



# Asia-Pacific Network for Global Change Research (APN)

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# About APN



- **Asia-Pacific Network for Global Change Research**
- Inter-governmental Network to foster global change research in the Asia-Pacific region
- Established in 1996 as a result of the 1990 White House Conference on Science and Economics Research Related to Global Change
- Full time secretariat in Kobe since 1999

# APN member countries



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

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

# APN: Framework -Vision, Mission

- **Vision:** Enable Asia-Pacific region to successfully address global change research
- **Mission**
  - Identify, explain and predict global change
  - Assess regional and global impacts and vulnerability of natural and human system
  - Contribute from the science perspective, to the development policy options for appropriate responses to global change that will also contribute to sustainable development

# APN: framework -Goals

- Goal1:supporting regional cooperation in global change research
- Goal2:strengthening interactions among scientists and policy-makers
- Goal3:Improving scientific and technical capabilities
- Goal4:Cooperating with other global change networks and organization

# Financial resource

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- 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

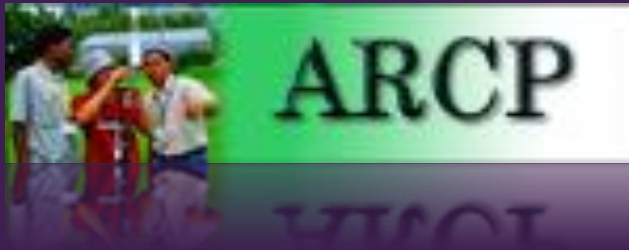


# APN in the Global Change Community



# Core Program

## ANNUAL CALLS FOR PROPOSALS



Visit:

<http://www.apn-gcr.org/newAPN/opportunities/opportunities.htm>



# Annual Regional Call for research Proposals (ARCP)

One of the scientific pillars of the APN to **support global change research** in the Asia-Pacific region

Competitive process launched in 1998 to select projects for funding under the Science Agenda.



## Project Eligibility, Duration and Funding:

- Conducted by at least 3 countries, two of which are developing countries
- The average grant awarded for 2011/12 (April 2011 – March 2012) projects was approximately US\$45,000. While APN may consider multi-year projects (maximum of 3 years), only a limited number may be funded
- If a multi-year proposal is approved, continued funding for year one is not guaranteed and the project will be subject to rigorous review after year one

# Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries

## CAPaBLE

The second pillar of APN supporting capacity development projects/activities

Registered as a World Summit on Sustainable Development (WSSD) Type II Partnership/Initiative

Launched in 2003 as a concrete initiative to realize part 107 to 114 of the Plan of Implementation for the WSSD

**Transferring Knowledge, Education and Training; Promoting Climate Tools and Technology**

**APN CAPaBLE MAKING A DIFFERENCE**

**Activities of interest under CAPaBLE**

- scientific capacity building and enhancement for sustainable development
- science-policy interfacing
- awareness-raising activities
- dissemination activities

**In its first 3 years, CAPaBLE**

- trained over 300 scientists
- raised the awareness of more than 4000 people on climate and global change issues
- published over 50 peer-reviewed papers

**CAPaBLE Phase 1 in Review : KEY MESSAGES**

- facilitated development of research infrastructure and transfer of expertise and technology
- strengthened regional collaboration
- developed and enhanced scientific and technical capabilities of researchers
- new and enhanced awareness of policy-makers and civil society
- successful science-policy interactions
- successful development and better use of climate change tools for decision-making processes
- unique and timely outputs that can be incorporated into future work on climate change

**Climate in Asia and the Pacific : A Synthesis of APN Activities**

The APN has embarked on a two-year synthesis entitled *Climate in Asia and the Pacific: A Synthesis of APN Activities* taking into account APN project and other related activities on climate change and their contribution to the challenges that the global community is being faced with in the light of climate change.

The Climate Synthesis Team will be synthesizing the work of over 50 APN-funded climate projects, focusing specifically on:

- Food, Agriculture and Climate
- Seasonal Climate Prediction & Applications
- Climate Variability, Trends and Extremes
- Regional Climate Change Modelling
- Vulnerability & Adaptation to Climate Change
- Climate Change Mitigation
- Coastal Cities and Climate Change
- Climate Change Policy and Outreach

The synthesis will be published in March 2011 and is expected to be a key citation for the IPCC AR4.

**Scientific Capacity Development for Climate Impact and Vulnerability Assessments**

APN strongly recognizes that science can support informed decisions and aims to develop the scientific capacity of vulnerable Asia-Pacific countries in order to make informed decisions on how best to reduce the risks associated with climate change.

**Asia-Pacific Region Highly Vulnerable** - there are sharp differences across regions when it comes to the distribution of vulnerabilities and those in the weakest economic positions are the most vulnerable to climate change.

**Key vulnerabilities to climate change** are associated with many climate-sensitive systems: Food and water resources, coastal systems, ecosystems, biogeochemical cycles, and modes of oceanic and atmospheric circulation.

APN has awarded seven grants to developing nations in the region:

- Vulnerability Assessment & Urban Development (Malaysia)
- Capacity Development on Integrating Science and Local Knowledge for Impact & Vulnerability Assessments (Philippines)
- Advancing Community-based Scientific Capacity to Support Climate Change Adaptation (China)
- Capacity Development for Impact & Vulnerability Assessments to Support Measurements of Sea Level Rise (Indonesia)
- Developing Research Capacity on Assessing Community Livelihood Vulnerability to Climate Change Impacts in Coastal Wetland and Floating River Delta (Thailand)
- Capacity Development for Climate Change Adaptation in Small Coastal Zones of Viet Nam
- Developing Capacity of the Scientific Community for Assessing the Health Impacts of Climate Change in Pakistan (Pakistan)

**Partners:** Hyogo Prefectural Government Japan, Ministry of the Environment Japan, Ministry of Environment Republic of Korea, National Science Foundation United States of America, US Environmental Science Policy Center International Institute for Environment and Development United States of America, Environment New Zealand, Visit Us! <http://www.apn-gcr.org>

# Types of Activities Eligible for Funding

- Scientific capacity development for sustainable development
- Science-policy Interfacing
- Awareness raising Activities
- Dissemination Activities



## Project Duration and Funding:

- While it is expected that capacity building projects will have a one-year duration, each proposal will be considered on a case by case basis
- The average grant awarded for 2011 projects with duration of 12 months was US\$ 35,000

# APN Activities in GEOSS

- **River Management System Development in Asia Based on Data Integration and Analysis System (DIAS) under GEOSS**
  - Countries involved: 18 countries in Asia
  - Project Leader: Prof. Toshio Koike, the University of Tokyo
  - Duration: 2years (FY2010–2011)
- **Climate Change Impact Assessment on Asia–Pacific Water Resources under AWCI/GEOSS**
  - Countries involved: Bangladesh, Japan, Mongolia, Pakistan
  - Project Leader: Prof. Deg-Hyo Bae, Sejong University
  - Duration 2 years (FY2010–2011)

# Asian Water Cycle Initiative (AWCI)

Development/adaptation of effective tools for enhanced data collecting and data management including: **software for data processing, quality control and format conversion, sophisticated database systems, and other tools**

Development/adaptation of advanced technologies for data integration and data dissemination to research groups including: **data integration systems based on Internet technologies and capable of integrating data from various sources such as satellite, in-situ, and model output data, metadata schemes following ISO standards, etc.**



**Cooperating with  
GEOSS and the APN**

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



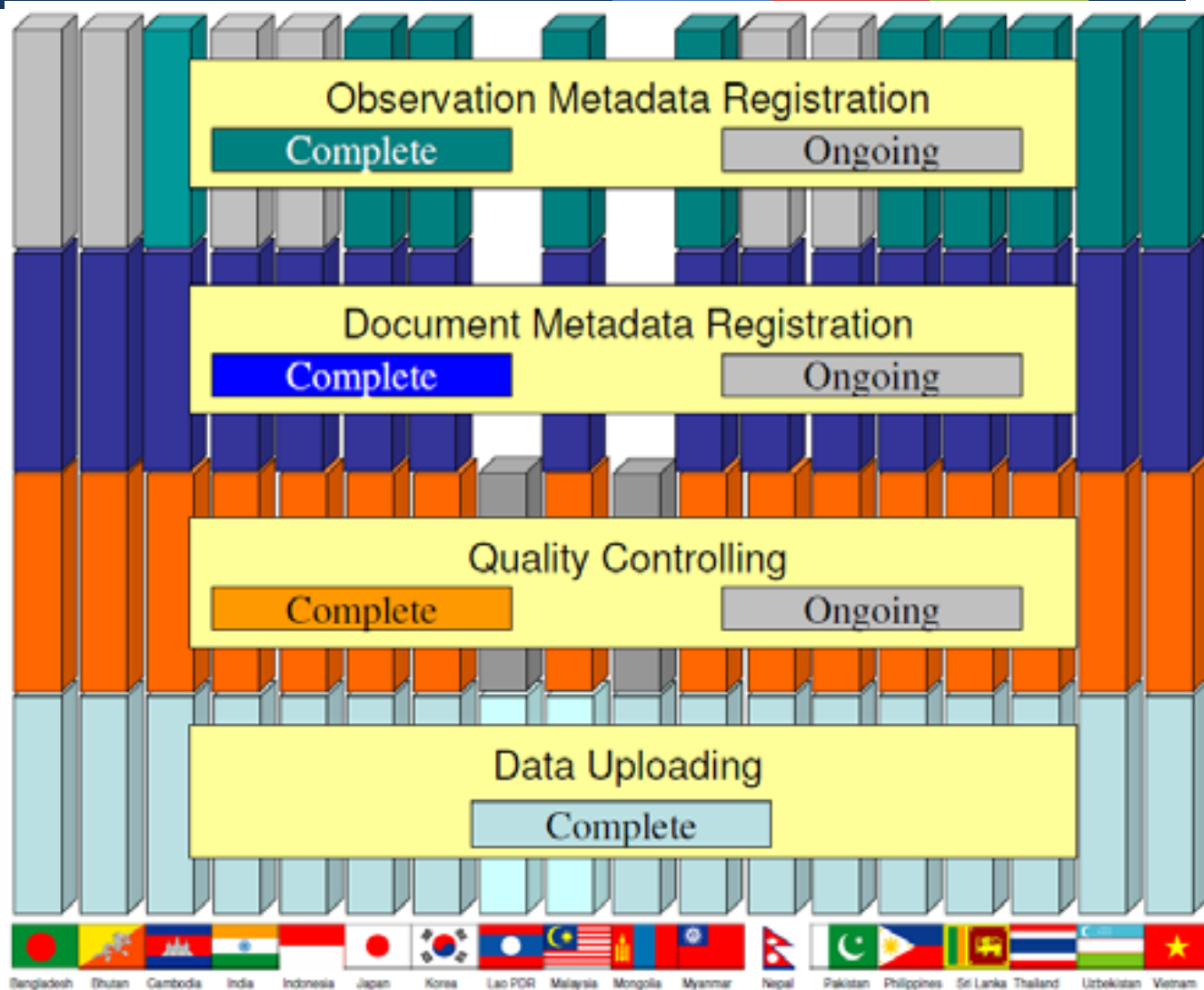


# APN Activities in GEOSS

## River Management System Development in Asia Based on Data Integration and Analysis System (DIAS) under GEOSS



# Status of AWCI data submission to DIAS, October 2011

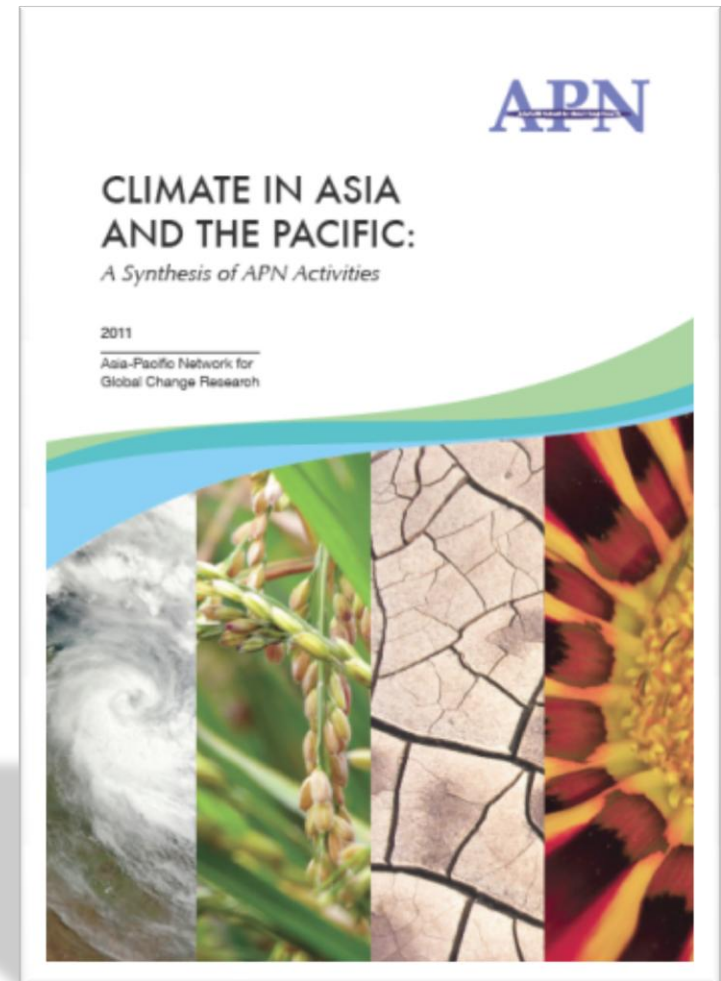


# Recent APN Publication

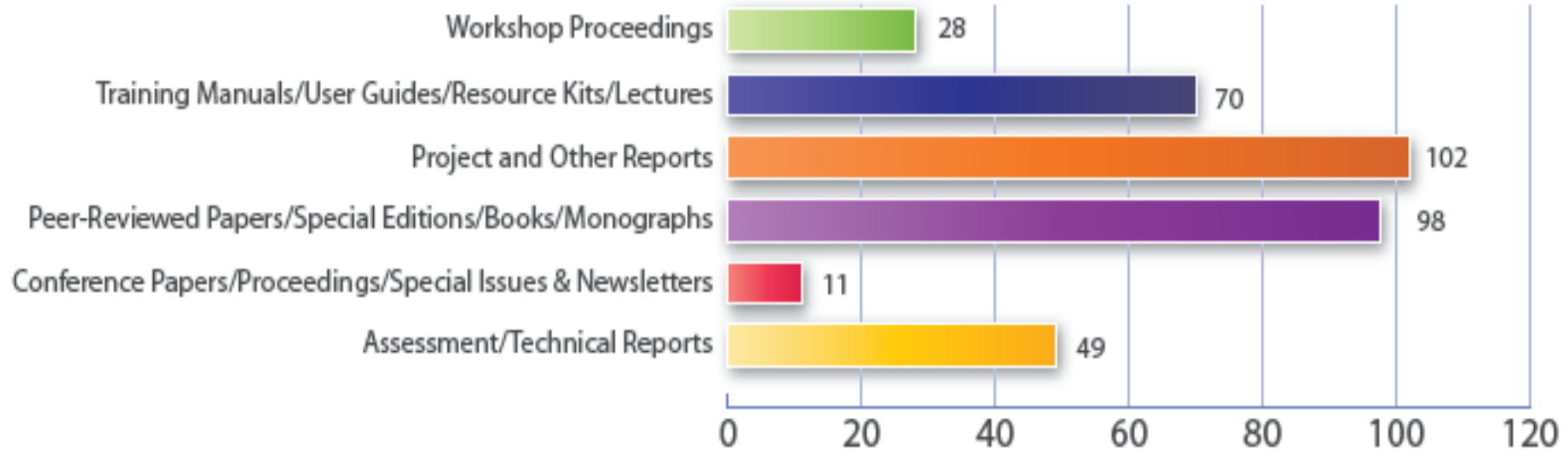
## 2011 Climate Synthesis Report on APN projects

- Synthesis of 56 climate-related projects funded by the APN since 1998

**Food, Agriculture, Seasonal Climate Prediction, Climate Variability and trends, regional modelling, vulnerability and adaptation, mitigation, coastal cities, policy and outreach**



# Types of publication of APN climate activities



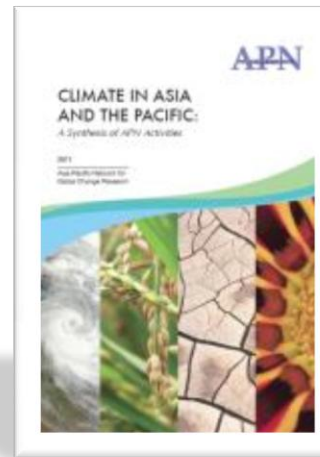
*Figure 3: Major publications from APN climate-related projects*

# 2011 Climate Synthesis Report

## 3.1 Food , Agriculture and Climate 3.1.1 Seasonal to Inter-annual variability

### (Recommendation)

- Further work is needed to **improve the skill of forecasts and associated downscaling** for better risk management **decision-making**.
- Identification of critical areas where agricultural production is sensitive and vulnerable to climate **requires close monitoring of climate**.
- Targeted climate synthesis and integration into applied risk management are required at the farm level. This **requires new institutional arrangements and multidisciplinary partnerships**.
- **Use of appropriate indices** to improve monitoring and prediction of these extreme events.
- **Mainstreaming climate information to farmers is required** from experts in meteorological services and agricultural ministries through improved communication via various media.



# 2011 Climate Synthesis

## 3.1 Food, Agriculture and Climate 3.1.2 Long-term change

### (Recommendation)

- Required **to link field data with climate conditions** so that crop simulation and disease simulation models can be refined and validated.
- Recent improvements in **crop model simulations should be extended to all important crops** so as to better define the impacts of climate change.
- **Watershed and water management models need to be used** in conjunction with crop simulation models.
- Use of **advanced remote sensing and GIS techniques** should be further encouraged so as to provide ongoing **monitoring of snow and water cover** and temporal **changes in the major glaciers**.
- **Use of decision-support systems as risk management tools** should be promoted as an effective means of providing outputs of integrated climate-agronomic information.

# Role of APN in implementing Cancun Adaptation Framework

- Role of regional centres in supporting following activities in Asia-Pacific region
  - **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**
  - Policy dialogue in AP region



# APN New Activities on Adaptation

(that will contribute to GEOSS in Asian developing countries)

## **1) Scoping workshop to enhance the action of APN developing country members on adaptation in the Asia-Pacific region**

Organizers: APN and the ICAS, Ibaraki University

Kobe, Date (TBD)

- Compare recent experiences to identify needs, gaps and lessons on planning and implementation of adaptation,
- Identify prioritized activities which should be supported by APN in regional or sub-regional scale, and
- Identify effective programmes and/or tools to support developing member countries in the region in the context of linking science and policy
- Bring scientists, policy-makers and practitioners associated with adaptation together in one venue – both within and outside the APN member countries

## **2) Joint activity with UN-CECAR: Training course on adaptation planning and implementation in Asian-Pacific region**

## **3) Proposal Development Training Workshop**



# New direction on GC research

## Planet under Pressure, London, 26-29 March 2012



# Extract from “State of the Planet Declaration”

## New knowledge toward Solutions

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(Necessary elements for new contracts between science and policy proposed by GC research community)

- Integrated goals for global sustainability based on scientific evidence are needed **to provide essential targets for societies**
- The challenges facing a planet under pressure demand a new approach to research that is **more integrative, international and solutions-oriented.**
- New mechanisms to facilitate an interactive dialogue on global sustainability among the various stakeholders and the policy-making community at different scales.

# Extract from “State of the Planet Declaration”

## New knowledge toward Solutions

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(Recommendations)

The initiatives above must be supported by:

- A greater commitment **to fund and support capacity-building in science and education** globally, and particularly in developing countries.
- A strong commitment to both applied and pure research and increased efforts to bring together disciplines, across all research domains.
- Strengthened support for observing systems, particularly in developing countries, including the **new observations needed to support decision-making for global sustainability**. New approaches should fully integrate global observing **systems for environmental and social issues**.



**Contact  
the APN**

For more information, please visit:

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