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BOOK REVIEW ESSAY

Water

Social Differentiation, Politics and Participation

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The Rule of Water: Statecraft, Ecology and Collective Action in South India; by D. Mosse; New Delhi: Oxford University Press.

On the Waterfront: Water Distribution, Technology and Agrarian Change in a South Indian Canal Irrigation System; by P. Mollinga; New Delhi: Orient Longman.

Water: Perspectives, Issues, Concerns; by R.R. Iyer; New Delhi: Sage Publications.

All the books under consideration here were published in 2003. All the three books deal with water, break new ground in the study of water as a theme in India, and are in the way of becoming classics. Although the foci of the three books are different, many themes and concerns are common and a combined reading can give us a better insight into the water sector in the country.

Over the last couple of decades, the focus of environmental debates has shifted from forests to water. This is true across quite a few disciplines like environmental sociology, environmental history, institutional economics, and so on. The shift has come about with a growing concern over water scarcity, its implications for livelihoods and human survival in the future. There is a widespread agreement that the world in the twenty-first century will face major health, security or economic crises due to increasing water scarcity. The solution generally preferred by technocrats is to prescribe the treatment of water as economic goods. But what kind of economic goods is water? Water is not one 'goods' but many. These goods differ along the dimensions of physical and biological characteristics; they also differ in the varying ways that human societies construct and evaluate them.

The framework of tragedy of commons initially governed the study of natural resources, including water. It was generally observed that the management of natural resources in the commons leads to the

degradation of the resource over a period of time due to the problem of free riding (Hardin, 1968). Therefore, establishing private property rights or rights of the state over the resource was seen as key to optimal resource utilisation. Quite a lot of subsequent scholarship of the analysis surrounding natural resource management draws from Common Property Resource (CPR) theories. By demonstrating theoretically, and in some cases empirically, these theories have provided a foundation for a whole wave of experimentation in community-based management of CPR. Common Property Resource analysts often take their theoretical groundings from game theory and show how rules can be purposively crafted to produce collective action. Institutions are seen as 'rules of the game' and collective action is seen as a rational option that produces results beneficial to all, whereas self-interested action would produce sub-optimal results for the collective. This model has been at the centre of a clutch of policy prescriptions. These prescriptions include investments in establishing formal legal systems, fixing property regimes, and formalising informal institutional arrangements. The discourse of 'design principles' comes from such an approach (Ostrom, 1996).

As opposed to these 'mainstream' views that focus on local areas, bounded communities and rule-based management, emerging views in the study of natural resources look at multiple levels (global to local) and diversity (in terms of livelihoods and perceptions) and see institutions as part of the constant process of negotiation that involves power and conflicting interests within communities, and between their members and other actors. Emerging views try to break down the distinctions between local/global and between formal/informal institutions in order to understand better the complexities and uncertainties that face the governance of natural resources like water today (Cleaver, 2001).

All the three books under consideration here can be seen as attempts to rethink the issues surrounding the water sector in India along the lines discussed above and to take the emerging concerns forward. One of the most important shifts has been the shift from looking at water only as a natural resource that needs to be managed to seeing it as an important factor in the process of social differentiation. One of the central themes of Peter Mollinga's study is social differentiation in the context of a canal irrigation-based economy. The canal in question is the Tungabhadra Left Bank Canal. In the study of this system, Mollinga tries to locate the linkages between the introductions of protective, localised irrigation in the command areas of the Tungabhadra Left Bank Canal to particular patterns of agrarian change in the region.

One of the important features of the Left Bank Canal case is the role of migrant farmers in the process of social differentiation and its spatial characteristics. In fact, migration seems to be an important result of

almost all medium to large irrigation schemes in peninsular India. The settler farmers in the Left Bank Canal mainly came from the coastal districts of Andhra Pradesh and were mostly small- and medium-sized farmers in their home region. The combination of small holdings and a high land price difference between coastal Andhra Pradesh and Raichur, Karnataka, was the major reason for farmers to migrate. Canal irrigation induced a dynamic process of agricultural intensification and commoditisation. Due to the protective nature of the canal system's design, this intensification process resulted in unequal water distribution. There seems to be some correlation between availability of water and the concentration of land holdings. Thus, particular patterns of agrarian differentiation seem contingent upon particular types of irrigation technology.

In contrast to this view, Mosse brings us a much more historically rooted analysis about social differentiation, water management and political change. Mosse bases his study in the tank irrigation systems of the old Ramanathapuram district in south-eastern Tamil Nadu. According to Mosse,

In the region under study, tank-based agriculture developed after 1300 during a period of major transformations in the human geography of south India when people moved out of the core irrigated zones, and the older medieval order of the Pandyas was disturbed by the military adventurers and agricultural settlements of south India's largest empire, the Vijaynagar empire.

In this region, Ramnad kingdom was ruled by its dominant social group, the martial caste of Marvars. They rose to prominence with the militarisation of the plains of South India under the Vijaynagar Empire in the mid-fourteenth century. The internal organisation of Ramnad was military in nature. The growth of military power depended upon the expansion of agriculture in hitherto marginal areas. This involved growing investments in tank irrigation systems that could sustain wetland paddy cultivation. Thus, militarisation encouraged the expansion of agriculture. This expansion was made possible by massive population displacements that brought in new settlers. Emerging local needs and local political power drove this process of cumulative, interdependent building of tanks.

This historical picture tells us that the patterns of resource extraction that made irrigation and agriculture possible in Ramnad were the products of particular processes of social differentiation and caste-based domination. These patterns of resource extraction and utilisation (either directly or as idealisations) have subsequently formed the basis of legitimising the power of particular social groups and political institutions. He points at the fact that warfare and tank building were two elements in the same mode of statecraft in the pre-colonial era. The political logic of this mode of statecraft mostly favoured investments in new irrigation works rather than maintaining

or repairing them after damage. The pre-colonial institutions of water management that were transformed by colonialism were neither stable nor ecologically adapted institutions of autonomous communities. And these forms bore all the signs of ecological vulnerability and economic uncertainty. Even after the colonial encounter, tank systems remained political institutions incorporated into political strategies of rule. But after 1800, the Zamindars had little real political power to disperse. The willingness and the ability of the Zamindars to invest in tanks, even in their own estate villages, were generally undermined by tenurial insecurity. It was the state of tank irrigation and the lack of investment that lay at the roots of peasant resistance to the Zamindari state during the colonial era. Thus, the centrality of water as a 'political' resource remained constant (although varied in its significance) across the colonial divide in the tank irrigated territories of coastal Tamil Nadu.

Mollinga also makes an important contribution to an understanding of water as a political resource. In his study of the Tungabhadra Left Bank Canal, he found that in all three pipe-outlet command areas that were studied, sets of rules existed for the internal distribution of water in the outlet. All rules were the product of local rule making by the water users themselves. But the local Members of Legislative Assembly (MLA) of Karnataka State seem to be important mediators between the farmers and the irrigation department in this context. In all the three cases, the rule sets functioned as resources, mobilised when necessary. Thus water management, as it has evolved over the last few decades in the command area of the Tungabhadra Left Bank Canal, draws upon broader political processes for its survival. Water management is also the site at which the polity interacts with local actors. Mollinga contrasts this political mediation in resource allocation and use to the supposed relative insulation of the planning and designing process of the irrigation system from socio-political mediation. What Mollinga fails to do is to consider in detail the structural and historical factors that led to the insulation of the designing phase of the project from 'political interventions'. The choice of particular technologies in the irrigation sector is a politically mediated choice. No choice of technology is ever free of socio-political considerations. So what is important is not merely to say that a particular choice of technology was insulated from 'political' pressures and processes but to unearth the particular brand of politics that led to such insulation in the first place.

Ramaswamy Iyer also deals with water as a political resource, but at a much more macro level. As a part of his extensive survey of the water sector in India, Iyer looks at the thesis that links political conflicts with resource scarcities and makes some incisive comments. According to him, the linkages between political conflicts and resource scarcities are not necessarily unidirectional. Iyer shows that the thesis that conflicts over water bodies lead to (or can lead to) broader political conflicts is a

slim one. More often than not the conflict over both international and national waters get prolonged and difficult to resolve because of the fact that they are enmeshed within broader political conflicts between nations and other local administrative units like the states in India. He seems to be making a case for water as a site for inter-national politics and therefore the use of water as a political resource. For example, the way Bangladesh's political relationship with India has shaped over the years seems to have had a significant impact on the ways the river waters have been shared between the two countries. This might be somewhat obvious to state, but considering the growing discourse about political conflicts arising out of resource scarcities, this point definitely needs re-emphasising.

Iyer quite comprehensibly brings another set of conflicts related to water to the fore. Quite a significant part of his book is devoted to the conflicts surrounding big water resource development projects in India. Using his experience as a former bureaucrat, he tries to give us a nuanced view of the debates surrounding big dams in India. In Chapter 16 of his book, he tells us about his changing views and how he has come to see dams as choices of the last resort to respond to the perceived water scarcity in India. In this context, he quite masterfully analyses the October 2000 judgment of the Supreme Court of India on the Narmada (Sardar Sarovar) case. He brings into the light the miscarriage of justice in the judgment and analyses the verdict and the process leading to the verdict in detail so as to expose the other side of judicial activism in India.

These broader issues of the polity and society get concretised in the field by various plans and programmes. One of the more fashionable policy prescriptions in the water sector in the recent times has been that of participatory irrigation management. Iyer succinctly sums up the current debates surrounding the participation of farmers in irrigation management. He says 'in recent years even governments have started talking about people's participation. However, the notions governments have of participation, as exemplified in programmes such as participatory irrigation management are generally limited. In the first place, participation is invited at a late stage in projects that are planned and implemented in a wholly non-participatory manner; second, it is often the inability of the state to manage and provide the planned services that leads to ideas of transforming responsibilities to the users; and thirdly, the state is usually unwilling to enter into a contractual relationship with the users and accept binding obligations with penalties for non-performance. All these concerns are quite valid.

The other two books also problematise the idea of users' participation in the irrigation sector. What seems as a common thread in all the three books is the understanding that participation in management cannot be productive in the absence of proprietary rights of the users. In fact, the decline of irrigation systems can be traced to

this dichotomy. Mosse and Mollinga draw similar conclusions based on their field based studies.

According to Mosse, the recent discourse on the commons has been profoundly affected by the new international policy consensus. The devolution of rights and responsibilities in resource management to local user groups is one of the significant aspects of this consensus. A variety of programmes for natural resource management now aim to redefine the relationship between farmers and the state. He studies the experience in Nallaneri, a village in Tamil Nadu, to look at these programmes in action. According to him, the experience of Nallaneri shows that the irrigation management transfer

does not imply stabilising village groups around rules of resource use, crafted by communities of appropriators, bound together by the individual economic benefits of co-operative management of shared resources. Moreover, WUAs (Water User Associations) are themselves a resource over which there is competition.

In Mollinga's study the occurrence of water scarcity and the resultant social conflicts induced changes in the organisation of water distribution in the Tungabhadra Left Bank main canal between 1980 and 1992. People other than those formally responsible Irrigation Department officials started getting involved in it. Part of the bargaining on water distribution has been institutionalised in the Irrigation Consultative Committee at the project level, in which officials and non-officials (MLAs) have seats. Participation has remained at the level of consultation only. A new policy for the main canal management emerged in the social process of negotiation of water distribution by the different actors concerned. But this involvement of farmers has not been institutionalised at the level of local institutions for water management.

A broad consensus seems to be emerging that water is essentially a political and social resource. As Mosse's study shows, water has always been central to statecraft and politics in India. Therefore, any approach that principally focuses on 'local' management regimes seems to be missing the forest for the trees. Systems for managing 'local' resources have rarely, if ever, grown in isolation. Groups have always used 'local' resources like water as a site for political action. In fact, as Mosse's study seems to suggest, water is as much a symbolic resource, as it is a physical resource. This is especially true in India where water is central to the ideas of purity and pollution that underlie caste.

The principal use of water in India has been for irrigation. More than four-fifths of the water consumed in India is consumed by agriculture. Therefore, particular irrigation technologies have a significant impact not only on irrigation, but also on other aspects of water use. This makes water use an intensely contested political activity. Water use also shapes and is dynamically shaped by particular patterns of agrarian change and social differentiation. As Mollinga's study

indicates, particular kinds of irrigation technology can induce particular kinds of migration and cropping patterns. But these patterns of resource use and social differentiation do not happen only on the 'social' terrain. These processes are linked to broader patterns of political change, as Mosse's study so effectively illustrates.

This makes one wary of the currently fashionable rhetoric of participatory irrigation management. Any programme or plan of action that unquestioningly privileges the local can easily hide inequities. The study of water has ceased to be (to a large extent) a matter of engineering. But it is rapidly threatening to become a matter of 'management' under participatory irrigation management. All the three books under review warn us about this quite unequivocally. The study of water needs both large sectoral overviews and ethnographies that trace the pattern of resource use within the broad matrix of social change. The three volumes under study fulfil one or the other part of this mandate and are a welcome addition to the existing body of literature.

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