



WATER MANAGEMENT TRADITIONAL SYSTEM IN RURAL AND TRIBAL SOCIETIES IN INDIA: VALUING THE UNVALUED

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Abstract:

Achieving effective and efficient management of water as the key to human survival and development has emerged as an urgent global concern. The realization of the limited availability of water in space and time under conditions of ever-increasing pressures has caused designing of 'modern' water management initiatives that are globally manufactured but implementable in local communities, India being no exception. It is perhaps universally assumed that water management, as an integrated system based upon local knowledge & practices, is either 'non-existent' or 'irrational', 'narrowly pragmatic' and 'in the process of disappearance'. If water is a basic resource necessary for sustaining all human activities, its provision in the desired quantity and quality and at the right time and place through a workable local water management system must be regarded as an omnipresent phenomenon. How water management is traditionally organized in rural Indian localities so that the community's needs are met through generations? What implications do such systems based in local situated knowledge & practices hold for the global water management context?

The paper seeks answers to these questions through an ethnographic study in rural India. It concludes that traditional water management system in rural Indian localities is pragmatic, rational and functional even in contemporary times. As found in

central and central-eastern parts of the country, the system may be resolved into human and non-human components, the latter further lying within two different analytical domains, namely, the 'ideational' and the 'operational'. Traditional knowledge informs each of these domains that is translated as practice in day-to-day life. The paper argues that the study of such systems is important not only for the sake of enhancing the understanding of traditional resource management systems as situated knowledge systems and situated action locales, but also for appreciating their practical value in designing of more workable, socio-culturally viable, community-based solutions to the resource management problems encountered in recent times.

Key words: Community, globalization, indigenous water management system, Irrigation, institution, situated knowledge, situated action, socio-cultural matrix, water.

Introduction:

Water is the key to development and sustenance of all communities. Under conditions of increasing stress on this essential renewable but scarce natural resource, effective and efficient management of water is emerging as an urgent contemporary issue. The realization of its limited availability in space and time has necessitated the designing of new globally viable water management regimes aiming at striking a balance between the use of water as a basis for livelihood and its protection to help ensure its

sustainability through present to future generations (Agarwal et al., 2000).

India is no exception to this emergent global trend and over the last couple of decades; new water management interventions are being designed and implemented throughout the country in anticipation of improved water management practices (RGNDWM, 2000). Broadly speaking, these interventions enunciate water management regimes based on participatory approaches where involvement of all stakeholders in universally defined water management structures is the key strategy. There is much emphasis on involvement of water users in decision-making processes; strengthening of local institutions; incorporation of traditional knowledge, skills, practices, etc. If water is a basic resource necessary for sustaining human activities, its provision in the desired quantity and quality and at the right time and place must be seen as a constant human endeavour in all communities, whether traditional or modern. The question of existence and the form of traditional 'localized' water management arrangements appear to have been little valued in the modern 'globalized' water development and management context.

Indeed, a majority of the local communities in India where water management takes place are rural in nature, organized in villages that are also the smallest viable social units in the rural milieu. How water management is traditionally organised in the rural Indian localities so that the needs of the community are met through generations? What implications do such systems based in local situated knowledge & practices hold for the global water management context?

Answers to these questions are sought in the paper through an anthropological study primarily based in villages in and around Haveri dist, corroborated by findings from other villages in the area as also in other villages of Shiggaon and Savanur taluks. The data in the study has been procured through intensive residential fieldwork in these areas. Fieldwork techniques such as participant observation, key informant interviews, both unstructured and structured, with open-ended questions and case studies were used for procuring the primary data. A number of secondary sources were also referred for procuring information on other relevant studies.

Water management traditions in rural Indian localities:

The water management traditions in rural India can be seen as organised within small-scale village communities. These traditions embody a blend of knowledge and action as a means to fulfil the water-related needs of the members through management of the resource and the sources through which it is harnessed. The elements of the system may be classified as falling within two basic realms, namely, the 'ideational' construct and the 'operational' aspects. The ensuing account of traditional water management system prevailing in villages of India is based upon an analytical framework consisting of these integral aspects. The system may be resolved into the human and non-human components. The human component comprises the community of practitioners that includes the water users and the managers of the system. These practitioners in the village identify themselves as stratified into different caste groups and much of their dynamics guided by the principle of 'social dominance'. The dominant caste generally leads in regulating water management affairs. The social mapping of Indian villages is generally such that the highest castes tend to reside in the heart of the village settlement, while others are arranged towards the periphery in decreasing order of their position, so that those placed lowest generally reside on the village outskirts. Caste and social dominance principles influence the various non-human elements in a complex manner. These generally govern the beliefs and practices about rights and responsibilities, powers and privileges with respect to the different water management activities. The non-human elements in the traditional water management system are described below:

1. Water and water needs: The ideational construct

In the rural localities, irrespective of the existing social diversities, water is regarded as a gift of nature made available to mankind for fulfilling the basic needs for survival. Most of these needs are believed to be common to all and therefore water is seen as a common resource over which universality of rights basic for life should prevail and every user must have access to water for fulfilling all relevant needs. Associated with the perceptions regarding water needs, different attributes are associated with appropriate nature

of the water. For instance, for the purposes of drinking and cooking, different attributes generally considered are colour, odour, taste and freshness. Good quality water for these purposes is generally expected to be colourless, odourless, sweet and fresh and these qualities, in turn, are seen as closely related to the local concepts of purity, health and hygiene. Similarly, purity is an important attribute associated with waters used for sacred purposes and one of the ways of maintaining it is through association of the water source itself with the supernatural and protecting it from potential sources of pollution. The perceptions about water quality actually overlap indigenous knowledge in this regard. The values underlying the Water Management System also attach a positive value to the act of sharing and creating water sources for others, such as constructing tanks and wells, as also providing water to the needy in general that are traditionally regarded as virtuous acts. Thus, sharing one's water sources with the neighbours and allowing the 'have-nots' with access to water is seen as an act of generosity. In southern India, it is noted that establishment of tanks is traditionally considered as one of the '*saptasantanas*' (seven kinds of wealth) (Raman, 2002).

Water is seen as a renewable yet scarce resource to be handled with care so that quality and quantity are not degenerated. The underlying quantity-related principle in utilizing water resources in the village lies in exploiting nature for serving human interests but not to the extent of depleting them forever. The quality-related perception is functionally supported by the concepts of purity and pollution of water through human actions, part of which in turn derives from the caste-based norms and the day-to-day cultural practices concerning water use. It is generally believed that with respect to water and water sources meant for the upper castes, use by a lower caste individual might cause pollution that in turn is supernaturally punishable for the latter.

2. Organizing the fulfilment of water needs:

Fulfilment of water needs is accomplished through harnessing of the naturally available water resources. Ordinarily, the water resources available within the physical boundaries of the village are regarded as village resources, the village itself being largely visualized as a micro-

watershed. The resources are further classified into categories such as surface water, ground water, rain water etc., further identified via their sources such as river water, lake/pond water, well water and others. In fact while a number of sources such as may be naturally occurring such as river and lake, others like pond, tank and well are created to harvest the different kinds of water reserves. The local villagers have a storehouse of water related knowledge about their area, which is used in identifying sites and other ground features before creating new water sources. They also possess substantial knowledge about the technologies suitable to their locales in terms of resource availability (both water and the resources required for harnessing it), sustainability of the resources, and the skills required. The technology related to developing a water source is generally simple and depends upon use of manual skills. In case of wells and ponds, it primarily involves digging up to an appropriate depth, the latter defined by the local knowledge about water availability and quality. In case of well, the walls may be lined with brick or stone slabs. Similarly, the technology used in collecting and using water from these sources is also simple, though it may involve the installation of additional technology at the source. For example, in case of well, water is generally collected using a rope and a bucket (or other kinds of water containers), with or without a simple pulley. In case of ponds and tanks, water is directly filled into the water container, the use of a specific end of the pond for this purpose being common in some areas. At this end, steps may be constructed using concrete or stone, in consideration of hygiene and safety as important. Knowledge and skills concerning organising the fulfilment of water needs is essentially caste-specific. The efficiency of operation of a traditional water source is believed to be high in the sense that a number of users can simultaneously draw water and the process itself involves lesser time and perhaps energy. All such knowledge is recorded and transmitted through oral tradition and learnt through observation and hands-on experience.

3. Institutionalising the management of water resources:

Since water is a common need for all members of the community and water itself is conceived as a common pool resource, collective responsibility for managing it rests with the

community that in turn is conceivable as organised at two levels-“user community” and “user groups”. The former encompasses the entire village community while the latter largely overlap with the resident castes in the village. The institutional framework involves definition of authority relationship that specify ‘who’ decides ‘what’ in relation to ‘whom’. These decisions pertain to (i) ‘collective choice situations’ that may involve decisions about planning, development and management of the resources and sources, (ii) ‘entry’ and ‘exit’ rules that concern exclusion of potential beneficiaries and seek to regulate access and use of the village water resources and sources, (iii) ‘operational rules’ that regulate the use and day to- day maintenance of the water sources.

➤ **Collective choice situations:**

These situations are deeply influenced by the social organizational principles in operation in Indian villages - notably caste and social dynamics. Planning and development of water sources generally begins with an assessment of water needs or expression of a common need by the intended users. The process of collective choice making involves mutual discussions and consensus decisions on part of these members under the leadership of senior men of dominant caste who constitute an informal group.

➤ **Entry and Exit rules:**

These are rather simple in again following the principle of caste. Members belonging to a particular caste or group of contiguous castes are generally allowed access to a common public water source. Access to sacred sources is more or less reserved for the upper castes such as Brahmins, Patils, Hiremath etc. However, it was also recorded that in situations of water scarcity in the village, access to a well in an upper caste locality may sometimes be allowed for users from other castes, though the former may still enjoy the first preference.

➤ **Operational rules:**

These pertain to use of the different water resources and sources in the village and relate to the perceptions and beliefs about water, water needs and potential water users. These largely revolve around the classification of water sources partly enumerated earlier and are more in the nature of customs, norms and cultural practices than as ‘rules’. The domestic sources

that are used for routine household activities are further classified as ‘drinking’ and ‘non-drinking’. While water from the former is to be used for drinking and cooking, that of the latter is primarily usable for washing, cleaning and bathing. Water from the drinking water sources may also be usable for additional needs such as individual-based sacred use and therapeutic, depending upon the presence of the requisite water qualities necessary for such usage.

Conclusion:

Since water is basic to life, the history of survival of local communities in rural India bears a testimony to the existence of “innovative approaches” and “sustainable practices” in water management. These are indigenously designed in history and passed on through generations as informal organizations, intricately enmeshed in the overall socio-cultural matrix. It can be further contested that these are by no means ‘narrowly pragmatic’ or ‘irrational’ nor are they in the process of disappearing. The findings illustrate that these traditions are extremely complex, consisting of a series of cognitive layers, in this case embodied in the ‘ideational’ and ‘operational’ domains of the water management system. By way of generalization, it may be said that resources management systems in small-scale local communities is essentially a reflection of “situatedness” where the exact contents of the system may be expected to vary from one community to another. In other words, ‘contextualization’ and ‘specificity’ are the key concepts in such situations. However, further empirical studies in indigenous (water) resources management regimes are needed to demonstrate the universality of the emergent model from this study.

Several new programmes professing ‘community participation’, community-based management even community-based demand-driven approach have been designed and implemented in the country for achieving sustainable water management but their effectiveness in terms of acceptability and expected outcomes is questionable. It can be argued that if there are vibrant and effective options that make sense to the practitioners, by virtue of being part of the situated knowledge and action handed down through generations, grafting of externally designed institutions may

not be viable. The new institutional interventions are divorced from the socio-cultural basis of the traditional system and propose nothing more than an additional component of involvement and participation of the local stakeholders. The findings regarding the ground realities of indigenous water management systems underline the need to rethink on the globally perceived notions about such arrangements in local communities. Water is probably the only natural resource to touch upon all aspects of human civilization – from agricultural to individual development to the cultural and religious values embedded in society (Matsuura, 2002 cited in Castelein and Otte, 2002). Due to its fundamental role in society's life, water may also be said to imply strong cultural dimension (WWC, 2003). The centrality of water in human life has made it arguable that the ways in which it is conceived and valued, understood and managed, used or abused, worshipped or desecrated, are influenced by the cultures. Therefore, if at all new 'co-management' regimes are to be designed as effective means of combating the present water crisis in the country, then, there is a need to rethink the strategy of global creation these globally and local transposition. These must be built upon the valuing and understanding of the situated realities of the practitioners for whom these are designed and by whom these are to be implemented for their own benefit.

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