Integrated Water Resources Management: Global theory, Emerging Practice and Local Needs

Eds. Peter P. Mollinga, Ajaya Dixit and Kusum Athukorala, Sage Publications, New Delhi, Thousand Oaks, London, 2006. pp 403

Droughts and Integrated Water Resource Management in South Asia: Issues, Alternatives and Futures

Eds. Jasveen Jairath and Vishwa Ballabh, Sage Publications, 2008, pp xx+356

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Discourses on IWRM

These are the first and second books in the series 'Water in South Asia' being brought out by Sage Publications in collaboration with the South Asia Consortium for Interdisciplinary Water Resources Studies (SaciWATERs), Hyderabad.

The first book, edited by Peter Mollinga, Ajaya Dixit, and Kusum Athukorala, is about the idea or concept of Integrated Water Resources Management (IWRM), and is in two parts. The first part is largely theoretical and conceptual; the second part is about a number of different aspects and themes, with reference to specific contexts or cases, grouped under the heading 'Different Dimensions of Integration'.

The book begins with an illuminating introductory essay by Peter Mollinga. Starting from the Dublin-Rio principles, Mollinga traces the origins and evolution of the concept of IWRM, draws attention to the absence of a firm and precise definition, and identifies the different ideas that are loosely associated with the fuzzy term. He points out that though claims of a global consensus on IWRM are somewhat misleading; the term has indeed gained some currency internationally. As for South Asia, Mollinga describes IWRM as a concept in search of a constituency: it is an external idea that has certainly become familiar in South Asia, but has not yet struck roots there. The fact that IWRM has associations with ideas such as water being an economic good, the principle of full cost recovery, the privatization of water services, and so on,

makes it a contested concept. However, Mollinga argues that the need for a change from the old agriculture-dominated perspective on water to a different and more integrated and inclusive perspective is being recognized and that this perspective is likely to make headway.

The second chapter by J. A. Allan postulates five successive water management paradigms: (i) pre-modern, (ii) industrial modernity (inspired by the Enlightenment, science, capitalism, and the belief that nature could be controlled), (iii) environmental awareness (the Green Movement), (iv) the economic paradigm and (v) the recognition that water allocation and management are political processes. His discussion of the evolving perspectives on sustainability and their special relevance to IWRM (which he amends as IWRAM, bringing in Allocation as a political dimension) is placed in a social / cultural theory framework. It is an insightful analysis and this review cannot do justice to its richness and complexity.

Another extraordinarily interesting and informative paper is one by Timothy Moss on the reorganization of water management in member States following the European Water Framework Directive. It points out that there was a wide range of institutional arrangements for water management in the European countries, all of them operating within political / administrative boundaries, and not many of them taking note of river basins as units. The superimposition on that diversity of the European Water Framework Directive (which, among other things, calls for water-management based on river basins) holds the potential of conflicts between the spatial reorganization of water management that this involves and the existing national arrangements. Moss argues that the spatial 'fit' so achieved may affect the institutional 'inter-play' that is necessary (and to some extent exists in the current administrative arrangements). This is studied in detail with reference to the facts of the German case.

The chapter by Tushaar Shah and others on 'Limits to Leapfrogging' gives an account of the circumstances of the developing world (hydrology, demographics, water sector organization, and stage of development), points out how different these are from those of the developed world, and argues that concepts and models that emerged in response to the conditions in the west cannot readily be transposed to the developing countries. It does recognize that some useful lessons can be learnt from western experience and concludes by briefly indicating the elements of the right approach for the South Asian countries.

Jayanta Bandyopadhyaya argues the case for a radical change from the old paradigm of water management to a new holistic framework, and sets out seven indicators or criteria for the latter. He examines India's National Water Policy 2002 against those indicators and finds that it does not constitute a significant new departure from past ways of thinking. He concludes that there is little indication of the much-needed emergence of a new holistic paradigm of water systems management in India.

D. J. Bandaragoda stresses the importance of water-land linkages, and holds it to be a relatively neglected issue in IWRM. He blames the current sectoral thinking for this. 'Integration' tends to be within the 'water sector', and the emphasis on water leads to a similar polarized emphasis on land. He concludes by emphasizing the imperative of water-land integration in IWRM.

That brings us to Part II of the book. The title 'Different Dimensions of Integration' does not seem to fit this Part very well. The papers contained in this Part discuss important issues, provide much information and analyses, and are generally well-written. They add substantially to the value of the book. However, the connection to the idea of IWRM varies and is quite tenuous in some cases. For instance, if Saktivadivel's solid and authoritative paper had been on 'Water Balance Studies and Hydrological Modelling' without any reference to IWRM, would it have been very different? Perhaps the answer is 'Yes'. That question is left open. Similar questions can be raised about the chapters on Water Allocation between Agriculture and Hydropower (Lalani Imbulana) and Multi-Stakeholder Dialogue (S. Janakarajan). They are

excellent papers, but would they have been significantly different if the book to which they were contributions, made no reference to the term IWRM? The idea of IWRM is perhaps more strongly (but still not integrally) present in the papers on Inter-Intra-Sector Coordination (Ranjith Ratnayake) and on the Thuruvila case (Kusum Athukorala). The last paper by Phadke and Patankar on Asserting the Rights of the Toiling Peasantry is of absorbing interest, but it is exactly what the title says it is: the account of a struggle for rights. It is difficult to see any direct connection between that struggle and the concept of IWRM.

A more important point is that certain aspects of integration, such as inter-disciplinary integration or humanity-nature relationships, are not covered by any illustrative cases. Perhaps such instances were not available in South Asia, but in a general book on the concept of IWRM, illustrations could have been drawn even from elsewhere. Secondly, it might have been useful to take some cases where the idea of IWRM played no part even indirectly, and to consider hypothetically what difference the concept would have made to them if it had been adopted.

However, it is always possible for a reviewer to suggest that the book under review should have been different! Such comments do not detract from the value of the book. This is a book of high quality on an important subject.

Turning to the second book on Droughts edited by Jasveen Jairath and Vishwa Ballabh, one can understand its being part of a series on 'Water in South Asia', but how useful is it to bring it under the rubric of IWRM? Leaving that aside, and looking at it simply as a book on drought, it is clear enough that it is a major contribution to the understanding of drought.

The first chapter by Jairath and Ballabh makes compelling reading and clarifies many things. It analyses the concept of drought, questions the prevalent understanding, distinguishes between drought and water scarcity, and points out that droughts are not necessarily natural phenomena but the result of the ways in which the available water is managed, controlled and shared. The chapter is virtually a class analysis of drought (whether so intended or not). It follows that treating droughts as instances of water scarcity to be responded to technologically with supply-augmentation projects, without remedying existing inequities of access and control, might accentuate those inequities and aggravate the problems of the poor. The authors argue for a reversal of the established approach of proceeding from projections of demand to supply-side responses, and call for a more socially just distribution of the available water endowment. They also deconstruct the complacent idea that the people learn to 'cope' with drought, and point out that survival in conditions of distress cannot be called 'coping'. There is much more in the chapter but this review can only give the reader a rough idea of its contents.

Sanjay Sharma gives a fascinating historical account of the evolving attitude to drought during the colonial period. Reading Seema Kulkarni and Nagamani Rao's paper on Gender and Drought was an educational experience. However, the *pièce de résistance* of this section is undoubtedly the elaborate setting forth of an alternative approach to drought and drought-proofing by Suhas Paranjape and K. J. Joy. In place of the usual firefighting strategies they propose an alternative one based on the enhancement of the local resource base. Drawing upon the late K. R. Datey's work, they advocate a biomass approach to water entitlements and allocations and distinguish a *rights-based* entitlement from an entitlement based on economic opportunities. They postulate a hierarchy of rights with water as life-support coming first, closely followed by the right to water-based livelihoods, the 'rights' of the environment / ecology coming next, and economic rights coming only thereafter. If the local water availability falls short of the requirements (modestly estimated at 6400 m^3 for a household), they envisage supplementation from exogenous sources. Some of these propositions are debatable, but there is no doubt that this is a different and original approach to the problem. Part II contains country overviews covering Sri Lanka, India, Bangladesh and Pakistan. These are very useful and illuminating but cannot be summarised here. That applies also to the valuable Case Studies in Part III.

In conclusion, this reviewer's general assessment is that these two books are solid, scholarly, interesting, informative volumes, and valuable additions to the literature. They set very high standards for the books that are to follow in the series. Having dealt with the books in their own terms, this reviewer may perhaps be allowed the liberty of indicating that he is not an enthusiastic subscriber to the idea of IWRM. To begin with semantics, 'integrated' is the language of engineers when they want to step beyond engineering. 'Resource' is an accountant's or economist's language, preferably to be avoided in talking about water; water and indeed nature in general have not merely an instrumental value but an existential one. 'Management' comes from the world of business: there is a world of difference between corporate management and 'natural resource management', and using the same word in both contexts is fraught with the danger that the thinking appropriate to the former might creep into the latter. Indeed it has. Further, if we talk about 'integrated river-basin management' we run the risk of promoting centralisation. IWRM is also susceptible to the ills of techno-centrism.

The problem is that water was understood to be essentially a matter for engineers not very long ago, and that way of thinking is still fairly strong. To this was added the economic element stressed in the fourth of the Dublin principles, and this became very strong because of the worldwide resurgence of capitalism. It is that combination of engineering and economics that still holds sway. In between came the emerging environmental concerns; these did influence the engineers and economists to some extent, and the word 'integrated' was added. The 'I' in IWRM was thus essentially the addition of the environmental dimension to the engineering-economic approach. To the extent that this represents a widening of mental horizons, it is indeed welcome. IWRM is certainly an advance over earlier thinking. However, it does not go far enough.

What then would be one's alternative formulation? In place of the words 'integrated', 'resource' and 'management' one would prefer 'holistic', 'water', and 'wise use', but that does not make for a catchy slogan like IWRM, which in any case seems well established. Reluctantly accepting that term, one would like to bring the following components within its ambit: holism; prudence and economy in water-use; equity and social justice; avoidance of conflict; ecological sustainability; harmony between groups, between political units, between countries, between generations, between species, and between humanity and nature. Proponents of IWRM would of course say that all this is part of IWRM. Such a claim is difficult to accept. A transformation is needed. The paper that comes closest to such a vision is Jayanta Bandyopadhyaya's chapter in the first book.