

Climate Change and Water

Climate change is having a profound effect on water worldwide. Rainfall patterns and amounts are changing. Temperatures are rising. Together, they're causing increased evaporation, glacial melt, landslides, flooding, and drought.

The consequences are alarming. Water-related natural disasters are more frequent and more severe. And the availability and quality of water resources are under threat.

IDRC's Climate Change and Water program aims to help the world's most vulnerable people adapt to water-related impacts of climate change.

OBJECTIVES

Our goal? To help develop the research and science base in developing countries. We support research that improves climate change adaptation efforts, at the policy level, and in practice.

OUR APPROACH TO PROGRAMMING

Our approach: We create opportunities for research; we help grantees develop the skill sets needed to conduct and communicate their research; and we engage with our research partners to push their results and policy priorities forward.

Research: We support research that is locally relevant, engages multidisciplinary teams, and that can influence public policy debates. This research also addresses important gaps in knowledge, such as the economic impact of climate change and adaptation strategies. We encourage our grantees to publish their research in peer-reviewed journals.

Increasing skills: We support efforts to conduct quality research that can help ensure that communities are able to put into practice effective adaptation measures.



SACIWATERS: SREOSHI SINGH

Researchers are exploring water governance issues in Hyderabad and other peri-urban areas in South Asia.

Policy influence: We favour projects that engage policy-makers in the research process and include clear communication strategies to ensure that research results lead to better informed policies.

We also fund grantees' efforts to publish research findings and communicate their results in creative ways — through videos, on the web, in exhibits, and more.

OUR RESEARCH AREAS

We support research in three key areas:

Improving the quality and availability of water in areas vulnerable to water stress

This research explores low-cost, simple ways of coping with water stress and improving livelihoods. It examines social, economic, and political incentives to ensure the tools are adopted.

Specific focus areas:

- alternative water supplies

- linking sustainable energy production and efficient water use
- water demand management
- glacial melt and related impacts on people
- financial costs of adaptation measures
- water-related adaptation tools

Managing risks and unexpected climatic events

We fund research to develop tools to assess, measure, and track changes in a community's ability to adapt. We support research that aims to develop and implement concrete measures to meet local needs.

Specific focus areas:

- using information and communication technologies in disaster response
- the social and economic costs of failing to adapt
- flood management in vulnerable urban and coastal areas

Improving debates, policies, and decision-making

To have an impact, research results must be communicated to those who can use them, in a timely way. We support evidence-based research and its communication to policymakers.

Specific focus areas:

- water governance and equity in decision-making
- integrating adaptation tools and strategies into policy
- building flexibility and resilience into policy-making and regulation

SELECTED PROJECTS

Adapting to Change in Bolivia's Illimani Watershed

The rapid retreat of glaciers, aggravated by climate change, is threatening the water supply of Andean communities. There is an urgent need to look for more efficient distribution and use of water to minimize growing conflicts over access.



Bolivia's Illimani glacier is the sole source of water for several rural communities.

Bolivia's Illimani glacier is the sole source of water for several rural communities in the watershed. Rising temperatures over the past decades have made the climate suitable for more diverse crops. However, water use is increasing as more profitable crops, such as fruits and vegetables, are being produced to meet demand from the cities. Researchers are assessing current and future water supply and demand in the region. The project aims to strengthen the capacity of local communities and authorities to develop longer-term strategies for adapting to climate change in the Illimani watershed.

Water Security in South Asia: Adapting to Climate Change and Urbanization

By the year 2025, 60% of the world's population will likely reside in urban areas. Peri-urban areas (the transition zones between cities and rural areas) are expected to absorb most of this growth. Such change is having a major impact on how water is managed and delivered to cities. Researchers are exploring the implications of this rapid urban growth on water stress for vulnerable communities in four South Asian cities: New Delhi

and Hyderabad (India); Kathmandu (Nepal); and Kulna (Bangladesh). A series of workshops with key stakeholders are informing inclusive and sustainable urban policies and ways to improve water governance.

Adaptation H2O

Adaptation H2O is a program that offers research awards to university students to deepen their knowledge and expertise on the links between climate change and water issues. Awardees will conduct primary research on water management, cost-benefit analysis of adaptation, and other topics. Awardees are encouraged to get involved in existing IDRC supported projects. Calls for proposals are posted annually on CCW's website: www.idrc.ca/Adaptation-H2O

FOR MORE INFORMATION

Please visit our website.

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IDRC supports research in developing countries to promote growth and development. IDRC also encourages sharing this information with policymakers, other researchers, and communities around the world. The result is innovative, lasting local solutions that aim to bring choice and change to those who need it most.

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