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An Analytical Study of Drinking Water Supply with special reference to Law and Policy

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Abstract

The Government of India has accorded highest priority to drinking water followed by irrigation. In urban areas, life is almost impossible without some kind of domestic water supply. It was known to the most primitive man that water was always beneath his feet. When- ever and wherever he required he had to dig to find it. However, now the scenario has absolutely changed. Water is not an abundant and readily available resource. It has been declared as a finite source, in the sense it is limited. India has been reported as a water short country. The chronic perennial shortage of drinking water is being reported continuously and has caused untold hardship to the people. In the hot months of summer, residents in many cities are denied drinking water for days together. Still there are places in India where water is more precious than milk. In some villages people have to walk several kilometres for sweet water. In Rajasthan, Beawar city is supplied with drinking water only once in 72 hrs.[1]

➢ Introduction

Alongside the increasing demand for water there is the most serious problem of quality of the resource. Almost 70 per cent of available water is reported to be polluted. Studies conducted by the National Environment Engineering Research Institute report that every third person deprived of clean drinking water in this world is an Indian." A USA expert has once remarked that most of the drinking water in India is contaminated. The truth about this fact is verified by studies conducted by the World Health Organisation (WHO) and Pollution Control Boards. Unfortunately we realise the reality and gravity of these data only in times of major epidemics. The biggest epidemic in the world due to infectious hepatities in Delhi during the month of December 1955 and the recent one of cholera during the months of June-July 1988, when over 15,000 cases of acute diarrhoea and vomiting were reported, are some of the glaring instances revealing the enormity of the problem.

The Constitution of India in article 47 proclaims that the state shall regard, (i) raising of the level of nutrition, (ii) standard of living of its. people, and (iii) improvement of public health, as among its primary duties.

In particular, it shall endeavour to bring about prohibition of the consumption, except for medicinal purposes, of intoxicating drinks and drugs injurious to health.[2]

Article 21 states, "No person shall be deprived of his life or personal liberty except according to procedure established by law.[3]

Article 48-A reads, "The state shall endeavour to protect and improve the environment.[4]

Article 51-A states, "It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures.[5]

Constitutionally, it is obligatory on the part of states to ensure the creation of conditions congenial to good health. State control is required to assure the supply, quantity and quality of drinking water. Soon after Independence, the need to ensure wholesome water supply has engaged the attention of the government. Though organised water systems were attempted first in the three Presidency towns of Calcutta, Bombay and Madras in late 1870, measures to secure better health for the people found emphasis only on the curative side. The Health Survey and Development Committee (Bhore Committee) which submitted its Report in 1946 for the first time invited attention to the importance of safe water supply on a country-wide basis. The Environmental Hygiene Committee (1948-49) appointed by the Union Government was the first agency of its type charged with an overall assessment of the problem in the field of Environmental Hygiene. It recommended provision of water supply for 90 % of the population. In 1954 the National Programme for providing safe drinking water to urban areas was launched.

In collaboration with various organisations such as the United Nations Development Programme (UNDP), WHO, United Nations Children's Fund (UNICEF) and the World Bank, many activities have been initiated and many programmes formulated though even at the close of the decade, India has not fully achieved its target. The availability of safe drinking water to all people is still a far cry. However, the most notable achievements have been made in rural water supplies. At the close of the decade, uncontaminated water has been made available only to some 1.3 billion people in the developing world.

- **Urban water supplies**

Urban areas are much better placed as generally tap water is being supplied therein by the municipal authorities. Really speaking in urban concentrations life would not be possible without some kind of organised water supply. Thus, in cities it is more or less a usual and well accepted feature. There it is a matter of survival, not development. During the International Water Decade, India has certainly made many efforts. Very graphic and visible targets have been set.

- **Rural water supply**

The rural water supply activities remained a part of the Integrated Rural Development Approach, until the Third Five Year Plan (1961-66) where rural water supply was linked with other activities of rural development such as sanitation, health, etc. The National Water Supply and Sanitation Programme was introduced in 1954. It was found during the mid-sixties that rural water supply schemes were implemented in the easily accessible

villages only. Therefore, the government requested the states to identify problem villages. The Government of India assisted the states to establish Special Investigation Divisions in the Fourth Plan to carry out identification of problem villages. The norm set was that this type of village has no source of safe drinking water within a distance of 1.6 kilometres or within a depth of 15 metres. Other problem villages are those where available water has excessive salinity, iron, flouride or other toxic elements or where diseases like cholera, guinea worm, etc., were endemic.

- **Sources of water supply**

In the 1981 census household schedule, a question was asked from each household regarding the source of drinking water supply. In most parts of the country, drinking water supply in the rural areas is from wells. In urban areas, the surface water happens to be the major source of water supply in most of the areas.[6] A detailed survey conducted by the Central Board for the Prevention and Control of Water Pollution[7] reports.

In class I cities (cities with population of 1,00,000 and above) proportionate contribution of total water supply from surface source, ground source and combined ground-surface source is 61, 9 and 30 % respectively.

- The southern states in the Deccan region are exclusively dependent on surface water indicating thereby non-availability of economically feasible groundwater. Only the Punjab states are supplied 100 % from ground source, among states in the Indo-Gangetic valley.
- Sourcewise, in class II cities, (cities with population of less than 1,00,000 but more than 50,000) the proportionate contribution of total water supply from surface, ground and combined source is 66.42, 29.29 and 4.31 % respectively. The groundwater forms a major source of water supply in class II towns in the northern states. In southern states the source of supply in almost all the towns is surface water. The class II towns in Gujarat are evenly dependent on surface and ground water source.

It is therefore clear that India's water resources are extremely unevenly distributed over its different regions. Water resources utilisation is in a very advanced stage. In 1985 India used almost 50 % of the total utilisable water or about 13 % of the total annual rainfall. But factors like rapid population growth, lack of adequate and effective urban planning, paucity of funds in exploiting the resource, etc., present a grim picture of the whole situation. According to the details given in the Report of the National Water Supply and Sanitation Programme (1960-61), out of 1736 urban local bodies, for which data was available, as many as 1056 had no arrangements for protected water supply. Out of the remaining 680, only 245 were supplying adequate water and the rest 435 had partial water supply arrangements only.

Among the corporation cities, a majority derive their raw water supply mainly from the rivers running close by, supplemented in some cases by canal supply, tubewells and bores. In urban conditions advanced water treatment is generally feasible and therefore water sources of comparatively poor quality may be accepted. The increasing demand of water for different purposes and at the same time, the limited available quantities make it obligatory to use even sewage water. It is estimated that the demand for drinking water in Delhi is likely to cross 592 mgd. by 1991. The total supply at present is only about 412 mgd. against the assessed demand of 472 mgd.[8]

Though 90 % of the raw water is being tapped from surface sources and the remaining 10 % from ground sources through tubewells and rannery wells, it is still insufficient to fulfil the demands of all.

About 85 % of the rural supply is based on groundwater. In rural areas, the emphasis is to locate water sources requiring the simplest possible treatment or no treatment before consumption. Though groundwater is not always free from pollution, by locating and designing wells and bore- holes conveniently, it is still possible to locate water sources of such quality that do not require treatment.

- **Institutional framework for water supply**

In India water supply is recognised as a legitimate field of municipal enterprise. There are mainly four kinds of municipal bodies, (as urban local institutions), viz., (i) city corporations; (ii) municipalities; (iii) town areas; and (iv) notified areas.

In certain cases specialised agencies such as the local level agency Jal Sansthan in Uttar Pradesh or a state level agency like Karnataka Water Supply and Sewerage Board, handle the respective water supply network. A special agency, the Calcutta Metropolitan Water and Sanitation Authority is set up in Calcutta. Tamil Nadu has since established a State Level Board for water supply and sewerage. The idea was to set up an autonomous body to look after all aspects of water supply and sewerage. Legislations have been drafted which define in varying degrees the board's duties, powers, responsibilities and the constitution. In Delhi, water supply and sewage disposal are undertaken by the specialised undertaking of the Municipal Corporation of Delhi.

It is one of the very important responsibilities of the municipalities to arrange and ensure safe and potable drinking water supply to the city dwellers. Although this is a complicated task, the same constitutes one of the basic infrastructure services. Preservation of public health in the city is also an engaging responsibility of the municipal chairman and all this requires huge finances, radical legislative measures and suitable administrative organisation and procedures, to follow the rapid pace of urbanisation.

This mismatch between expenditure and receipt on account of providing water supply seems to be a result of the following factors:

- Water supply rates are normally very low.
- Recovery ratios are poor.
- Wastage of water and lack of discipline in water consumption, etc.

- **Legal controls**

The State Municipal Acts and Panchayat Acts make it very clear that potable water supply is one of the prime obligations of local bodies in India. Specific powers and responsibilities have been given to these bodies. The Acts specifically lay down that it is the duty of the committee/ board, etc., to take steps for ascertaining the sufficiency and wholesomeness of water supplies in pipes. It is incumbent upon the commissioner to see that

every house has a sufficient supply of wholesome water available for domestic purposes. He is also authorised to examine as to whether there was waste or misuse of water.[9]

However, the question remains that even though so many duties have been imposed on the local bodies, what remedy a citizen has if they fail to perform their duties. These Acts really speaking have not provided for fixing any type of accountability for, (i) failure to provide this public service; or (ii) supplying water which is not fit for drinking, etc.

Under tort law the municipal bodies can be made liable for damages but courts have restricted powers in this regard. Mandatory directions cannot be issued to these bodies to improve water supply though in recent years, courts have directed these authorities to improve the quality of water. Now pollution free water has been declared as a fundamental right.[10]

Under the U.P. Municipalities Act 1916, the board has a duty, if water tax is imposed, to maintain a system of water supply through pipes. If the municipality fails to do so the tax payer consumers have a remedy to recover damage by filing a civil suit.[11] However, again no mandatory direction can be issued to the municipality to maintain water supply, it being a complicated issue depending on so many factors. Tort law makes these bodies liable for negligence in performance of their duties. If the authorities use pipes of very inferior quality or in a dilapidated condition or if the pipes are being used after the period of their normal use and the municipalities do not replace them, resulting in leakage and overflow in the streets and the engineers on duty do not take adequate precautions to prevent damage, the authorities can be sued for damages in such cases.[12]

As regards public nuisance which results in adverse effect on public health, the aggrieved can invoke section 133 of the Code of Criminal Procedure. This remedy had been invoked against the municipality in Ratlam Municipal Council v. Vardichands for non-performance of its duties.[13] Even the Consumer Protection Act 1986 can be invoked against municipal bodies if water tax is made compulsory. The Act has a wider scope but till now application of the Act in respect of municipal bodies is a debatable issue. Recently the National Commission has entertained a petition filed against the Ahmedabad Municipal Corporation, alleging negligence and failure on its part to take adequate preventive measures before the onset of the monsoon, so as to avoid contamination of drinking water supplies to the public and that as a consequence thereof there was an outbreak of epidemic of cholera and gastro-enterities.[14]

- **Benefits of water supply**

The significance of water supply development depends upon the nature of the preexisting water supply situation. On the issue as to what water supply can do and should do for the communities into which it is being placed, different people have different responses. In communities where the water journey is short and convenient, any improvement in accessability of supply will not save a significant amount of time or energy. However, in developing countries, there are still many communities, in which, during certain periods of the year, or throughout the year, the collection of water involves a significant expenditure of time and energy and an improved water supply has an apparent potential for reducing these efforts especially for women.

An improved health is another design benefit of water supply development. Though a majority of the population does not perceive this as an immediate benefit, the last decade has seen a considerable advance in the epidemiology and ecology of water-related diseases. Now sufficient knowledge exists (may be not for all water related diseases) to enable improved health to be used as a design benefit.

To achieve these immediate goals, the essentials of a public water supply scheme are:

- Sufficient amount of water should be made available to the consumers.
- To ensure purity of water.
- Accessability of water; for this there should be proper distribution system.
- The scheme should be economical from the point of view of initial cost.

Though these aims are unattainable for a majority of the population, many combinations of improvements in quality, quantity, availability and reliability must be decided upon. The association between the water collection journey, health and water supply developments are now analysed to see whether these benefits can be utilised as design benefits.

- **Water collection journey: women issue**

One of the most obvious and immediate goals of water supply develop- ment is to bring the resource closer to the homes. In the twentieth century, after about 45 years of Independence, there are many places in India where villagers have to walk several kilometres (30 to 40) for sweet water. The global movement of providing drinking water for all is still a pipe-dream. According to a recent government survey, 2,27,000 villages still remain nearly 2 kilometres away from drinking water. There are experiences showing that village women spend half their lives fetching water from ponds, wells, etc., at least five to six miles away from their dwellings. They have to carry pots of water six to seven hours every day. Its acute scarcity has made life very difficult in such places. When time is short, hygiene tends to suffer, because of ignorance and shortage of time. It is common for rural mothers to use a corner of their sari to, (i) dry plates, (ii) wipe their hands; and (iii) clean their children's faces, etc.

- **Health issue**

Majority of the public is primarily indifferent to the existing scenario regarding the water resource management. Common people are not aware how and from where the water comes in the taps of their houses. A majority of the population even in urban areas tend to accept distributed water as safe. In villages, the popular definition of good water is water which is clear to look at, sweet to taste and cooks food quickly. Open dugwells continue to be the preferred and primary source of drinking water in many villages despite widespread coverage of villages with deepwell handpumps. Popular ignorance of specific collection, storage and handling practices seems to be cancelling out the benefits of providing safe water sources.

- **Difficulties in water resource use in India**

- **Area of origin theory**

While there is an adequate amount of water to sustain the population in India, there are a number of difficulties in actually using the available water by the entire population. There is heavy imbalance in its availability. There may be enormous variations from year to year or month to month, in different regions of the country. Being an essential ingredient for all life it is not always available where needed. The eastern portion does not have adequate water in the country, while it is 7 % in the western portion. Except zone-1 and western portion, every other zone has not got sufficient water and so requires assistance especially for scarcity areas. Concept of transferring water from one basin for use in another basin is not a new one. Under India's national policy, the waters of any river can be distributed on equitable considerations to subserve national interest.

- **Disabilities in access to water**

Access to potable water is a human entitlement. The Indian community is not homogenous but segmented by class, caste and gendre. Since water use and management practices are part of the social fabric of the community, there exist different distribution patterns for different population-broadly, rural, urban, suburban, hill and mountain people; drought and famine affected people; people in custody; destitute and impoverished people. There are different rights for slum-dwellers, pavement dwellers, marginalised people. In slums, squatter settlements, labour colonics/jhuggis, brutal and inhuman conditions exist. No agency holds itself responsible for providing the basic amenities to these areas. Experience shows that these people suffer disproportionately from environmental degradation caused by pollution, etc.[15]

- **Conclusion**

Evaluation of the existing scenario in the field of drinking water supply shows that there is still a considerable gap between the objects proposed and achieved so far. Though the governments have launched massive efforts for improving water supply, targets have been set to provide all people with clean water, many strategies are being evolved for improving the life of people, still we are left with many communities even after about 75 years of Independence surviving on open muddy wells.

It is an accepted fact that water is a scarce commodity and challenge of increasing population and rapid urbanisation may be major hurdles in achieving these targets. However, lack of political will, institutional breakdown, especially of local bodies, multiplicity of agencies and poor coordination, low level of quality and quantity consciousness among masses, bad planning, poor design, etc. are some of the factors which are the avoidable deterrents to the enlargement of the government functions. What is really required is judicious use of the resource. The managers should be able to allocate resources in a way which might have the optimum impact on the communities concerned. For this the role of the government has to change. It must move from being a provider to being a promoter and facilitator to enable local public, private and community institutions to deliver services. Some of the important steps required to achieve the goals may be the following:

- Every Government Plan must touch imperatives of directive principles.

- Equity to be ensured in the distribution of water resources.
- Water demand to be managed through appropriate pricing of water.
- Revival of traditional water harvesting systems can help meet the numerous water needs provided steps are taken to improve quality of water.
- Renovation of the outdated water distribution system.
- Need for promoting four or five key practices in the handling of drinking water during collection, transportation, storage and use. Mass awareness regarding the preventive measures of water pollution.
- A shared understanding between the system and its clients on what constitutes safe water must be the foundation of all government schemes. Effective communication is the only means to reach such an understanding. For this rural water supply projects be linked with other developments, including the education and awareness of villagers on the significance of water supply.
- By impounding water of river sources for satisfying the growing needs of the cities, the district needs are getting ignored. Urgency of legal control in this regard.
- Water development to be integrated with land management on a watershed and river basin basis to ensure sustainable services to the masses.
- Need for privatisation of the resource only for domestic water supply mainly in metropolitan cities or fixation of some accountability norms to ensure proper functioning of municipalities in this regard.

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