY-Schaefer: Quantifying the Role of Dead Wood in Carbon Sequestration
ARCP2010-07CMY-Bai: Asian Coastal Ecosystems: An Integrated Database and Information Management System (DIMS) for Assessing Impact of Climate Change and its Appraisal
<b>ARCP2010-08NSY-Freeman:</b> Impact of Climate Change on Food Security and Biosecurity of Crop Production Systems in Small Pacific Nations
<b>ARCP2010-09NSY-Patwardhan:</b> Enhancing Adaptation to Climate Change by Integrating Climate Risk into Long-Term Development Plans and Disaster Management



#### **2010-11** Research Projects under the ARCP Programme

ARCP2010-10NMY-Koike: River Management System Development in Asia Based on Data Integration and Analysis System (DIAS) under the GEOSS
ARCP2010-11NMY-Asanuma: Intercomparison of Landsurface Process Modelling at Asian Drylands
<b>ARCP2010-12NMY-Uprety:</b> Community Based Forestry and Livelihoods in the Context of Climate Change Adaptation
ARCP2010-13NMY-Bae: Climate Change Impact Assessment on the Asia-Pacific Water Resources under AWCI/GEOSS
<b>ARCP2010-14NMY-Li:</b> Analysis on Urban Land-Use Changes and its Impacts on Food Security in Different Asian Cities of four Developing Countries using Modified Cellular Automata (CA)
<b>ARCP2010-15NMY-Han:</b> The Impact of Spatial Parameters on Greenhouse Gas Emissions: A Comparative Study between Cities in China and India
<b>ARCP2010-16NMY-Huda:</b> Food Security and Climate Change in the Asia-Pacific Region: Evaluating Mismatch between Crop Development and Water Availability
<b>ARCP2010-17NMY-Towprayoon:</b> Strategic Rice Cultivation for Sustainable Low Carbon Society Development in Southeast Asia
ARCP2010-18NMY-Lutaenko: Coastal Marine Biodiversity of Viet Nam: Regional and Local Challenges and Coastal Zone Management for Sustainable Development



#### 2010-11 Research Projects under the CAPaBLE Programme

<b>CBA2010-01CMY-Sang-arun</b> : Promoting Sustainable Use of Waste Biomass in Cambodia, Lao People's Democratic Republic and Thailand: Combining Food Security, Bio-energy and Climate Protection Benefits
CBA2010-02CMY-Togtohyn: Dryland Development Paradigm (DDP) Application for the Most Vulnerable to Climate and Land Use Change of Pastoral Systems in the Southern Khangai Mountains of Mongolia (DDPPaS)
<b>CBA2010-03NSY-Indrawan:</b> Developing the Capacity for Teaching Biodiversity and Conservation in the Asia-Pacific Region
CBA2010-04NSY-Dhakal: Carbon Governance in Asia: Bridging Scales and Disciplines
<b>CBA2010-05NSY-Lorrey</b> : Improving Pacific Island Meteorological Data Rescue and Data Visualisation Capabilities through Involvement in Emerging Climate Research Programmes
<b>CBA2010-06NSY-Kench</b> : Improving Understanding of Local-Scale Vulnerability in Atoll Island Countries: Developing Capacity to Improve In-Country Approaches and Research
CBA2010-07NSY-Stone: Web-based 'Discussion-support' Agricultural-Climate Information for Regional India
<b>CBA2010-08NSY-Salinger:</b> Addressing the Livelihood Crisis for Farmers: Weather and Climate Services for Sustainable Agriculture – Development of Tools
<b>CBA2010-09NSY-Rupakheti:</b> Scientific Capacity Development of the Trainers and Policy Makers for Climate Change Adaptation Planning in Asia and the Pacific



#### 2010-11 Research Projects under the CAPaBLE Programme

<b>CBA2010-10NSY-Chen:</b> Promoting a Data Sharing Environment within the Earth Observation System of Systems: The Asia-Pacific Perspective
<b>CBA2010-11NSY-De Guzman</b> : Capacity Building for Research and Monitoring of Marine Protected Areas: An Adaptive Mechanism for Climate Change in the Asia-Pacific Region
CBA2010-12NSY-Pradhananga: Graduate Conference on Climate Change and People
CBA2010-13NMY-Kawai: Capacity Building of Biodiversity Research in the Coastal Zones of the Asia Pacific Region: Phycology Taxonomy Analysis Training Using Genetic Marker
<b>CBA2010-14NMY-Kaihotsu:</b> Drought Monitoring System Development by Integrating In-situ Data, Satellite Data and Numerical Model Output
<b>CBA2010-15NMY-South:</b> Global Change and Coral Reef Management Capacity in the Pacific: Engaging Scientists and Policy Makers in Fiji, Samoa, Tuvalu and Tonga
CRP2010-01CMY-Weber: Vulnerability Mapping as a Policy Tool in Developing Countries
<b>CRP2010-02CMY-Pereira:</b> Strengthening Capacity for Policy Research on Mainstreaming Adaptation to Climate Change in Agriculture and Water Sectors



# UNDER SCIENTIFIC RESEARCH THEMES 2 AND 40F THE APN'S 3RD STRATEGIC PLAN



Theme 2: Ecosystems,
Biodiversity and Land Use
Key Focus Areas: Forestry

and REDD-Plus

http://www.apngcr.org/newAPN/op portunities/opportunities.htm



Theme 4: Resources Utilisation and Pathways for Sustainable Development

Key Focus Areas: Global change implications of efficient resource utilization; Action to establish international sound material cycle society



#### New Activities Focused under Scientific Research Themes 2 and 4 of the APN's 3<sup>rd</sup> Strategic Plan

Th	e kinds of activities that may be supported include:
	Promoting and strengthening interdisciplinary regional global change research, particularly addressing novel research, and/or identifying key gaps via synthesis and assessment work.
	Identifying and developing existing and/or new methodologies for capacity development, particularly in <b>effective transfer of scientific know-how and technology</b> to user communities, both science and non-science.
	Strengthening interfaces between science and policy communities and society in general for effective pathways to sustainable development.
	<b>Encouraging initiatives from developing nations</b> for place-based, integrative research activities.
	Aligning with other programmes of the global change community.



#### **NEW HYOGO INITIATIVES**

- □ Activity 1: International Symposium Coexistence with and Blessing from Nature ~ Biodiversity and People Hyogo Dialogue for the Future
- Activity 2: Side event at CBD COP1
- Activity 3: Exhibit at CBD COP 10

These new activities will be implemented with funding from Hyogo Prefecture Government, Japan



In strengthening collaboration with the Hyogo Prefecture Government, Japan, a number of activities were endorsed at the 15<sup>th</sup> IGM/SPG Meeting.



For more details, check the following sites:

http://www.apn-gcr.org/newAPN/activities/symposiaInHyogo.htm http://www.apn-gcr.org/newAPN/activities/synthesis.htm



#### **Annual Calls for Proposals**

The Annual Regional Call for Research Proposals (ARCP) and the Annual Call for Capacity Building Proposals under the Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries (CAPaBLE) Programme was launched on 14 May 2010. Submission of Summary Proposal is on 30 July 2010.

Vsisit: <a href="http://www.apn-gcr.org/newAPN/opportunities/opportunities.htm">http://www.apn-gcr.org/newAPN/opportunities/opportunities.htm</a>.



# **Science-Policy Interactions/Challenges**

One of APN's goals is "Strengthening appropriate interactions among scientists and policy-makers, and providing scientific input to policy decisionmaking and scientific knowledge to the public"





# **Science-Policy Interactions/Challenges**

To	facilitate of appropriate science-policy interaction, APN will:
	Support training workshops for scientists to develop skills and techniques in providing science-based tools to support policy development
	Provide scientific information to policy-makers in a suitable format
	Identify and maintain databases of key policy bodies for the region
	Improve communications and exchange of information with relevant governmental fora in the region and relevant inter-governmental bodies
	Cooperate with other organisations to provide scientific information to the public
	Improve access to APN products and activities through media by providing frequent press releases and enhancing communications with media groups
	Facilitate communications and interactions among APN members and the Secretariat
	Develop a set of metrics for science-policy interactions/linkages and define specific criteria for successful science-policy linkages
	Encourage projects to adopt interdisciplinary approaches that include natural, social, economic and political sciences



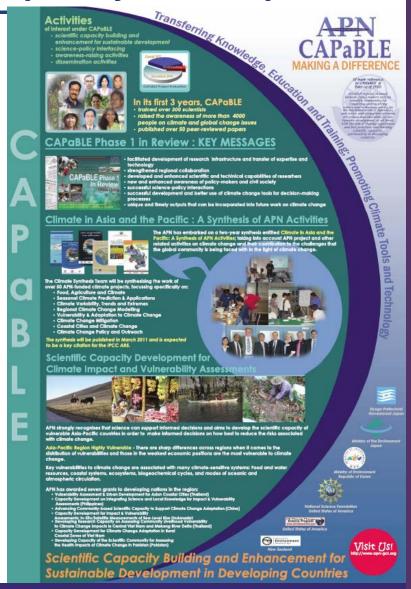
# **Science-Policy Interactions/Challenges**

Continue to empower APN members, who represent their governments, in APN activities, by seeking their guidance on best practices and opportunities to promote science and policy interactions Increase the number of policy publications, including policy-briefs, synthesis reports and assessments Disseminate scientific results to non-science audiences in order for policy-makers, end-users and the public to have a better appreciation of global change issues Cooperate with other institutions and bodies (e.g. the global change programmes, Association of Southeast Asian Nations [ASEAN], Intergovernmental Panel on Climate Change [IPCC], United Nations Framework Convention on Climate Change [UNFCCC] and Subsidiary Body for Scientific and Technological Advice [SBSTA], etc), who, like the APN, address or face issues relating to science-policy interactions Provide increasing opportunities for interactions between scientists and policymakers, and through policy-based workshops where participants include policymaking groups and a cross-section of stakeholders



## **Commitment to Capacity Development**

The **CAPaBLE** programme is enhancing scientific capacity in developing countries to improve decision-making relating to issues that are directly linked to their sustainable development. This effort is being achieved through a three-track mechanism: 1) capacity enhancement of experienced leading scientists; 2) capacity development for earlyto-mid-career scientists; and 3) science-policy interfacing and awareness raising of scientists, decision-makers and civil society.





### **Commitment to Capacity Development**

In thi	s commitment to capacity development, the APN's strategies are to:
	Recognise that scientific capacity development is needed for both the

- science and non-science communities;
- Establish specific criteria and a set of metrics for evaluating successful capacity development for short- and long-term outcomes;
- Widen its scientific capacity development activities in the broader context of global change and the scientific themes identified in the present Strategic Plan;
- Continue its scientific capacity development efforts in science and education at all levels from the local and community levels (grass roots), to the national, regional and global levels, particularly in developing countries.



# Contact the APN



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or email

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