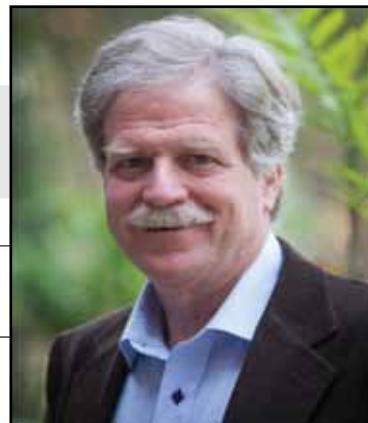


## An Interview with Dr. David J. Molden

Director General, ICIMOD

(International Centre for Integrated Mountain Development)

*Dr. David J. Molden granted an interview to Mr. Bhai Raja Manandhar, Managing Editor, Hydro Nepal journal. The interview in its entirety is presented.*



### **Based on the research/studies undertaken by ICIMOD so far, could you shed some light on the most obvious effects of Climate Change in Nepal Himalaya?**

The most observable impact is the rise in air temperature, the rate of which over the last four decades has been much higher than the global average trend. The next major and visible impact is the change in the cryosphere, particularly the glaciers. The glacier area in Nepal has shrunk by 21% based on the comparative results of the inventories prepared in 2001 and 2010. Erratic rainfall, unpredictable weather patterns, climate variability and extreme events, biodiversity loss, spread of diseases and invasive species, and the change in overall water supply are other possible effects. The effect on agriculture and food security is what we must be conscious of because this would directly impact the livelihoods of rural farmers.

### **How well have the findings of research/studies of ICIMOD on the mountains of Nepal been reflected in the national policies, plans, and programs of the Government of Nepal?**

Quite well, because ICIMOD's activities are aligned with priority programmes of the member countries. Our programmes in Nepal are, therefore, aligned with national priority programmes of the Government. ICIMOD has always sought to work closely with all our regional member countries. We are an intergovernmental organization, so, sitting on our Board is one member each from these eight regional member countries. The Vice Chair of the National Planning Commission represents Nepal on our Board. So far we have worked with a number of Ministries and Departments who have been our project partners, providing guidance and other critical inputs to our pilots and projects. More recently, ICIMOD in collaboration with the National Planning Commission launched the 'Strategic Framework for Resilient Livelihoods in Earthquake- Affected Areas of Nepal'. The Framework has been prepared primarily to provide insights into how to restore, revive, and revitalize livelihoods focusing on the various socioeconomic challenges towards a strategic framework for designing and implementing actions, particularly those in the hills and mountain areas. It aims to complement the Post Disaster Needs Assessment of the Government of Nepal

by providing insights into the livelihood dimensions of the earthquake and its socioeconomic and livelihood impacts. We will continue to emphasize the importance of enhancing and strengthening our partnership with the Government of Nepal.

### **How far do you think the National/Local Adaptation Plans of Actions (NAPA/LAPA) adopted by the GoN to tackle Climate Change impacts are appropriate and effective, considering the delicate environment of our mountains in particular?**

Initially NAPA came as a prerequisite from the climate negotiations for Least Developed Countries (LDCs) to have a strategy in place that outlines urgent and immediate adaptation needs for addressing extreme climate events and their consequences, before accessing the climate finance. Nepal started this process in 2009 and NAPA was completed in 2010. It provides a broad framework at national level with prioritization and categorization of the most vulnerable districts. This legitimized accessing climate finance, but there was a lack of implementation modality. The Government of Nepal realized this quickly and came up with the LAPA Framework in 2011 by integrating climate change resilience from local-to-national planning based on bottom-up, inclusive, responsive, and flexible planning process. This actually helped mainstream adaptation into development planning. This made Nepal's adaptation strategy stand out from other LDCs as it was not only the first country with a LAPA Framework, but one that puts local communities at the center of adaptation planning. Today, many districts have already made their LAPA and are already implementing community-based adaptation activities.

Nepal is one of the most vulnerable countries. Therefore, the implementation of NAPA through LAPA is the best way forward, and the Government has made a very good and innovative decision on implementing NAPA by being able to successfully mainstream adaptation into development planning. This is evident from the climate change budget code created by the Government. As a result, this has enabled many district

plans to implement adaptation activities by integrating them in the district development plans.

**In the wake of the recent earthquake, the degree of vulnerability of our mountain environment has become pretty evident to all of us. In this context, how is this new revelation going to influence the future priorities and works of ICIMOD?**

The recent earthquake has been an eye opener for all of us. Obviously, the very first lesson has been the importance we must accord to disaster readiness and risk reduction. At ICIMOD, we will be intensifying works on Disaster Risk Reduction. We have already been active in identifying post-earthquake landslides and Glacial Lake Outburst Flood hazards. One of our initiatives, Regional Flood Information System in the Hindu Kush Himalayan Region, seeks to promote the timely exchange of flood data and information for the reduction of flood vulnerability within and among the countries of Bangladesh, Bhutan, China, India, Nepal, and Pakistan. Projects like this would greatly help in situations like the one we are going through right now where severe flooding has affected our entire region. Therefore, people and communities must stay prepared. The biggest lesson we learn after each disaster is that preparedness is critical.

**What will be the implications of such Climate Change effects for the water resource of Nepal and for our hydro-based infrastructure projects for that matter?**

The average annual and seasonal water supply is not projected to be impacted by climate change. While the overall glacier area will continue to decrease under the projected climate change scenarios, an increase in precipitation is likely to compensate for the reduction in the melt water contribution. However, there are indications that extreme events such as rainfall, floods, and drought are likely to increase in intensity and magnitude in the future. Hydro-infrastructure should be designed to absorb these changes.

**How successful do you think we have been in striking a sensible balance between our aspirations for economic prosperity through developmental activities and the fragility of the mountain environment?**

Striking a perfect balance is difficult. Indeed, it is a formidable task that requires immense hard work and sacrifice on the part of governments and peoples of the mountain countries. The recent earthquake was a wake-up call to all of us, especially to development workers and political leadership. There must be better and improved coordination among all the stakeholders. It's never too late to change policies that are not responding to people's aspirations, or those that pose serious threat to our environment and ecosystems. Indeed, the ongoing global debate on climate change must be seen as an opportunity to galvanize people and build a grassroots momentum to

advance policies that improve lives and create a better harmony between the ideal of economic prosperity and the reality of mountain environment.

**As temperature rises, glacier mass decreases resulting in decrease in river discharge. Besides, most of the planned hydropower projects of Nepal face the risks of GLOFs. Hence, is there any coordination with GoN during the planning stage to minimize such risks in a proactive manner?**

Major hydropower projects have to consider GLOF risk during their design phase. Independent Power Producers tend to review the available information on GLOF risk. However, the Government of Nepal and the private sector must continue to make concerted effort to assess GLOF risks in all major river corridors. ICIMOD coordinates and works with the Department of Hydrology and Meteorology on issues related to glacier and GLOFs.

ICIMOD is also filling existing knowledge gaps in these areas by generating new information through its various programmes. Initial fear was that the rivers would dry up because of glacier melt; however, new research indicates that water levels of the rivers will not drop over the next century due to an increase in monsoon rains in the region. However, climate change will result in smaller glaciers and less meltwater in the Himalayas. The impact of climate change on river discharge in the Himalayas is being continuously studied by our scientists, but much work remains, including better understanding of changes in monsoon patterns and snowmelt, and resulting variability in river flows, including low flows and flood peaks.

**Considering the immense prospects of tourism and hydro-power projects in the mountains of the country and also the fragility of these mountains, what would be the best modality of sustainable economic development for Nepal?**

The major thrust has to be on mountain people and mountain environment. Mountains are full of opportunities. If we think about migration, we can also think about the remittances from migration. What about the money coming back into the country? Can we put that to better use, for environment and livelihoods? There are also unique mountain products. Can we get them to the market and bring more income to mountain people? At ICIMOD, we focus a lot on high-value niche products. Ecotourism is one such product; others include high-value crops like cardamom and medicinal herbs. The country's hydropower development still has a long way to go, and this means opportunity to learn from the best practices in the region, from countries like Bhutan that have sensibly pursued a fairly good hydropower development model. And let's not forget the use of other

green and sustainable energy options.

**How far do you think have the international community and particularly the developed world been effective in their actions for saving the Mother Earth from the ultimate impacts of Climate Change on a global scale?**

The international community needs to move faster and take critical action. But it's a long road ahead, fraught with uncertainties. The international community, particularly the developed nations, haven't done enough to combat climate change. And small developing nations like Nepal bear the brunt of failures in international negotiations. The faster the UN Climate Summits are able to forge consensus to reduce emissions, the better would our collective future be. Major polluting countries must sign binding agreements to cut emissions, because the dangers of global warming is no longer an old wives' tale, it's a living reality. The need for global political will has never been direr.

**As Nepal's mountains are home to rich bio- and ethnic diversities of the country, how vulnerable are these to the threats of Climate Change and what defensive measures need to be taken up to protect them?**

Yes, Nepal's rich bio- and ethnic diversity is very vulnerable to the threats of climate change. As I stated earlier, the focus, based on the recent disaster experience, must be preparedness. Coping capabilities must be improved to build resilient mountain communities that are able to respond suitably to certain degrees of shock from unforeseen threats and disasters. We must continuously seek new opportunities in the face of these uncertainties. And the biggest opportunity perhaps is the learning right across this region in mountains and from mountain people. There is also a big opportunity in fostering south-south collaboration amongst institutes and people on mountain research. Can we, therefore, work together to share this mountain knowledge to collectively face the challenges of today and tomorrow!

**Given the wealth of research-based knowledge that ICIMOD has acquired over the past three decades since its formation, how well have the countries of the Hindu-Kush region in general and Nepal in particular benefitted in terms of poverty alleviation of their people living in the**

**mountains?**

ICIMOD is a regional intergovernmental learning and knowledge sharing centre serving the eight member countries of the Hindu Kush Himalayan (HKH) region – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. It aims to influence policy and practices to meet environmental and livelihood challenges emerging in the HKH region. We deliver impact through our programmes and initiatives within the four thematic areas of Livelihoods, Ecosystem Services, Water and Air, and Geospatial Solutions.

As I said earlier, our works in all our regional member countries are aligned with national priority programmes of these governments. Every day we disseminate new knowledge to our partners in the field, often working together to co-create this knowledge. And this knowledge has been useful for policy and practice. We are confident that it has made considerable difference for the livelihoods of mountain people. Measuring ICIMOD's direct impact on poverty alleviation would be difficult, but suffice it to say that we have made some notable differences on the ground. We have trained honey farmers, we've taught housewives to make bio-briquettes, we've introduced and promoted new crops, we've introduced new farming methods, we've linked farmers to markets, and we've developed policies and programmes mostly focusing on resilient livelihoods. Many of our researches seek to fill the data and information gaps that continue to persist at global level regarding mountains, especially the Hindu Kush Himalayas.

**Lastly, would you like to convey any message to the readers of HYDRO Nepal Journal?**

People must be at the center of all development efforts, and they must be provided with a range of strategic choices and options for developing resilient livelihoods. Given a hoard of climate-related uncertainties surrounding our future, it's the poor mountain people, including women and other marginalized groups, who would be most affected in the event of a calamity. We must build on the already existing local and traditional knowledge to devise effective coping strategies as well as improve people's adaptive capacities. As the recent earthquake showed, readiness and resilience must be the key focus.

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