

HUC Academy 2018

Climate Science and Adaptation in the Hindu Kush Himalayan Region: A Transdisciplinary Approach

01–14 July 2018, Kathmandu and Pokhara, Nepal

ICIMOD

HUC Himalayan
University
Consortium



Introduction

The Hindu Kush Himalaya (HKH) is home to 240 million people and serves two billion people through rivers that have their headwaters in the region. It has the largest body of ice outside of the polar regions, more than 60,000 km², and is sometime referred to as the “third pole.” About one billion people live in its three large transboundary basins: the Indus, Ganges, and Brahmaputra.

Globalization and climate change are increasingly affecting fragile mountain ecosystems. Climate change studies suggest that the effects of glacial melt, temperature variation, and erratic monsoon patterns will cut water supply in the region and lead to more floods and droughts. As a result, mountain and downstream communities require effective adaptation and mitigation measures. The resilience and adaptive capacities of communities and ecosystems need to be strengthened through mechanisms that are built on

indigenous knowledge and strong scientific evidence. Appropriate policies and practices and innovative livelihood improvement and sustainable natural resource management strategies need to be developed through partnerships between scientists, policymakers, and practitioners.

The HUC Academy

Universities and research centres play a key role in generating and sharing knowledge on climate change and providing evidence for effective climate change impact mitigation policies and practice. They fill crucial knowledge gaps and infuse technical content into public discourse that can influence policy makers and public opinion. The Himalayan University Consortium (HUC) was founded in 2007 with a mandate to develop an effective, sustainable network of universities in the HKH that collaborate with academic, research, and knowledge generating institutions both within and outside the region for sustainable mountain development.



The HUC Academy is a flagship annual intensive programme of the Consortium, providing cross-disciplinary scholarship opportunities to young researchers. It aims to create a new generation of transformational leaders committed to mountain research, who are capable of producing consequential knowledge, innovative policies, and environmentally responsible business practices to address HKH mountain challenges with transboundary solutions. The four signature features of the HUC Academy are: mountain focus; interdisciplinarity; field research; and, leadership.

The HUC Academy 2018, titled “Climate Science and Adaptation in the Hindu Kush Himalayan Region – a Transdisciplinary Approach,” will take place in Kathmandu from 1 to 14 July 2018, as part of a two-year grant made to the HUC by the Swiss Agency for Development and Cooperation (SDC). The project aims to advance knowledge of climate science and promote effective and sustainable adaptation measures. It seeks to scale up the impacts of previous and existing Indian Himalayas Climate Adaptation Programme (IHCAP) interventions to the HKH and promote regional collaboration between higher education institutions in India and neighbouring countries.

The HUC Academy 2018 aims to:

- Enhance scientific and applied knowledge on issues of climate change and adaptation in the HKH region
- Improve practical skills needed for competent academics, practitioners and future leaders
- Create an interdisciplinary network of teaching faculty and scholars in climate change and adaptation in and for the HKH

About HUC

The Himalayan University Consortium – an Initiative under ICIMOD’s regional programme on Mountain Knowledge and Action Networks (MKAN) – has a mandate to develop an effective, sustainable network of universities in the Hindu Kush Himalaya. This network engages top-notch professionals to take up high-quality research, education, teaching, and knowledge dissemination in the service of sustainable, inclusive, fair, and mountain-specific development for HKH communities and adjoining mountainous areas. The Consortium’s elected five-member Steering Group and Secretariat coordinate with member institutions in networking, building partnerships, promoting collaboration, resource sharing, and fundraising.

Participants

The course has been designed to build key skills and competencies in climate science and adaptation. It is based on learner-centred methods and interactive practical work. The course creates space and opportunities to exchange ideas and approaches and update knowledge. Class sessions are facilitated with expert inputs, real-life case examples and field excursions. Session-based group work lets participants work collectively to put their learning to practice.

Learning Approach

The course has been designed to build key skills and competence in disaster risk and water management. It is based on learner-centred methods and interactive practical work by participants. The course creates space and opportunity to exchange ideas and approaches, and update knowledge. It requires active participation from all participants. Class sessions are facilitated with expert inputs combined with real-life case examples and field excursions. Session-based group work will enable participants to put their learning into practice and collectively seek answers to real questions. The participants will prepare a brief action plan with ideas on how to integrate learning into their individual research and education work, and that of their institutes.

Course Programme

The programme consists of 28 sessions organized into 8 modules to be completed in 14 days. There is a field work component that encourages participants to take up transdisciplinary research.

- Module 1** Understanding Climate Change and its Biophysical Impacts; Knowledge for Sustainable Mountain Development
- Module 2** Conceptualizing Climate Change Impacts and Climate Change Adaptation; Understanding Human Dimensions of Climate Change
- Module 3** Responding to Impacts of Climate Change 1: International and National Policy Processes
- Module 4** Responding to Impacts of Climate Change 2: Adaptive Governance, Limits to Adaptation (Human Mobility), and Evaluation for Effective Adaptation
- Module 5** Preparing an Inter- and Transdisciplinary Research Strategy for Climate Change Adaptation Issues in Context
- Module 6** Validating Identified CCA Challenges; Developing Concrete Inter- and Transdisciplinary Research Strategies
- Module 7** Communicating Research to Various Audiences
- Module 8** Evaluation, Learning, and Closing of the Programme

Course facilitators and trainers

The lead instructors are **Anne Zimmermann**, Head of Education for Sustainable Development at the Cluster Centre for Development and Environment (CDE), University of Bern, Switzerland, and **Anjal Prakash**, Programme Coordinator, Himalayan Adaptation, Water and Resilience Research (HI-AWARE), ICIMOD. Resource persons and invited speakers come from various programmes and initiatives of ICIMOD, CDE, and other Swiss tertiary education institutions. The course is coordinated by the HUC Secretariat, led by **Chi Huyen Truong**.



Anjal Prakash

Programme Coordinator, Himalayan Adaptation, Water and Resilience (HI-AWARE), ICIMOD
Anjal.Prakash@icimod.org

Anjal Prakash is the Programme Coordinator of Himalayan Adaptation, Water and Resilience (HI-AWARE) Research on Glacier and Snowpack Dependent River Basins at ICIMOD. HI-AWARE is

a special initiative that focuses on adaptation issues in three river basins of South Asia. Dr Prakash has been selected as the coordinating lead author for the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC) to be finalized in September 2019. Before joining ICIMOD, Dr Prakash led the South Asia Consortium for Interdisciplinary Water Resources Studies (SaciWATERs) that worked in six countries of South Asia. With an advanced degree (1997) from the Tata Institute and Social Sciences (TISS), Mumbai, India and a PhD (2005) in Social/Environmental Sciences from Wageningen University, the Netherlands, Dr Prakash has been working in policy research, advocacy, capacity building, knowledge management, networking, and implementation of large scale and multi-country environmental development projects in South Asia. Dr Prakash is the author of *The Dark Zone: Groundwater Irrigation, Politics and Social Power in North Gujarat* (2005), published by Orient Longman.

Anne Zimmermann

Senior Research Scientist, Centre for Development and Environment (CDE), University of Bern
Anne.Zimmermann@cde.unibe.ch

Anne Zimmermann is a senior research scientist at the Centre for Development and Environment (CDE), University of Bern, and Head of CDE's Education for Sustainable Development cluster. With colleagues, she supports the university's efforts to mainstream sustainable development in teaching at all faculties – a complex and long-term process. She is also involved in research on transformative learning and science for sustainable development. She has long-term experience of teaching inter- and trans-disciplinary research skills in a North-South context and is committed to helping young researchers get their work published in international, peer-reviewed journals. To this end, she has offered scientific writing courses in many countries for the past 15 years, based on her nearly 20 years of experience as an Associate Editor at the international journal *Mountain Research and Development* (MRD). From 2002 to 2013, she also coordinated efforts to support young women's careers and mainstream gender in research in the 12-year NCCR North-South programme. Her PhD (1995) was on "Negotiations and Legitimations of Cultural Identity in New Zealand Literature."





Chi Huyen Truong

Programme Coordinator, HUC, ICIMOD
Chi.Truong@icimod.org

Chi Huyen Truong is an anthropologist by training. She had conducted ethnographic research on decollectivization, migration, and post-socialist transition in Vietnam. Her recent research interests include social memory, gender, education for indigenous/ethnic minority children, child poverty, and post-disaster livelihood recovery and resilience in Cambodia, the Philippines, and Nepal. Apart from being active in building a regional network of Southeast Asian scholars, she coordinated a number of curriculum building, training, and international collaborative research projects funded by The Ford Foundation and The Toyota Foundation.



Philippus (Flip) Wester

Regional Programme Manager, Mountain Knowledge and Action Networks (MKAN), ICIMOD
Philippus.Wester@icimod.org

Dr Philippus (Flip) Wester joined ICIMOD in March 2013 as Chief Scientist, Water Resources Management, and in 2018 was appointed Regional Programme Manager of ICIMOD's Mountain Knowledge and Action Networks (MKAN) Regional Programme. He is the Coordinator of the Hindu Kush Himalayan Monitoring and Assessment Programme (HIMAP), producing the first Comprehensive Assessment of the Hindu Kush Himalaya, and the Principal Investigator of the Himalayan Adaptation, WATER and RESilience (HI-AWARE) research on glacier and snowpack depending river basins for improving livelihoods, one of the four consortia forming the Collaborative Adaptation Initiative in Africa and Asia (CARIAA).



Veruska Muccione

Senior researcher, Department of Geography, University of Zurich
veruska.muccione@geo.uzh.ch

Veruska completed her PhD in Astrophysics in 2006 at the University of Geneva (Switzerland) and obtained a postgraduate master's degree in Sustainable Development from SOAS, University of London (UK) in 2014. She completed postdocs at the University of Geneva and University of Zurich and was a visiting scientist at the University of Canterbury (Christchurch, New Zealand). Since 2011, she has been senior researcher at the Department of Geography of the University of Zurich (Switzerland). Her current research focuses on climate change impact and risks in mountain areas and climate change adaptation and loss and damage. She has been involved in several national and international projects that aim to understand the impacts of climate change on water resources and natural hazards and the development of climate change adaptation measures. She has worked as programme coordinator in an interdisciplinary research programme on global change and biodiversity, as project manager and consultant for different NGOs, and as a natural risk analyst for the reinsurance sector. She is a lead author for the IPCC Working Group II Sixth Assessment Report, chapter "Europe" and lead author for the cross-chapter "Mountains."

About ICIMOD

The International Centre for Integrated Mountain Development (ICIMOD) is a regional knowledge development and learning centre serving eight regional member countries in the HKH – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and based in Kathmandu, Nepal. Globalization 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 understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues. ICIMOD supports regional transboundary programmes through partnership with regional partner institutions, facilitates experience exchanges, serves as a regional knowledge hub, and strengthens networking among regional and global centres of excellence. ICIMOD's Regional Programme River Basins and one of its four themes, Water and Air, have generated significant scientific and practical knowledge on issues of disaster risk and water management, and on promoting productive dialogues between researchers, practitioners, policy makers, and end-users.



For further information contact

Chi H Truong chi.truong@icimod.org
Bhawana Syangden bhawana.syangden@icimod.org
Achala Sharma achala.sharma@icimod.org

Photos: Jitendra Bajracharya, Rajendra Shakya, Utsav Maden

ICIMOD gratefully acknowledges the support of its core donors: the Governments of Afghanistan, Australia, Austria, Bangladesh, Bhutan, China, India, Myanmar, Nepal, Norway, Pakistan, Sweden, and Switzerland

© ICIMOD 2018

International Centre for Integrated Mountain Development
GPO Box 3226, Kathmandu, Nepal **Tel** +977-1-5003222

Email info@icimod.org **Web** www.icimod.org/huc