

Groundwater Governance – Ownership and Its Pricing

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Abstract: Tamil Nadu is an agrarian State and in the absence of any perennial river, ground water is used for agricultural purposes. Over-exploitation of ground water has led to rise in OE and critical blocks and is mainly attributed to its indiscriminate withdrawal and absence of any regulatory system to monitor and regulate its use. Two acts have been enacted in Tamil Nadu during 1987 and 2003. The Chennai Metropolitan Area Ground Water (Regulation) Act in 1987 is being implemented in Chennai city and specified 302 villages in Kancheepuram and Thiruvallur districts. The Ground Water Development and Management Act, 2003 has been enacted during 2003 for areas not covered under the 1987 Act. This Act is based on Model Bill circulated by Govt. of India and provides suitable measures for regulation of groundwater development in the State. The ownership of ground water needs be vested with the State Government by making suitable amendments to the constitution to bring Ground Water under 'State Subject' in order to implement the recommendations of the 'Revised National Water Policy'. The issue of pricing of ground water has gained importance in the present groundwater development scenario. A Dual Pricing System can be introduced by the government to regulate the use of ground water. This paper deals with above issues in detail.

INTRODUCTION

Water is elixir of human life. Water is a scarce, precious and replenishable natural resource which cannot be created. Its value can be determined only where it is not available and gauged by the energy and time spent in traversing to fetch a pot of water. Also it is one of the most critical natural resources for the continuance of life on earth. Rain is the first form of water in the 'hydrological cycle'. The sources of water are mainly surface and ground water. The use of one source affects the availability of the other source as they are interlinked and utilisation of each source vary depending upon its availability.

Tamil Nadu is an agrarian state, 95% of the surfacewater resources have been utilised. No perennial river is flowing in Tamil Nadu. Hence this state has to go in for the exploitation of ground water for its agricultural activities. The status of groundwater development in terms of its exploitation for various uses in 385 blocks is as below (Vide G.O.Ms.No. 51PW [R2] Dept., dated 11.02.2006).

Categorization as on January 2003

<i>Sl. No.</i>	<i>Category</i>	<i>No. of blocks</i>
1.	Over-exploited	138
2.	Critical	37
3.	Semi-critical	105
4.	Safe	97
5.	Saline	8
Total		385

From the above it is very clear that the percentage of over-exploited and critical blocks contribute 45.45% and the percentage of semi-critical blocks contribute 27.27% to the precarious situation in Tamil Nadu in respect of groundwater availability. Unless proper steps are taken, the 27.27% of semi-critical blocks will also become critical adding the worsening situation in Tamil Nadu. This problem is mainly attributed to indiscriminate tapping of ground water for various uses. As there is no regulatory system to monitor and regulate the use of ground water this worsening situation is prevailing in Tamil Nadu. This situation compound with the problem of non-availability of surface water due to deficient rainfall and also due to the vagaries in the rainfall.

The reason for the non-regulation of the ground water is due to the fact that no legal measure can be taken against the persons exploiting the ground water indiscriminately. As we all know, water is a 'State subject [In List II (State List)] of the seventeenth schedule subject to provision of 'Entry 56' of List I [Union List] which deals with inter-state rivers. In this provision there is no specific mention about ground water. During the pre-independence period, an Act viz., "the Indian Easement Act 1882" was enacted which linked groundwater ownership to that of land ownership. As per this act, the landowner has the right to collect and dispose within his own limit and all water under the land, which implies that the landowner can use the ground water under his land for irrigating his own land. The landowner can not sell the water to others for commercial purposes. This is the only act enacted which deals with groundwater ownership in this country.

In order to bring the use of ground water under control, the ownership of ground water should be fixed. There are two options available:

1. To make suitable amendments in the Constitution to include the ground water in the 'State' list after delinking the groundwater ownership from the land ownership by repealing the relevant clause in the "Indian Easement Act".
2. To enact an act to monitor and regulate the use of ground water.

As far as Tamil Nadu is concerned, there are two acts enacted, one during 1987 and the other during 2003. The Chennai Metropolitan Area Ground Water [Regulation] Act [1987] was enacted for the regulation of ground water exclusively for the Chennai city and specified 302 revenue villages in the adjoining Kancheepuram and Thiruvallur districts. This act was amended in 2002. The Ground Water Development and Management Act 2003 has been enacted during March 2003 exclusively for the areas not covered by the Chennai Metropolitan Area Ground Water [Regulation] Act 1987.

The Chennai Metropolitan Area Ground Water [Regulation] Act is being implemented by "Chennai Metropolitan Water Supply and Sewerage Board" in Chennai city; and for the specified 302 villages in Kancheepuram and Thiruvallur districts, the Collectors of the respective districts are the authorities for the implementation of the Act.

SALIENT FEATURES OF GROUND WATER DEVELOPMENT & MANAGEMENT ACT, 2003

As regard the Ground Water Development and Management Act 2003, the Ground Water Authority has to be formed. The Ground Water Authority (Constituted under the Act) has powers to:

- Notify areas for development, control and regulation of ground water.
- Monitor the groundwater regime in the mining area and may direct the disposal of mine water suitably.
- Lay down or adopt standards for water quality depending on the kinds of water use.
- Alter or amend or cancel terms of certificate of registration, permit or license.
- Enter upon any premises [including break open the door if the owner or the occupants refuse to comply with], inspect, take specimens and copies of relevant records, serve notice and seize and take possession of any equipments utilised for unauthorised sinking.
- This Act provides for groundwater management by identifying and notifying the suitable areas for conjunctive use of surface water and ground water.
- Under this Act all wells sunk in the state on or after the date of commencement of this Act [including notified and non-notified areas] have to be registered with the authority.
- Also under this Act, electrical energy from Tamil Nadu Electricity Board will not be supplied for energizing the wells sunk in contravention of this Act.
- The Act includes various penalty clauses for the offences.

This Act envisages certain restrictions in the notified area as below.

- Every user of ground water has to obtain 'certificate of registration' from the Authority for recognising the existing groundwater use.
- Sinking of wells without permit from the Authority is prohibited.
- Transportation of ground water without permit is prohibited.
- Carrying on the business of sinking wells without license from the Authority is prohibited.

This act exempts—

- Wells used for domestic purposes [Extracting device upto 1 HP];
- Wells sunk by state and central agencies for scientific purposes; and
- Wells sunk by small and marginal farmers.

OWNERSHIP OF GROUND WATER

The long-term solution for the ownership of ground water lies with effecting the suitable amendments to the Constitution of India by including the ground water in the State list [List II of seventeenth schedule] [state list] after delinking it from the "Indian Easement Act".

To summarise, the ownership of the ground water should be vested with the state government by making suitable amendments to the Constitution to bring the ground water under 'State subject' in order to implement the recommendations of the 'Revised National Water Policy [2002]. As this amendment of the Constitution involves more complicated issues like delinking of groundwater ownership from land ownership by repealing the relevant clause 7 of "The Indian Easement Act".

Till such time, the regulation and development of ground water will be taken care of by the 'Ground Water Development and Management Act 2003' and the Chennai Metropolitan Area Ground

Water [Regulation Act] 1987 [Amended as on November 2002]. Among the above two acts, the Chennai Metropolitan Area Ground Water [Regulation Act] 1987 [Amended as on 2002] is in force, in Tamil Nadu covering the Chennai city and specified 302 villages in Kancheepuram and Thiruvallur Districts. For the remaining areas, for the implementation of the Ground Water Development and Management Act 2003, the Ground Water Authority will take care of and the formation of the Authority is on the anvil.

Pricing of Ground Water

Water promises to be to the 21st century what oil was to the 20th century—the precious commodity that determines the wealth of nations. Water, once a gift of nature and available in abundance has become a scarce resource because of the indifference of man to the nature and indiscriminate interference with nature. The result is the continuing conformation between man and nature with poor water supply management and lack of determined effort to harness the flood water resources. In the absence of any worthwhile measure towards afforestation and due to the vagaries of monsoon, the availability of water as a resource has become a problematic one for both urban and rural uses. It deserves serious consideration of all the concerned. Hence, it is prudent to look at water as a fragile resource with the background of economics.

Considering water as natural resource, the major concerns of the resource economics are:

1. The resource allocation in the present and the future.
2. The distributional outcomes of the intertemporal resource allocation decision.
3. Resources are multi attribute and thus have quantity, quality, time and space dimension: they are
 1. Exhaustible resources, 2. Flow resources, 3. Fund resources and 4. Biological resources.
4. Under this water is categorised as 'Fund Resource' which can be stored or deposited, withdrawn and manipulated by people.

Often problems in resource economics are complex and dynamic in character. However many of its problems can be fruitfully identified with simple demand, supply and market equilibrium models. If the total demand for water is less than the quantity supplied, the question of pricing does not arise. The pricing of water is needed when the quantity of water is less and the total demand for water is more. i.e. either the pricing must be done or some other means of rationing must be identified. The pricing of water is to be done, in order to motivate the people to use the precious, scarce resource, to meet their minimum requirement without any wastage. If it is not priced, there will be a tendency to use the available water lavishly unmindful of its availability. The water price is the price charged for the water consumption as established between the production supplier and the consumer. The rates are categorised by the difference used viz., domestic, agricultural, industrial—each differing from each other. The price paid for water is often dictated by the nature of water supplier. The water users, be it farmers, or other users, are ready to pay any price for water if the water supplier is a private well owner and at the same time they are reluctant to pay the price for water if the State is the water provider. Moreover anything given free of cost, the value of the material will not be felt and appreciated. The government can also think of 'Dual price system' setting a higher price for urban users and comparatively lesser price for agricultural users for a given quantity. This will effectively aggregate the available water among competing users. The pricing of ground water is very much essential in the light of the above contexts. However, this is a policy matter which has to be decided by the government.