

[We reproduce below extracts from a news item that appeared in the *Science*, v.312, 26 May, 2006, p.1117 and v.313, 7 July, 2006, pp.30-31 for the information of our readers. Permission accorded by *Science* for reproducing the same is thankfully acknowledged – Editor]

PAKISTAN GIVES GEOLOGY CONFERENCE THE COLD SHOULDER

“Pakistan has pulled the plug on high-profile conference next week that would have brought together scientists from India and Pakistan in a session designed to set aside hostilities and forge a research plan for the high Himalayas. The blow has left organizers of the science-for-peace event reeling. The cancellation “is completely unexpected and unwarranted”, says co-organizer Jack Shroder, a geologist at the University of Nebraska, Omaha.

The joint project was to focus on the Karakoram range of the Himalayan mountains of northern Kashmir, a high-altitude graveyard for soldiers from the Indian and Pakistani

armies, who in reality are far more likely to die from exposure and accidents than enemy fire. Topping the agenda of the conference, funded in part by a \$70,000 grant from the U.S. National Science Foundation and scheduled for 29 to 31 May, was a discussion of how to turn one iconic battleground, the 6100 metre high Siachen Glacier, into a science peace park. The first step would require that the two countries strike an accord and withdraw their troops. More than 100 scientists from eight countries had registered for the conference, sponsored by Pakistan’s Higher Education Commission (HEC)”. — Pallava Bagla

ACROSS A POLITICAL DIVIDE, RESEARCHERS CONVERGE ON HIMALAYAN PLAIN

“Dehra Dun, India – A few dozen geoscientists met here in the foothills of the Himalayas last week to lay the groundwork for a bold initiative that would bring researchers from India and Pakistan together on joint projects in Kashmir. But there was a glaring hitch: Their Pakistani colleagues were on the other side of the border.

It wasn’t supposed to be like this. After months of delicate planning, scientists had been set to gather in Islamabad at the end of May to hammer out a research plan for the western Himalayas, in particular the Karakoram Mountains. “There can’t be a better natural earth science laboratory than the high Himalayas”, says John “Jack” H. Shroder, a geoscientist at the University of Nebraska, Omaha, and coorganizer of the meeting, funded in part by the U.S. National Science Foundation (NSF). A centerpiece was to have been a discussion of a “science peace park” centered on the Siachen Glacier, a high-altitude graveyard for troops on the disputed border.

At the last minute, however, the Pakistan government withdrew its support for the meeting, citing security concerns (*Science*, 26 May, p.1117). The cancellation appeared to be collateral damage from the glacial pace of India-Pakistan talks on Siachen demilitarization, says Harry Barnes, a former U.S. ambassador to India who is advising NSF on the initiative.

Event organizers regrouped as best they could. On 31

May, 35 Pakistani and six U.S. scientists met in Islamabad to cobble together a research manifesto for the western Himalayas. A similar wish list was produced in Dehra Dun by a few dozen Indian scientists and colleagues from Canada and the United States. Neither meeting had local government support; Pakistan denied visas to Indian scientists, whereas Dehra Dun organizers say that time was too short after the May debacle to seek visas for Pakistani counterparts.

A top priority of all sides is to better understand Himalayan geodynamics. Accentuating the need for such studies is the earthquake that struck Kashmir on 8 October 2005, killing more than 100,000 people. The magnitude-7.6 quake “was a wake-up call ... that temblors do not respect national boundaries”, says Shroder. One nasty surprise was that the quake’s epicenter—the Muzaffarabad fault—was not known to be active, he says.

Researchers called for the installation of a seismic network to better map tectonic activity in the western Himalayas. That would require unprecedented cooperation between Indian and Pakistani security forces, says Michael P. Bishop, a geoscientist at the University of Nebraska, Omaha. Researchers also hope to undertake active seismic profiling, in which explosives are detonated in deep holes. The vibrations reveal rock composition and fault structure—vital to refining maps of seismic risk. Mary Leech, a geologist at San Francisco State University in California, has tried to

launch such work with Indian colleagues “We have been stopped because of the complex political problems”, she says “Carrying out even small explosions in border areas can be very problematic”

Both meetings generated other ideas under the banner of a “Siachen Science Laboratory” Proposals include probing the potential effects of climate change on monsoons and documenting the retreat of border glaciers Barring a rapprochement on the Siachen military issue, the scientists intend to meet next year in neutral venue-possibly in the

Italian Alps-to merge research agendas and seek sponsors

Although the absence of Pakistani researchers was acutely felt in Dehra Dun, Shroder urged scientists to keep their spirits up “just keep pushing the edges, and little by little, good science can be done,” he said And as Baldev R Arora, director of the Wadia Institute of Himalayan Geology in Dehra Dun, optimistically predicted, “Opportunities for collaborative work among all Himalayan neighbors can only increase” It may take a significant thaw between cold warriors for those hopes to become reality” — Pallava Bagla

MEETING OF THE NORTH INDIAN CHAPTER OF THE GEOLOGICAL SOCIETY OF INDIA AT LUCKNOW

A meeting of the Lucknow based Fellows of the North Indian Chapter of the Geological Society of India was held at Birbal Sahn Institute of Palaeobotany (BSIP), Lucknow on 17th July, 2006 A large number of Fellows and other scientists from BSIP, GSI, UPRSAC, DGM, Lucknow University numbering to 64 attended the meeting The meeting started with an obituary reference by Mukund Sharma, BSIP, about the tragic death of Dr Manoj Shukla, Scientist BSIP, and a Fellow of the Society, in an accident

Dr Naresh C Methrotra, Director, BSIP welcomed the guests and recapitulated the activities carried out during last one year at Lucknow and future plans Dr K R Gupta highlighted the activities of the North Indian Chapter undertaken at Delhi, Chandigarh, Dehradun & Lucknow during last 15 months Shri Ravi Shanker, Vice President of the Geological Society, presided over the meeting

The main focus of this meeting was a lecture on “**River Interlinking: Impact on Earth Systems**” by Prof **Rajiv Sinha**, Engineering Geosciences Group, Department of Civil Engineering, IIT Kanpur In his talk, Prof Sinha pointed out that the Government of India (GOI) is in the process of drawing up a plan for creating a national grid for equitable distribution of water. Thirty seven rivers across the country would be linked through thirty major links – fourteen Himalayan and sixteen Peninsular, involving 12,500 kms of canal length and construction of thirty-two dams In view of the fact that the proposal is billed as the largest engineering project in the world Such a proposal, which appears to offer a simple solution to a complex problem, needs to be assessed with a high level of transparency and professionalism The development of a programme of this magnitude and complexity calls for an innovative, participatory approach and would require managing various interrelated issues,

namely, political, social, environmental, technical and international

The concept of river interlinking is not a new one and has been attempted at several places including Egypt, Japan, USSR, USA and even in India on different scales However, most of these projects have either been abandoned or scaled down drastically due to several issues due to opposition from donor basins, poor economic feasibility and severe and adverse environmental impact Since the inception of the Indian river interlinking project, several concerns have been raised, which include

- Mode and basis of intra-basinal water transfers
- Basins with ‘surplus’ water- divided opinion?
- Non-availability of data on water and sediment discharges,
- No proper understanding of fluvial processes particularly fluvial dynamics, flooding behaviour and discharge-sediment relationships,
- Effect on sediment flux of different rivers – e.g aggradation/ degradation,
- Considerations of change in topography, soil system and runoff flow pattern in a changing climate,
- Rainfall-runoff models – insufficient, need to incorporate geomorphometric parameters for unit hydrograph computations,
- Land degradation and water logging e.g Indira Gandhi Canal,
- Pollution of surface waters and mixing of waters of different chemistry,
- Enormous cost of the project and seemingly no concrete planning,
- Various cheaper, safe and environmental-friendly alternatives not being explored and
- Social concerns – displaced people and their rehabilitation,

Dr Rajiv Sinha deliberated upon the various scientific issues related to the river interlinking project and emphasized the urgent need for generating the knowledge base of the