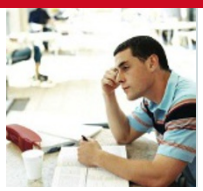

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Glacial melt thaws South Asian rivalry

More than 70 international climate scientists met in Kathmandu earlier this month to begin the tricky scientific — and diplomatic — task of mapping glacial retreat in the world's highest mountains.

The massive glaciers of the Hindu Kush–Himalaya ranges supply some 1.3 billion people in the surrounding countries with water, and their retreat will have an impact on wetlands, agriculture and rangeland. Glacial lakes left by the melt are brimming, threatening to destroy homes and power stations (see *Nature* **438,** 275–276; 2005). Yet there is little information about how the glaciers are changing as Earth warms. A comprehensive report released last year by the Intergovernmental Panel on Climate Change detailed the impact of global warming over much of the cryosphere — areas covered in snow, ice or permafrost — but the Himalayas were barely mentioned.

G. DIXON/LONELY PLANET/GETTY

Increased monitoring is needed for Earth's highest glaciers.

"This has been a blind spot, a big scientific question mark," says geographer Mats Eriksson, programme manager for water and hazard management at the International Centre for Integrated Mountain Development (ICIMOD) based in Kathmandu, which helped organize the three-day workshop.

The aim is to combine data from all over the region on atmospheric temperature, precipitation, wind speed, river discharge, topography and elevation to assemble models of water availability that might be useful for making policies on, for example, agriculture. There are too few remote-sensing stations, meaning that some models have been based on "very faulty information", says Michael Bishop, a physical geographer at the University of Nebraska in Omaha, who helped organize the workshop. And different countries use different algorithms to process remote-sensing data. "We need protocols so the data can be prepared," Bishop says.

The dearth of data makes it hard to assess danger and take measures to head off disaster. Studies outlining the impact of the retreating glaciers on people's lives, such as a 2005 report on glaciers in India, Nepal and China by the conservation group WWF, mostly depended on data five or ten years old, says WWF's Lifeng Li. ICIMOD, an independent centre funded by its eight member countries — Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal and Pakistan — held the workshop to address these problems. It's been a long time coming, says Bishop, who spent four years trying to coordinate research activities among the region's scientists. Political friction always prevented members from attending.

Political sensitivities also make member countries hesitant to share data. Pakistan considers all aerial photos to be state secrets, and India is wary of sharing oceanographic and land-survey data. Both are reluctant to reveal locations of observatories, Bishop says. After more than two decades working in Pakistan with data from low-altitude climate stations, he was surprised to find out that the country also has high-altitude stations.

At the end of the workshop, the scientists called for each member state to have at least "one focal glacier under close long-term study, preferably including mass balance and velocity studies" and to "create basin-wide water scenarios for all major basins in the region".

It is not yet clear to what extent the countries will increase investment in data collection. And the workshop's call to make data sharing "politically correct" will probably face resistance. But Bishop is hopeful: "For the first time I see Pakistanis and Indians really talking, really excited, and recognizing the scientific successes of the other country." ■

David Cyranoski

$50 million cyberchallenge for plant scientists

Plant biologists were offered a dream ticket last week: US$50 million to address the biggest challenges in their field. But the money comes with a catch. It can't be used to generate new data, only to create user-friendly computational tools. And, perhaps hardest of all, researchers have to persuade others in the field to collaborate on how to spend the funds.

The offer was presented at the inaugural meeting of the iPlant Collaborative, a project funded by the US National Science Foundation to address 'grand challenges' in plant biology. During the coming months, researchers will form grand-challenge teams to hammer out proposals. The hope, says iPlant director Richard Jorgensen of Arizona State University in Tempe, is that the project will generate new interdisciplinary collaborations and deliver useful computational tools to the community.

Many at last week's meeting, held at the Cold Spring Harbor Laboratory, New York, were sceptical. Some thought it premature to shift the focus away from data collection when many databases are contaminated with poorly described experiments and low-quality data. Others wondered if iPlant would meet the same fate as several previous cyberprojects that were abandoned once funding ran dry.

iPlant plans to adopt an open-source model, in which users are encouraged to develop the programs to suit their needs. That could extend the life of iPlant computational tools beyond the day that the project ends, but only if a wide community is motivated to develop them. For Jorgensen, one of the earliest challenges has been encouraging participation from ecologists and evolutionary biologists and not just molecular biologists.

Early suggestions for grand challenges include understanding the effects of climate change to modelling how a single cell becomes a multicellular plant. Because the iPlant organizers want ideas to come from the community, they offer little guidance on what a grand challenge ought to be. As a result, preliminary brainstorming sessions were meandering and unfocused. "It's a creative chaos," says Jorgensen. "As long as we don't let it drive us completely off the cliff, we're fine." ■

Heidi Ledford