

WATER RESOURCE MANAGEMENT: THE RIGHTS -REGULATION INTERFACE

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1. Introduction

I would like to highlight three points by way of introduction before moving on to my understanding of Water Resource Management from legal perspective. One, national, regional and seasonal water scarcity in developing countries has been posing and shall continue to pose severe challenges for national governments and the international community. These challenges of growing water scarcity are exacerbated by the increasing costs of water; wasteful use of already developed water supplies; degradation of soil in irrigated areas; depletion of groundwater; water pollution and degradation of water-related ecosystems; subsidies and the distorted incentives that govern water use; inequitable water access by women, the poor, and disadvantaged groups; and threats of transboundary conflicts at national and international levels.

Secondly, it should also be taken note of with a pinch of salt that any kind of a water resource management, regulation or exploitation through legislation and effective administration with focus on water conservation, recycle/reuse, restrictions to ensure equitability in water availability and pragmatic land use; regulation by education, i.e., by creating awareness amongst the people to enable their participation and traditional knowledge in sustainable water resource management; or management of water resources to achieve overall aspirational goal of sustainable development shall require some kind of legal interventions. However noble and ennobling could be the goals of traditional modes of water management, the matters relating to water management are so complex and involve so many components that the role of the state and of legal interventions cannot simply be wished away.

Thirdly, and this follows from the first two propositions, the whole range of issues relating to water resource management, from ensuring supply of safe drinking water to ensuring supply of water for irrigation purposes, from equitable distribution of river waters to various states to the issues of large dams, depletion of ground water resources to recharge of ground water aquifers and so many other issues, may not possibly be covered in one paper alone. And therefore while the intention of the author would be to highlight all important issues relating to water resource management, from regulatory perspective, only some of the issues shall be dealt with comprehensively in all their dimensions.

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2. WATER RESOURCE MANAGEMENT : THE BACKGROUNDER

To begin with, the majority of sources of supply of water both for drinking and sanitation and for irrigation purposes can be classified into two, i.e. surface and underground water. The ownership and regulatory pattern of these sources of water have not been uniform throughout the history. If we look at the pre-colonial period, the ownership and regulation of the water supply was in the hands of the community. Water management in traditional societies has largely been vested in the community domain. Water akin to land, forestry and other common resources has been considered as commons in several parts of India especially in scheduled areas¹. Age-old practices for water management have been refined over the years and have continued from one generation to another. Utilisation, allocation and distribution of resources in such commons have been governed by social norms, taboos and rules and regulations based on the availability and the demands thereupon. The practice of setting aside river reserves and attaching sacred sanctity to certain water bodies; not defiling the water sources were some of the practices for management of the water. There are plenty of examples of traditional water management practices from around the country. These practices could be in the form of tanks in Tamil Nadu or the *naulas* (water springs) and the *gools* (channels) of Uttaranchal; the *johads* (earthen check dams) of Rajasthan and the *pokhars* (ponds) of West Bengal.

With the onset of colonial period the 'State' asserted its rights under the doctrine of *eminent domain* to own and control the water management practices. A brief analysis of the entire gamut of colonial laws enacted by the colonial government related to irrigation, fisheries, electricity, canal and drainage brings out that the Crown had extended its control over all waters. For instance, the preamble to the Northern India Canal and Drainage Act, 1873 states, 'the provincial government is entitled to use and control, for public purposes, the water of all rivers and streams flowing in natural channels, and of all lakes and other natural collections of still water'. Similarly, the Bombay Irrigation Act, 1879, lays down that 'whenever it appears expedient to the state government that the water of any river or stream flowing in a natural channel should be applied or used by the state government.... the state government by notification, may declare that the said water will be so applied'.

3. PLURALITY OF LAWS : THE POST INDEPENDENCE REGULATORY PERSPECTIVE

The pattern of ownership and control of water sources continued in the post-colonial period. However in schedule areas the community management practices not only

1. The Constitution of India accords a special status to areas predominantly inhabited by indigenous communities in India. These areas have been placed under two categories: the V and VI schedules.

continued but were even recognised by the state system under the 5th and 6th schedule of the constitution. Apart from this the Indian Easement Act, 1882, recognised the right of a riparian owner to unpolluted waters. A riparian owner has a right to use the water of the stream which flows past his land equally with other riparian owners, and to have the water come to him undiminished in flow, quantity and quality and to go beyond his land without obstruction. Section 7 of the Easement Act provides that every riparian owner has the right to the continued flow of the waters of a natural stream in its natural condition without destruction or unreasonable pollution.

Some of the earlier cases reinforce the rights of riparian to free flowing water without any obstruction (by a dam)², no material decrease in water for lower riparian³, judicious use by upper riparian so as not to injure the right of the lower riparian⁴. The earlier decisions also make a point that riparian right is a natural right⁵ and accrues only in natural streams/ rivers and not in artificial water bodies.

Further 73rd Constitutional amendment which has been enacted to associate the community in general in governance processes, puts special emphasis on decentralised governance in India. Under these provisions *Panchayats* (bodies of local self-governance) have been empowered to manage *inter alia*, water resources within their geographical jurisdiction.

Furthermore, there appears to be some kind of an asymmetry in Indian law between the ownership of surface and ground water. While surface water is considered a state property, ground water belongs to the owner of the land. Unrestricted extraction from the ground by some could lead to inequities and injustice to others as people share the same aquifers. The Central Ground Water Authority has promulgated 'Environment Protection Rules for Development and Protection of Groundwater'. The Working Group on Legal, Institutional and Financial Aspects, constituted under the Ministry of Water Resources, has suggested that the state should play the role of a facilitator; and the role of the user organisations and panchayats should be that of a regulatory agency.

4. WATER RESOURCE : THE RIGHTS PERSPECTIVE

Looking at the water management issues from individual rights perspective, it must be noted that under the Indian Constitution there is nothing like a right to safe drinking water, but by way of the *doctrine of emanation* the apex judiciary in India has constructed a sort of right to receive adequate supply of drinking water under

2. Jagan Nath v Chandrika, AIR 1919 Oudh 74; Vippalapati v Raja of Vizianagram, AIR 1937 Mad 310.

3. Sethramanamalingam v Anada Padyach, AIR 1934 Mad 583.

4. Malipat Madhatil v Neelamance, AIR 1938 Mad 649.

5. Secy. of State v Sannidhiraju, AIR 1932 PC 46, Ram Sewak Kaz v Ramgir Choudhary AIR 1954 Pat 320.

the Constitution. This evidently has been done under Article 21 of Indian Constitution. In fact individuals, communities and an active judiciary is responsible for finding spaces in the Constitution to reinforce the right to water as a basic right not merely for human beings but for all living things. In addition to the Right to Life under Article 21 which encompasses the right to water, there are other provisions in the Constitution such as Article 14⁶ and Article 17⁷ which could be interpreted to provide an equitable and unbiased access to all irrespective of creed, caste, race etc.

Article 14 has been interpreted by the Judiciary to guarantee inter-generational equity which is a right of each generation to benefit from natural and cultural inheritance from past generations and which would entail conserving the biological diversity and the sustainable use of other renewable and non-renewable natural resources. Article 14 is also interpreted to include a right of intra-generational equity, which emphasises on the right of equitable distribution within this generation. Article 17 is implemented by the Protection of Civil Rights Act, 1955 to ban the practice of untouchability (social disability) imposed on certain classes of persons by reason of their birth in certain castes. Article 39 lays down principles for the establishment of a welfare state that prescribes: that the ownership and control of the material resources of the community are so distributed as best to sub-serve the common good.

This big range of rights of individuals and communities relating to water access, may lead to some kind of a confusion. But the intention of the system appears to be clear. There could be different forms of rights of individuals and communities in different situations. And in every situation it may not be possible for the individual or the community to manage the resource in such a manner that everybody's interest is taken care of. In fact quite a few situations may lead to various dispute situations and in many cases the individuals or communities may not be competent at all to manage the vast range of rights relating to the resource or the resource itself. A familiar example could be multipurpose projects, wherein conflicting and colliding interests of many people and communities essentially require an arbiter to mediate in these dispute situations. On the other hand, the needs of large amount of water for irrigation purposes, energy needs for industrial development and such other national requirements underline the importance of these multipurpose projects and small communities can neither afford nor manage such mega-investment project. Therefore the role of the state system has been designed in such a manner that it not only help in management of the resource base, but also help in mediating and administering and adjudicating the whole range of rights of individuals and

6. Right to equality before law is embodied in Article 14 of the Constitution.

7. Abolition of Untouchability.

communities. And it was for this reason that it was stated in the beginning of this article that the role of the state system in water management cannot be wished away. It is an inevitability of the modern national governance systems.

5. STATE OF POLLUTION AND REGULATION

Once the basic frame of the rights and ownership issues and role of the state in the water resource management is understood, the next important question would naturally be as to the state of the resource base itself. It must be noted in this context that though India is blessed with a number of fresh water supply resources, perennial river systems, wells, freshwater lakes and many traditional fresh water supply sources, but the state of pollution of these sources is in such a bad shape that it appears highly unlikely that the state system can meet the growing demand of irrigation, expanding industrial base and the supply of drinking water and sanitation facilities. India's 14 major river systems which cater to the 80 percent needs of Indian people are amongst the 100 most polluted rivers of the world. The water of these rivers cannot be used without proper treatment. Out of 3100 towns around 200 have full or partial treatment facilities, rest of the towns are without any treatment facilities.⁸ Over two thirds of illnesses in India are due to contaminated water ;17 per cent of the population does not have access to safe drinking water; About 38 per cent of urban population in India, who are below the poverty line, have no access to water ; 69 per cent of the people do not have access to sanitary services ; 80 per cent children of India suffer from water-borne diseases; of which 7 lakh die each year ; 44 million people suffer from problems related to water quality – due to presence of fluoride, iron, nitrate, arsenic, heavy metal and salinity and towards the end of 20th century, nearly 65000 villages in India had no system of regular supply of safe drinking water.⁹

What has been done to deal with the problems of pollution ? Early statutory attempts in India to control pollution of water can be traced back to legislation of local bodies, their basic duty being to keep their surrounding areas clean. In modern India, the initial days of independence saw the heydays of economic reconstruction by way of industrialization. That time gone, by the early seventies, due to urbanization and industrialization water pollution has become a major problem. Need of treatment of domestic and industrial effluents before being discharged into water – and due to pollution of rivers and streams, availability of water has been

8. National Law School of India University, Bangalore, Report on "State of India's Environment" submitted to Indira Gandhi Institute of Developmental Administration, Bombay 2000.

9. State of India's Environment, Report 2006, National Institute of Rural Development Hyderabad.

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reduced to a significant extent. Water Act 1974¹⁰ represent one of India's first attempts to deal with comprehensively with an environmental issue, i.e. water pollution.

Water Act provides for a permit system or consent procedure to prevent and control water pollution. The Act generally prohibits disposal of polluting matter in streams, wells and sewers or on land in excess of the standards established by the state boards. A person must obtain consent from the state board before taking steps to establish any industry, operation or process, any treatment and disposal system or any extension or addition to such a system which might result in the discharge of sewage or trade effluent into a stream, well or sewer or onto land. The state board may condition its consent by orders that specify the location, construction and use of the outlet as well as the nature and composition of new discharges. The state board must maintain and make public a register containing the particulars of the consent orders. The Act empowers a state board, upon thirty days notice to a polluter, to execute any work required under a consent order which has not been executed and expenses on such a work can always be recovered from the polluter.

The Water Act appears to be comprehensive in its coverage, applying to streams, inland waters, subterranean waters and sea or tidal waters. But the very scheme of the Act does not warrant the conclusion and ground water (subterranean waters) appears to be lying outside the scope of the Act. That probably is the reason why the Central Ground Water Authority and such other authorities have been established under the aegis of central government. Another incident which appears to be warranting this conclusion is the fact that as and when the issues of ground water depletion or salination of ground water have come up before the country, Water Act has not been made applicable, rather states have obligingly approved separate body of laws and rules for the same. This was the precise reason why there was a demand for such a long time for passing of a Ground Water Regulation Act. And it is now, after such a long time that a bill for ground water regulation has been circulated by the Ministry of Water Resources,¹¹ which is slated to be put before the house in the coming winter session of the Parliament.

This clearly implies that despite an Act devoted for the purpose of restoring the wholesomeness of water, and to ensure that domestic and industrial effluents are not discharged into watercourses without adequate treatment, the issues relating to drinking water are not adequately and comprehensively addressed.

10. Water is a State subject but with the growing incidents of water pollution in the country, a need was felt for a comprehensive central legislation. Consequently, this law was enacted under Article 252 (1) of the Indian Constitution, which empowers the Union Government to legislate in a field reserved for the states, where two or more state legislatures consent to a central law.

11. See the Bill on Ground Water Resource Management circulated by Min of Water Resources, Government of India for eliciting public opinion during Aug 2006.

6. FUTURE AGENDA OF REGULATORY MECHANISM

New problems of regulation have surfaced with the new developments in view of the utility of the resource base. One such problem has been depletion of ground water due to heavy demands of agriculture and the application of outdated agricultural technology. And therefore the new ways of regulation. Presently the control being exercised in the country for regulating groundwater development is in the form of indirect administrative measures being adopted by institutional finance agencies who by and large insist on technical clearance of the schemes from authorized groundwater departments of respective states. These departments in turn look into the various aspects of groundwater availability. Another control imposed by the institutional agencies, availing financing from National bank for Agriculture and Rural Development is by way of prescribing spacing criteria between the groundwater structures. Yet another method of indirect control is by way of denial of power connections for the pump-sets financed through loans from banks. However, in the absence of any law, the administrative measures do not prevent affluent farmers from constructing wells in critical areas, which leads to further compounding of problems of regulation and resource management. An affluent farmer with his large capital investment can construct a high capacity well which affects shallow wells in the neighborhood, leading to the creation of another area of conflicting situations and colliding interests. This diffused way of regulation, lacking the character of an integrated management of water resources, with lot of loopholes and pitfalls specially in the area of ground water resources is not a satisfactory situation and there have been demands for long that some kind of an integrated water resource regulation be designed to replace the chaotic form of regulation at the moment.

Water pricing is another area which calls for a better regulation perspective. This is particularly significant in view of the increasing demand of water for agriculture purposes and the outdated agricultural technology and increasing needs of urban sectors in view of new thrust on marketisation and liberalization and resulting boom in urbanization. And the new sources of water are increasingly expensive to exploit, limiting the potential for expansion of new water supplies. In India, the real costs of new irrigation have more than doubled since the late 1960s and early 1970s, and the recovery of the costs is just fraction of the invested costs in water sector.

In view of this one of the most important challenges today is to generate water savings from existing agricultural, household and industrial uses. Water use efficiency in irrigation in much of the developing world including India is typically in the range of 25 to 40 percent. Therefore a particularly difficult challenge will be to improve the efficiency of agricultural water use to maintain crop productivity growth while at the same time allowing reallocation of water from agriculture to urban and industrial uses. Since irrigated area accounts for nearly two-thirds of world rice and

over one-third of world wheat production, growth in irrigated output per unit of land and water is essential to feed growing populations. At the same time, because of the limited number of cost effective new sources of water, the rapidly growing household and industrial demand for water will need to come increasingly from water savings in irrigated agriculture, which generally accounts for 80 percent of water diverted for use in developing countries. Moreover, water savings in agriculture, to truly contribute to reducing water scarcity, should be accompanied by improved efficiency in urban and industrial use. It must be noted in this context that in urban sector water supply systems, "unaccounted for water" (much of which is direct water losses) is often 50 percent or more in major metropolitan areas. These inefficiencies seem to imply the potential for huge savings from existing uses of water.

This way, while, significant amount of water is going waste due to inefficiencies of the system an important side effects of this misuse of water in agricultural sector is seen in the form of significant degradation of existing irrigated cropland. All this loss of agricultural land is taking place due to waterlogging and salinization and lack of improved agricultural and irrigation practices. In India, though no reliable data as to the total loss of cropland is available, one thing that can be stated safely is that the situation is fairly serious and is likely to further increase significantly.

Another important issue, and the one which has been the bone of contention for so long is the issue of large dams. In the aftermath of independence and the enthuse for rapid growth and industrialization, these dams and big industrial enterprises, at one time, were considered the temples of modern India. Once those heydays of rapid industrial growth were over, the doubts were raised as to the efficacy of the large dams as they involved large scale environmental and social costs including the dislocation of people displaced from dam and reservoir sites. The controversy over the Narmada Valley Development Program in western India is illustrative of the issues that need to be resolved if large-scale irrigation projects are to play a role in future water development. The Narmada project includes 30 large dams, 135 medium-sized ones, and 3,000 small ones, and covers an area from the watersheds of the Narmada river in Madhya Pradesh and Maharashtra in central India through Gujarat on the west coast and on to arid regions in Rajasthan.

The main dam in the project is the Sardar Sarovar, which is designed to provide domestic water to 40 million people, generate 1,200 MW of electric power, and irrigate 1.8 million hectares of land (Seckler 1992).¹² These benefits are large, but the environmental and human costs of the construction of the dam are also large.

12. Seckler, David. *The Sardor Sarovar Project in India*. A Commentary on the Report of the Independent Review. Center for Economic Policy Studies Discussion Paper No. 8. Winrock International Institute for Agricultural Development, July 1992.

The reservoir to be created by the Sardar Sarovar dam would flood 37,000 hectares of forest and farmland and displace nearly 100,000 people, mostly poor tribal villagers. An additional 80,000 hectares of land will be utilized for the construction of the distribution network, affecting, in various degrees, another 140,000 people (Berger 1994).¹³ Assessment of large-scale dams should include a comprehensive accounting of costs and benefits, and if projects proceed they must employ equitable, realistic and practical methods for compensating those who are negatively affected. Future construction of large-scale dams will require balanced development approaches acceptable to diverse constituencies. The cost of supplying water for household and industrial uses is also increasing rapidly.

7. IMPERATIVES OF STATE INTERVENTION : THE PUBLIC TRUST

All this requires state and legal interventions and there is no gainsaying of the fact that the state has not only been facilitating the supply and management of this scarce resource but has promoted the availability and long-term sustenance of the resource. That said, the instances of failure on the part of the state system have been numerous. In fact the experiences of the people working at the grassroot level shows that the present legal framework does not support community initiatives ; in fact it is hostile to them. Nevertheless the role of the state system in managing this scarce water resources cannot be overemphasized. The crux of the problem is, as to what should be the norms of state intervention in facilitating the management & augmentation, and creation of conditions, which shall help the exercise of the right to access and reception of clean water which has been raised to the status of a fundamental right by the Indian Judiciary. Californian Supreme Court dealt with the issue in *Monolake* case. "The state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible. Just as the history of this state shows that appropriation may be necessary for efficient use of water despite unavoidable harm to public trust values, it demonstrates that an appropriate water right system administered without consideration of the public trust may cause unnecessary and unjustified harm to trust interests"¹⁴ The Court went on explaining the imperatives of Public Trust, "As a matter of practical necessity the state may have to approve appropriations despite foreseeable harm to public trust uses. In so doing, however, the state must bear in

13. Berger, T. The independent review of the Sardar Sarovar projects 1991-1992. *Water Resources Development* 10(1): 55-66.

14. See Johnson, 14 U.C. Davis L. Rev. 233. 258-257; Robie, Some Reflections on Environmental Considerations in Water Rights Administration, 2 Ecology L.Q. 695, 710-711 (19/2); Comment, 33 Hastings L.J. 653, 654.

mind its duty as trustee to consider the effect of the taking on the public trust¹⁵ and to preserve, so far as consistent with the public interest, the uses protected by the trust.

Justice Kuldeep Singh in *M.C.Mehta v. Kamalnath*¹⁶, explained the imperatives of Public Trust Doctrine in Indian context. "Thus, the public trust is more than an affirmation of state power to use public property for public purposes. It is an affirmation of the duty of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands, surrendering that right of protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust...". In the exercise of its rights as a trustee of the public, therefore, the state system has not only to ensure that the right conditions are created for exercise of the fundamental right to Water but also do this in the capacity of the public trustee, which carries a heavy and sacred duty enshrined in the very basic document of our socio-political existence i.e. the "Constitution of India". And the agenda for that is very heavy, "To prepare medium and long-term national use plans *inter alia* including agricultural practices, human settlement patterns and industrial topology in consultation with Ministries/Departments concerned based on the regional water supportive capacity ; to assess the present irrigation practices and cropping patterns, with respect to high water consuming crops and lay down National Agricultural Water Use Policy to encourage judicious use of water resources; to keep under review groundwater levels and quality, and surface water quantity to devise and implement pragmatic strategies at plan and programme levels; to ensure maintenance of minimum flows in the rivers so as to fulfill the riparian rights to protect the flood plains, so as also protect the vital ecological functions of the rivers; to ensure techno-economic feasibility and to implement programmes on reuse of appropriately treated sewage for agriculture, reuse of industrial waste waters as industrial process water, use of treated sewage in social forestry and public parks in municipal areas and reuse of treated waste water in new housing complexes for non-consumptive usages; to protect, conserve and augment traditional water retaining structures; to protect, conserve and augment natural and manmade wetlands in the country; to promote rain water harvesting in human settlement practices, particularly in cities with more than 10 lakh population in arid/semiarid regions; to promote and implement modern and traditional water harvesting technologies to ensure minimal expenditure in groundwater harnessing; to design and implement programmes to arrest alarming rates of decline in snowline in the country; to ensure catchment area treatment, including construction of checkdams, contour bunding,

15. See *United Plainsmen v. N.D. State Water Cons. Comm'n* 247 N.W 2d 457,462-463 (N.D. 1976).

16. AIR 1997 SC 3127.

control of river bank erosion and plantation of endemic fast-growing tree species to arrest soil and water loss in all river basins, and to ensure the implementation of afforestation programmes for achieving a minimum of 33 % of forest cover as per National Forest Policy 1988. This would also include a duty to prepare and implement guidelines for various water usages commensurate with production and scarcity value of the resource and to ensure community participation with a view to harnessing traditional knowledge at all stages of water resource management.”

8. CONCLUSION

The current legal system and its regulatory pattern, as we have seen above leaves much to be desired. Given the duty of the state system in view of the responsibilities it carries under the Indian Constitution and the role of public trustee with respect to water resources that has been imposed upon it by the people’s initiatives and the initiatives taken by the Indian judiciary, the state system has to craft its priorities with utmost care. It must be noted that the inefficiencies of the state system in managing water resources, during post-independence period cannot be the excuse for going towards the softer options of privatizing water supply systems, the efforts for which are being made now in various parts of the country, including the state of Rajasthan and Chhattisgarh. All these imperatives have been worked out well in the National Water Policy and in view of the 73rd amendment of the Constitution, the role of the state in water resource management has got to be that of a facilitator rather than that of a despot and shurker of the responsibility in favour of the private parties.