

Adaptation to Climate Change: Urgent Call for Intensified Action in the Hindu Kush Himalaya

CLAs: Arabinda Mishra¹, Arivudai Nambi Appadurai², Dhruvad Choudhury¹

¹ International Centre for Integrated Mountain Development, Nepal; ² World Resources Institute, India, China



Introduction

The current level of understanding of adaptation needs and interventions specific to mountain situations continues to be highly limited. At the same time, adaptation is becoming increasingly urgent for the Hindu Kush Himalaya (HKH).

Five of the eight HKH countries – Afghanistan, Bhutan, Myanmar, Nepal and Pakistan – are predominantly mountain countries and, at the same time, four of these (excluding Pakistan) are classified as Least Developed Countries. Even in case of the remaining two South Asian countries – Bangladesh and India – the mountain states/regions compare poorly with most of their non-mountain counterparts in terms of GDP and HDI indicators. In China, most of people living in poverty are resident in mountain regions which occupy nearly two-thirds of the land.

Thus for mountain people in HKH countries, climate change impacts carry a significant risk of undermining the achievement of fundamental human rights like rights to food/ health/ adequate housing, access to safe drinking water and sanitation.

Key Messages

- Adaptation is a complex challenge for HKH policy makers. Constraints include:
 - lack of adequate knowledge about climate change impacts;
 - weak institutional capacity for anticipatory governance;
 - social and cultural barriers to uptake of interventions; and
 - presence of non-climatic risks.
- Adaptation responses by governments in the HKH are mostly incremental, and insufficiently integrated with development plans.
- Finance is the greatest challenge to climate change adaptation in HKH countries, which generally needs stronger institutional capacity to plan an adequate anticipatory response (well established).
Institutional capacity—especially subnational—suffers from poor access to information, knowledge, and resources.
- Autonomous adaptation is widespread but may prove inadequate (established but incomplete).
Documentation is limited, and few attempts towards scientific validation.
- Opportunities exist for a scaled up, inclusive, and more comprehensive climate change adaptation response—in part through private sector engagement.

Policy Messages

- Climate change adaptation policies and practices must intensify in the HKH—and must become transformative. Institutional capacity on adaptation urgently needs to increase until it fits to purpose at each level of governance.
- Local-level autonomous responses to climate variability and extreme events must be studied systematically. Such responses need to become a source of critical, practice-based feedback to adaptation planning at higher governance levels.
- The first thing that must be done to build communities' adaptive capacity in the HKH is to alleviate poverty. Policy and practice should focus more on the links among climate change adaptation, disaster risk reduction, and the Sustainable Development Goals.

Nine indicators of climate change adaptation for HKH, consistent with SDG priorities and targets:

- Number of deaths, missing persons, and persons affected by climatic hazards per 100,000 people (disaggregated by sex).
- Economic loss (as % of GDP) that is averted by climate-proofing critical infrastructure and basic services.
- Percentage of population with access to improved climate information and services.
- Percentage of population with improved access to successful adaptation technologies.
- Proportion of local governments that formulate and implement local adaptation plans aimed at DRR and resilience building for vulnerable population groups.
- Number of urban settlements with access to safe, climate-resilient infrastructure and service delivery systems.
- Amount of climate financing flowing locally for climate change adaptation.
- Access to international funding (for example, from the GCF).
- Number of knowledge institutions engaged in adaptation knowledge generation, communication, and scale-up relevant to mountain context.

Country	Reference to NAPA / NAP	Adaptation priorities (sectors)	Cost of adaptation	Target years
Afghanistan	Adaptations actions and strategies included; NAPA and NAP mentioned	Meteorological and hydrological monitoring networks and services; Water resources infrastructure and irrigation systems; Community-based NRM; Selected species and habitat conservation; alternative and renewable energy; Regeneration of degraded forests and rangeland areas	10.8 billion USD (out of a total financial need of 17.4 billion USD)	2020 to 2030
Bangladesh	Adaptation actions mentioned; NAP mentioned	Disaster preparedness and protection measures; Improved early warning systems; Climate resilient housing, infrastructure and communication; Urban drainage; River training and dredging; Stress tolerant crop variety improvement and cultivation (including livestock and fisheries); Health; Biodiversity and ecosystem conservation	42 billion USD (out of a total financial need of 69 billion USD)	2015 to 2030
Bhutan	NAPA mentioned in context of ongoing actions, NAP mentioned as way for medium to long term adaptation	Water security; Climate resilient agriculture and livestock farming; Sustainable forest management and conservation of biodiversity; Resilience to climate change induced hazards; Minimize climate-related health risks; Climate proof transport infrastructure; Climate information services for VA assessment and planning; Renewable and climate resilient energy generation	cost not indicated	2018-2023 (12 th 5-year Plan)
China	Adaptation actions mentioned; NAP not mentioned	Infrastructure of water conservancy, transport and energy; optimal water resources management; water conservation facilities for farmlands, to vigorously develop water-saving agricultural irrigation and to cultivate heat and drought-resistant crops; resilience of coastal areas; biodiversity; forestry; urban infrastructure; public health services; early warning and communication system; DRR and emergency response systems	cost not indicated	by 2030
India	Adaptations actions included; NAP not mentioned	Agriculture, forestry, fisheries, infrastructure, water resources and ecosystems.	206 billion USD (at 2014-15 prices; mitigation cost estimated around USD 834 billion till 2030 at 2011 prices)	2015 to 2030
Nepal	Adaptations actions and strategies included; NAPA, LAPAs, CAPAs, NAP mentioned	Policy formulation and implementation; Research on loss and damage; Sustainable management of forests; Agricultural sector enhancement by adopting climate-friendly technologies and reducing climate change impacts; Climate-induced disasters in earthquake affected areas; Institutional level capacity building	cost not indicated	varies for sector to sector
Myanmar	Adaptations actions included; NAPA and NAP mentioned	NAPA priority sectors: 1. First priority level: resilience in the agriculture sector, developing early warning systems and forest preservation measures; 2. Second priority level: public health protection and water resource management; 3. Third priority level: coastal zone protection; 4. Fourth priority level: energy and industry sectors, biodiversity preservation	cost not indicated	not indicated
Pakistan	Not mentioned	not mentioned	cost not indicated	not indicated

