

5 A Call for Action!

Mainstreaming Climate Change

It is realised that without the support and awareness of civil society, including NGOs (non-government organisations), civil society organisations (CSOs), the private sector, universities, and other research institutions, it will not be possible to achieve resilient mountain social-ecological systems. It is, therefore, essential that these institutions assume responsibility for sensitising policy makers, planners, and decision-makers at all levels, as well as the public, about the importance of the goods and services provided by mountain systems, as well as about their disproportionate vulnerability and the emerging opportunities. Mountains should be recognised as hotspots of climate and other global changes, and policy makers should be motivated to take action and place a special emphasis on the conservation of mountain social-ecological systems, to fund research in order to reduce existing knowledge gaps, and to respond to the specific needs of communities dwelling in these fragile systems in this time of rapidly changing climatic and socioeconomic circumstances. Local and regional authorities play a crucial role in this context, since mountain areas usually do not cover entire countries.

Need for Mountain-specific Policies

Despite differences between mountain areas across the world in terms of the needs and challenges, particularly between those situated in developed and in developing countries, the fundamental challenges of mountain areas such as high fragility, loss of biodiversity, physical isolation, and political marginalisation are largely common and highly related. National policies often do not adequately consider or directly address the special conditions and challenges that mountain regions and their inhabitants face. Effective mountain-specific policies need to be designed not only at the local or country level but beyond, as these challenges are independent of national boundaries. In many countries, policies currently mostly favour lowland areas and largely ignore the disproportionate vulnerability of mountain social-ecological systems. As a result of the strong highland-lowland linkages described above, this could have negative repercussions on both mountain systems and lowland communities, as they are highly dependent on services and goods deriving from the mountains.

Need to Address Knowledge Gaps and for International Cooperation

There is still a high degree of uncertainty about climate change impacts on mountain systems. Especially in the developing world, the density of hydro-meteorological stations is extremely low, resulting in a serious lack of data. This is especially pronounced at high altitude and in remote areas. What is more, existing regional climate change models are still too crude to predict the impacts of climate change at regional or even local levels. It is therefore effectively impossible at present to predict with any certainty the many impacts of climate change on mountain systems. Given the importance of mountain goods and services, it is in the interest of both upstream and downstream communities to lessen the existing knowledge gaps. Comprehensive networks of climatic and hydrological monitoring stations are needed in mountain areas across the world, together with research in the fields of impacts, vulnerability, and adaptation to climate change. Sharing of research experience and data, and international level transfer of knowledge (especially in the fields of meteorology, water and glaciers, forests, energy sources, migration and conflict), are crucial for meeting the challenges mountain systems currently face from climate and other drivers of change, and achieving resilient mountain social-ecological systems. As most climate change issues are transboundary in nature, it will be essential to establish or reinforce international research partnerships, and develop international mechanisms on knowledge and data transfer.

Strengthening Existing Initiatives

In order to achieve an optimal impact, greater effort should be put into existing initiatives, and they should be linked effectively. At a global level, such initiatives include the Convention on Desertification; the Convention on Biological Diversity's (CBD) Programme of Work on Mountain Biological Diversity, which specifically addresses "the fragility of mountain ecosystems and species and their vulnerability to human and natural disturbances, in particular to land-use change and global climate change (such as the retreat of glaciers and increased areas of desertification)" (CBD 2010); the CBD's Programme of Work on Protected Areas, which promotes protected areas as being a strategy for both mitigation and adaptation to climate change and states that protected areas provide opportunities for research including for adaptive measures to cope with climate change; and UNFCCC REDD. Regional initiatives, including the Alpine Convention which has led to an Action Plan on Climate Change in the Alps, the Carpathian Convention, and non-legal frameworks and efforts such as the Balkans and Caucasus processes being led by UNEP, should also be strengthened and might serve as examples for other regions.

The Mountain Partnership hosted by FAO could gain new importance in linking these various global initiatives and making the learning available to all stakeholders. Regional information networks are increasingly needed to serve as learning and awareness creation platforms between researchers, civil society, and government institutions and to support targeted education and training. Mountain countries and regions need to develop mountain specific adaptation and mitigation policies, institutions, knowhow, and capacities to overcome the challenges posed by climate change and thereby maintain the pace and spread of economic development. This is the goal of the Mountain Initiative.

Sharing of Good Practices and Capacity Building

With regard to adaptation to and mitigation of climate change, while funds to implement interventions are necessary, knowledge about successful mechanisms and up-to-date technology may be even more relevant. In this context, developed mountain states, who often already have the benefit of long experience at their disposal, as well as greater financial means to test and implement such mechanisms, could play crucial roles in providing knowledge and expertise to, and building the capacities of, developing mountain states. Furthermore, traditional knowledge on coping and adaptive mechanisms to environmental change needs to be better understood. Overall, good practices of climate change adaptation and mitigation – both modern and traditional – need to be documented and disseminated through training and education initiatives that are tailored to the needs of mountain environments and people.

The Way Forward: An Initiative for Enhancing Resilient Mountain Systems

Mountain systems across the world, which are largely situated in subtropical and tropical zones, have contributed the least to global greenhouse gas emissions. Yet they are at the receiving end of the adverse effects of climate change, and thus urgently need to be supported in their struggle to adapt to the challenges, and enabled to benefit from emerging opportunities. In order to achieve environmental justice and develop resilient mountain social-ecological systems, developing countries with a high proportion of fragile mountainous territory need to be compensated and rewarded for their services by the Annex 1 Parties of the United Nations Framework Convention on Climate Change (UNFCCC). In order to achieve this goal, developing countries with mountain systems need to accept the challenge and collaborate with each other in order to have a strong common voice and to be in a position to defend their interests. For this, the promotion of a strong network of developing mountainous states and all concerned stakeholders will be indispensable.



Jiaju Zangzhai, Sichuan, China