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## BOOK REVIEW

**Mirza, M.M.Q.; Ahmed, A.U. and Ahmad, Q.K. 2008. Interlinking of rivers in India: Issues and concerns.** Leiden, the Netherlands: CRC Press/Balkema. 298 pages, \$109.95.

(URL: [www.routledge.com/books/Interlinking-of-Rivers-in-India-isbn9780415404693](http://www.routledge.com/books/Interlinking-of-Rivers-in-India-isbn9780415404693))

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The transfer of water between river basins is probably as old as human technology used to dig canals and construct aqueducts. Remnants of Roman technology, to take just one example, attest to the use of human ingenuity to transfer water from abundant sources to distant places of use and need. Nowadays, the overexploitation – or 'closure' of many river basins in the world – has forced planners to 'reopen' river basins by implementing large-scale interbasin transfers. What is new, perhaps, is the magnitude of some of these transfers, manifested both in their awesome financial costs and in their potential for severe human and environmental impact on the 'donor' basin. In the past two decades or so, a number of large-scale transfers have been implemented (e.g. in Arizona, Libya, Brazil, South Africa, China, etc) or have been floated (e.g. Thailand, Jordan, India, etc).

India's Interlinking of Rivers (ILR) project is arguably the biggest of these water transfer projects. The project is predicated upon the assertion that northern India (more exactly the Ganges-Brahmaputra basin) is an 'excess' basin and that country-wide rational water management makes it natural to envisage the transfer of parts of its water to the water-short 'deficit' southern basins. In other words, Himalayan water, including part of the discharge of the Brahmaputra, would be collected by the Himalayan component of the project (a set of 10 river links and several reservoirs) and channelled to both the north-western part of the country and to the peninsular subsystem down south. The project would include 34 'links' from one basin to the next, 36 big dams, 94 tunnels and 10,976 km of canals; and its cost has been estimated at US\$125 to 200 billion (not considering usual cost escalation).

Several books have attempted to unpack the rationale of the project and estimate its benefits and negative impacts. *Interlinking of Rivers in India: Issues and Concerns*, edited by M. Monirul Q. Mirza, Ahsan Uddin Ahmed and Qasi K. Ahmad, offers a collection of 17 chapters that scrutinise the arguments put forth by the Government of India, discuss in detail likely social and environmental impacts overlooked or disregarded by the project planners, and sketch out a few alternatives. This timely publication is a comprehensive review of the project's implications and emphasises "the view from downstream" – the editors are Bangladeshi scholars – as well as that of Nepal, the upstream riparian country.

A singularity of the book is to offer head-on (in chapter 3) the vision of Suresh Prabhu, former Chairman of the Task Force on Interlinking of Rivers, in charge of supervising the planning of the project between 2002 and 2004. The justification and rationale deployed by this chapter is a textbook example of the rhetoric commonly associated with mega water projects worldwide. The background is provided by reminders on population growth, the need for food production and poverty alleviation, the growing demand for energy, the occurrence of flood damage which begs flood control, and the vulnerability of agriculture to drought, which invites expansion of irrigation based on water transfers from 'excess' areas. Although the hydrologic and human complexity of the project is mind-boggling, the reader's

fears are allayed by the assurance that "all possible aspects [of the project] are thoroughly addressed" by "experts from various Indian institutes known for their technical competence worldwide" and that the frequently sorrowful issues of rehabilitation and resettlement are taken care of by a "group of eminent lawyers" and other "highly respected professionals". The reader is also rest assured that "all decision-making must be done in the most scientific and transparent manner" and the chapter ends with a typical TINA (There Is No Alternative) argument that brings the debate to 'closure': "any delay will be only to the peril to the nation of India".

The rest of the book articulates a comprehensive range of counter-arguments that indirectly unpack and challenge the rhetoric of chapter 3, which eventually serves as a scarecrow for the rest of the volume. A chapter by J. Bandyopadhyay and S. Perveen provides an excellent and far-reaching technical, economic and environmental analysis of the project, although the authors recognise – as other contributors do – that the scarcity of available technical data makes it difficult to engage into a full-fledged discussion of the ILR. They challenge the concept of 'surplus river basin', associated with a reductionist vision of hydrology, insensitive to a wider understanding of aquatic ecosystems, dispute the predicament that the ILR project is the most cost-effective option for domestic water security, and test the assumption that India's food security is critically dependent on the project. Further arguments related to hydrology and water management are advanced and developed in further chapters.

S.G. Vomatkere emphasises the need for a systemic approach of the project and the dependence of the peninsular subsystem on the realisation of the Himalayan component. The use of water in southern India is dependent upon the functioning of a very long chain of canals and is therefore as vulnerable as its weaker link, including a number of huge pumping stations needed to lift water at a few points, and can be expected to be beset by violent conflicts between the States traversed by the canals around the share of their water, notably in times of shortage. D.N. Dhungel and S.B. Pun stress that the whole scheme is dependent upon large additional storage to be built in Nepal and that the complexity of the implied agreements between Nepal and India stand in sharp contrast to the hitherto unilateral planning and conception of the project by India. They question why Nepal should allow a project that will submerge large tracts of its land for providing benefits to the people living across the border; and fear the prospect that India would use large-scale irrigation infrastructure built on its land to later claim prior use of, and right to, upstream water.

A modelling exercise carried out by S. Gourdji and colleagues confirms that the ILR would result in a substantial reduction in dry-season flow in Patna and further downstream, at the Farakka dam, 18 km upstream of the Bangladeshi border. Ecological and social impacts on Bangladesh are further examined by A.U. Ahmed, who stresses how reduced dry-season flows would result in increased salinity intrusion, irrigation of waterways, destruction of the coastal Sundarbans forest, and problems with domestic water supply and dry-season cropping. The impact of the Farakka dam witnessed in the past provides a bleak measure of the much more serious disruption that would occur with the ILR.

K. Platt and colleagues examine the ILR in light of India's energy needs, while C. Knowlton attempts to anticipate the implication of the project on public health. Additional chapters investigate the implications of climate change on the ILR, zoom in on the impacts of one of the links (the Ken-Betwa link) considered as a pilot project, and debate on the international and regional legal aspects of the project.

The last four chapters endeavour to outline a few alternatives. R. Singh describes the revival of indigenous knowledge systems water management in India and provides details on the experience in the Arwari basin, in Rajasthan. It is claimed that local domestic supply and water needs for small-scale agriculture can be best met by resorting to water-harvesting techniques. Q.K. Ahmad stresses that unilateral action by India could and should be replaced by a more cooperative posture, allowing benefits to be shared and costs to be contained and compensated for. The last two chapters by S. Bricchieri-Colombi look at the hydrological impacts on Bangladesh of Chinese and Indian plans on the Brahmaputra, and ponder whether and how Bangladesh could be benefited by the project. The potential benefits of upstream hydropower dams in terms of flood control and dry-season flow

augmentation could materialise if diversions to the Gangetic plain and peninsular India were limited or abandoned. Again, win-win solutions can only be found through the formal collaboration between planners (and politicians) from India and Bangladesh.

If *Interlinking of Rivers in India* provides a comprehensive discussion of many of the obscure(d) facets of the ILR project it is unfortunate that its scope remains confined to technical, social and environmental analyses, however sound these may be. Instead of presenting S. Prabhu's position upfront and courteously ignoring it along the remaining of the volume – although, of course, the chapters are as many as indirect answers to his arguments – the book might have addressed the politics of this megaproject more pungently. The rhetoric surrounding the proposal of the ILR lends itself to a discourse analysis that would reveal the web of ideologies that commonly underpin such projects and the range of discursive devices deployed to justify them. This would highlight the way powerful water bureaucracies – as discussed in the last issue (October 2009) of *Water Alternatives* – constantly reinvent their 'hydraulic mission', and would shed light on the massive financial benefits that would accrue to construction and other private companies. More importantly, *Interlinking of Rivers in India* says nothing on the political benefits expected from the project and the way it situates itself at the interface between, on the one hand, the states and the central government and, on the other, between the Indian government and those of neighbouring Nepal and Bangladesh. Oddly enough, although financial and political benefits, private or otherwise, are paramount in the decision-making process that gives birth to such projects, the book is silent on such matters; this limits the understanding of the political process that marks the emergence – and the contesting – of the project and, perhaps, deprives the reader – or the activist – of some keys to orient his/her reflexion and action.

Despite this shortcoming, the book is a valuable addition to the literature on interbasin transfers and will, hopefully, play its part in the unending debate on, and contesting of, large-scale transformations of waterscapes.