There are thousands of policymakers, climate scientists, activists and journalists from all over the world gathered here in the Polish capital for the climate summit, officially known as the 19th Conference of the Parties (COP19) to discuss climate change.

As every year, everything from global temperature rises, greenhouse gas emission, ocean acidification, biodiversity conservation, farming, to scarcity of natural resources is on the agenda.

However, even when the world’s leading water researchers and policymakers meet, they are not discussing the fragile mountain ecosystems of the Himalayas where most of the big rivers of Asia originate.

“Mountains in the Himalayas are the water towers of Asia and global reservoirs of biodiversity,” said Eklabya Sharma, a director of programme operations at the International Centre for Integrated Mountain Development (ICIMOD), in Kathmandu, Nepal, speaking at a side event
(Adaptation without Borders: Building Cooperation for Resilient Regions) at the conference.

“There is limited knowledge on the impact of melting permafrost on downstream irrigation and agriculture so transboundary cooperation is essential to better adapt to future disasters and ensure the sustainability of mountain ecosystem.”

Nand Kishor Agrawal, Himalayan Climate Adapation Programme

The continuous release of greenhouse gases into the atmosphere is increasing the vulnerability of people living in the fragile ecosystem of the Himalayas and trying to adapt to rising temperatures. And now people in the mountainous region are faced with the additional implications of climate change on food security, scientists say.

ICIMOD’s forthcoming report ‘The Last Straw’ will highlight the effects of climate change on food security in the Himalayan region.

“The mountain areas of India, China, Nepal and Pakistan have the highest degree of food deficiency in the region and climate change will exacerbate problems for those already living on the margins of food production,” said Nand Kishor Agrawal of ICIMOD’s Himalayan Climate Adapation Programme, which will publish the report early next year.

And yet sharing resources and knowledge on adaptation is still not widely practiced in mountainous South Asian countries, even though they face similar challenges from climate change.

“There is limited knowledge on the impact of melting permafrost on downstream irrigation and agriculture so transboundary cooperation is essential to better adapt to future disasters and ensure the sustainability of mountain ecosystem,” Agrawal told SciDev.Net.

But local experts at the conference highlighted that the cooperation on adaptation is easier said than done.
Rebecca Nadin, director of Adapting to Climate Change in China, an NGO, pointed out that the concept of adaptation without borders should not be limited only to geographic or political borders, but should span the technical and political divide

“We need to have technical knowledge-sharing within all concerned sectors at the national and local level first, for adaptation policy and planning before crossing borders,” she said.