

## CORRESPONDENCE

### IS LINKING OF MAJOR RIVERS DESIRABLE?

The article on linking of major rivers in India by B P Radhakrishna (*Editorial, Jour Geol Soc India, 2003, v 61, pp 251-256*) is an eye opener. Linking of rivers may be possible to a very limited extent but linking of major rivers will involve problems and it may not be quite feasible nor desirable. In linking of major rivers the scientific opinion should prevail and not the political exigencies. The construction of Bhakra dam on the existing site was a political decision and enormous amount was wasted on grouting and keeping the dam intact.

Rainwater harvesting and conservation is the best solution for water scarcity. The problem of seepage, evaporation, topography, construction of some dams, the amount electricity required and above all the enormous amount of money needed (Rs 560,000 crores) does not warrant the linking of major rivers in India. Even after linking of rivers much of the water will flow towards sea. Further

the big question arises whether enough water will be available after all major rivers have been linked.

Most of the geoscientists will agree with the points raised by Dr Radhakrishna. Let the geoscientists hold discussions and seminars and make the government aware of the plus and minus points in the said project. There is no doubt that geoscientists will recommend the traditional and modern methods of conserving water and reject any plan for linking of major rivers. Rainwater harvesting can solve the water problem of our country to a great extent. Conservation of environment and improved mode of cultivation like drip irrigation etc can further improve the water situation of our country.

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### LINKING OF MAJOR RIVERS OF INDIA – BANE OR BOON?

The recent editorial of Dr B P Radhakrishna on the above subject is very timely, constructive and thought provoking. He has with his characteristic erudition and clarity of thought, dealt with every aspect related to such mega projects, however, some geological aspects related to changing river courses were not mentioned.

River waters attain chemical composition in tune with the country rocks and acts as a finger print of each water system. For example, what will happen to the alkaline rivers of northern India when joined with the less alkaline or slightly acidic waters of the peninsular region? Will there be co-precipitation or re-dissolution of elements? This rock-water interaction results in changing soil characteristics. An otherwise alkali/sodic soil will become acidic. River geomorphology will no more be the same and natural with such human interventions. Similarly, the geochemical cycles of elements (nutrients) like silica, potassium will be greatly disturbed resulting in the formation/destruction of diatoms

and other water living biota. The Ganga river, believed never to get polluted (by devout Hindus) because of the presence of certain specific algae and bacteria rendering it pollution free. If such a thing is true, the biological aspects of the rivers will also be greatly altered, may be for good who knows! Further, river ecology and niche so specific for a particular river will not be the same again.

Transfer of huge quantities of suspended and dissolved loads from one river to another would also cause imbalance in river energy and it will show changes in river scouring and valley formation activities. I hope that the Government of India is sensitive and careful enough to study all aspects before the programme is implemented.

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