

ENHANCING THE CAPACITY FOR CLIMATE RESEARCH IN THE ASIA-PACIFIC REGION

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What is the APN?

The Asia-Pacific Network for Global Change Research (APN) is a network of 21 member governments whose mission is to enable the investigation of change in the Earth's life support systems as it occurs in the Asia-Pacific region 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, 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.



Why research?

We need to be able to provide timely and meaningful climate forecasts to managers and planners in sectors of the economy that are impacted by climate variability and change and particularly to those susceptible to climate extremes (floods, droughts, water storage and planned infrastructure, high winds, delayed monsoon, etc.)



What is the issue?

- Satellite community in '70's probably over-sold its capability to predict changes in the earth's climate.
- Resulted in lack of investment in systematic and sustained observations at the surface
- Substantial ongoing research and surface observation is needed to calibrate and verify algorithms and satellite products at regional and local scale.
- Many existing data are not accessible to researchers in Asia-Pacific, either within country or internationally.
(Resolution of this barrier requires promoting political commitment to data sharing and removing practical barriers by enhancing electronic interconnectivity and metadata);
- There is a need for data rescue and digitisation.



Particularly relevant for Developing States in the Asia-Pacific region:

- Scarcity of scientists, science infrastructure and science funding;
- Limited research experience of scientists;
- Lack of observational data (meteorological; oceanographic, and socio-economic etc.) and analytical tools;
- Lack of familiarity with relevant methods and models;
- Capacity to construct credible future climate scenarios;
- Difficulty of establishing and continuing collaborations from scientists from multiple disciplines as is needed for climate change research.

Participation in climate change research

UNFCCC Special Side Event on Research Needs of the Convention
SBSTA 24, 13:00 - 15:00, 19 May 2006





APN's Initiative in this context

- To identify and address the capacity building needs of countries in the Asia-Pacific region for research and monitoring related to climate change and its impacts;
- To facilitate activities to address the capacity building needs for climate-related issues in relation to the GEOSS 10-year implementation strategy & SBSTA's call to enhance capacity of developing countries to participate in climate change research.



Climate Hotspots

APN Special Workshop Bangkok March 2006:
identified several sensitive and fragile
'exposure' systems (hot spots) in the Asia-
Pacific region for which conventional *in-situ*
and remotely-sensed observational data, at
appropriate spatial and temporal scales,
together with the appropriately scaled
models, are required for advancing the
current understanding of climate variability
and climate change.



Asia-Pacific Hotspots

The hot spots in this region include:

- Himalayan Glaciers - spatial, temporal distribution of snow cover
- High Elevation Areas of Tibetan Plateau
- Degradation and depletion of ground water aquifers
- Desertification trends in arid/semi-arid areas of West Asia
- Mongolian Tundra
- Hydrological cycle and changes in Asian monsoon system and linkage to El Niño - Southern Oscillation
- Potential changes in extreme weather events including tropical cyclones and typhoons.
- Trends in deterioration of coral reefs, mangroves, and sea grass in coastal waters of East, South, Southeast Asia, Australia and island countries
- Loss of biodiversity in fragile ecosystems of highlands, wetlands and islands
- Coastal zones - erosion, sea level rise etc.
- Forest fires and land degradation



Common issue for all Developing States is the:

need for a commitment to continual and continuing capacity development and training.

This is particularly critical in areas where technical skills are developed as these skills, including computer literacy, are particularly 'marketable' in a Developing States as this often provides a stepping stone into the rapidly expanding telecommunications industry for example.

Continual training

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THANK YOU

