

Dear Friends of ICIMOD,

During the 5th World Water Forum in Istanbul in March 2009, we had the chance to chair a roundtable discussion on 'Snowpack Dependent Water Services'.

The three key messages of the discussion were: (1) the need to increase the availability of scientific information and knowledge, (2) the need to develop natural and artificial systems to increase water storage capacity, and (3) the need to strengthen institutions for improving water governance. Storage of water in the mountains was identified as a key issue for improving water security and as an adaptation strategy to climate change and other events.

The present issue of ICIMOD's periodical Sustainable Mountain Development is a follow-up of these discussions. We want to provide a brief overview of the different dimensions of 'storage' in the Himalayan region in the context of climate change.

We are convinced that water storage is and will be a key strategy for climate change adaptation. One of the major impacts of climate change in the mountains will be on the availability of water. This together with increased demand from a growing population for water for agricultural, industrial, and domestic purposes is likely to turn water into a major issue in the countries of Asia in the coming years. The easiest way to address the growing gap between demand and availability of water seems clear: store more water when it is available in excess and release it when it is needed. 'Storage' thus becomes the central issue, although increasing efficiency of water use is also important. The more water we can store at high altitude the better. This allows us multifunctional use of the water, for hydroelectricity, irrigation, animals, and domestic use.

What sounds simple in theory, proves complicated and challenging in practice, particularly in the Hindu Kush-Himalayan region.

The many glacier lakes, themselves a product of rising temperatures, may offer storage potential, but only if the risk of outburst from the unstable moraine dams can be reduced. But the high elevation of these lakes – mostly above 5000 masl – means we do not have any access or infrastructure to manage them.

The high altitude wetlands constitute an enormous potential, particularly on the Tibetan Plateau. Is it possible to extend the surface and potential of the wetlands on the southern slopes of the Himalayas? Can we protect and extend existing wetlands in the face of moves towards land use change and increasing exploitation?

Water storage at farm level is still a largely untapped resource. Farmers in traditionally water-stressed areas have developed elaborate systems of storage and governance to collect and distribute water, but the skills and knowledge are rapidly disappearing, just when they are needed most. We have rich experience within the Hindu Kush-Himalayan region. Are the hill farmers going to be the water managers of the future? We certainly have to revisit the watershed development



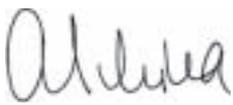
programmes and analyse the potential of water storage. Out of the box thinking will be required combining local experiences with high end technology.

And in the cities, rainwater harvesting and assisted recharge of aquifers offer a potential solution to some of the massive urban shortages.

Big dams have not been discussed in this periodical; this is certainly a gap. We know that building dams is the most conventional approach, but it has serious potential drawbacks in our unstable environment. In addition, dams are massive local structures. We think that we need to rethink and look at new approaches that are supported and promoted by the local population.

The topic is by no means exhausted. But we hope that the articles presented here will provide you with food for thought, and stimulate discussion and activities on water storage in the mountains.

Sincerely,



Andreas Schild,
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