

# Asia Pacific Climate Change Adaptation Network (APAN)

## Mountain Climate Change Thematic Node

ICIMOD

FOR MOUNTAINS AND PEOPLE

ASIA PACIFIC  
ADAPTATION  
NETWORK



As the mountain climate change thematic node of APAN, ICIMOD will:

- Link APAN with the Centre's other networks and mechanisms – the Asia Pacific Water Knowledge Network, the Asia Pacific Mountain Network, and the Mountain Initiative for Climate Change Adaptation, among others
- Organize joint capacity building sessions and adaptation knowledge sharing workshops
- Collaborate with other regional APAN hubs and nodes to study, document, and share information on drivers, pressures, states, impacts, and responses to climate change including adaptive measures and policy responses
- Identify specific gaps and needs in knowledge, information, and technologies for climate change adaptation and priority areas at the country and the sub-regional level through dialogue with national implementing partners and regional entities
- Identify national and regional implementing partners and promote knowledge exchange among them, contribute to the Climate Change Adaptation Knowledge Portal managed by the APAN Secretariat, and issue relevant policy briefs and technical updates on a periodic basis
- Establish linkages, collaborate and exchange knowledge with networks, initiatives, national centres of excellence, donor agencies, government and other specialized institutions working on climate change adaptation in the countries of the sub-region
- Participate in and provide inputs to the annual Asia Pacific Climate Change Adaptation Forum and other regional/sub-regional/national activities as necessary
- Prepare an annual work plan and budget which may include application for financial assistance where necessary

### ICIMOD

The International Centre for Integrated Mountain Development, ICIMOD, is a regional knowledge development and learning centre serving the eight regional member countries of the Hindu Kush Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and based in Kathmandu, Nepal. Globalisation and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues. We support regional transboundary programmes through partnership with regional partner institutions, facilitate the exchange of experience, and serve as a regional knowledge hub. We strengthen networking among regional and global centres of excellence. Overall, we are working to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream – now, and for the future.

### APAN

The Asia Pacific Climate Change Adaptation Network (APAN) was launched as a part of the Global Adaptation Network (GAN) plan in October 2009 with initial support from the Government of Japan, the Government of Sweden and the Asian Development Bank. APAN is facilitated by the United Nations Environment Programme (UNEP), the Asian Institute of Technology – UNEP Regional Resource Center for the Asia Pacific (AIT-UNEP RRC AP), and the Institute for Global Environment Strategies (IGES), in partnership with other key actors in the region. APAN aims at building capacity and facilitating policy, planning, access to finances and actions, and knowledge dissemination in climate change adaptation.

## Climate Change in the Himalayas

Climate change has become a major issue in the greater Himalayan region. As summarized in the ICIMOD report *Climate Change in the Hindu Kush-Himalayas: the State of Current Knowledge* (2011), if average temperatures increase as predicted, all aspects of human and natural life will be affected. The mountain regions are particularly vulnerable, both because warming trends are higher and because the impacts are magnified by the extreme changes in altitude over small distances. Life in the Himalayan region also relies strongly on the monsoon systems, and these may be altered by climate change. Locally, people's ability to adapt will be challenged; further away, changes in the Himalayas could affect the life and livelihoods of the 1.3 billion people living in the river basins downstream. Good data and information are needed to assess the current situation and to make reliable predictions that can be used as a basis for planning. But poor accessibility, low population density, and lack of infrastructure have led to low rates of data collection and a general lack of reliable data for the region.

## The State of Current Knowledge

**Meteorology and hydrology:** Although historical data and sampling sites are too few, especially at higher elevations, available studies show a mild warming trend over the past few decades.

**Glacier status:** Of the more than 54,000 glaciers in the region, only a few dozen have been observed and documented at close range. While some are receding and others advancing, a slightly greater number appears to be receding.

**Contribution of meltwater to river flows:** The few studies of river hydrology available and the results of predictive models are inconclusive regarding trends in river flows.

**Species biodiversity:** Changes in climate and in the availability of water could be expected to influence the region's extremely rich biodiversity, but with insufficient monitoring of changes in species ranges and population dynamics, baseline data are not yet available to trace the possible impacts.

**Atmospheric pollutants:** The presence of black carbon aerosols in the atmosphere at high elevations has been confirmed, but the extent to which they alter circulation and precipitation patterns or accelerate the melting of ice and snow remains unknown.

**Livelihood and human health impacts:** Climate change is expected to interfere with water supplies, facilitate the spread of infectious diseases, and increase the frequency of natural hazards and disasters. Model-based predictions suggest that the impacts on both human life and ecosystems can be both positive and negative. While anecdotal evidence collected from farmers is scant and contradictory, farmers in some areas report warmer wintertime temperatures and erratic weather patterns.



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