

TRADITIONAL VS FORMAL INSTITUTIONS IN MANAGING
COMMON PROPERTY RESOURCES: A CASE STUDY OF
TRADITIONAL DRINKING WATER SYSTEM 'OORNI' IN
RAMNATHAPURAM DISTRICT, TAMIL NADU, INDIA.

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Ramnathapuram, a coastal district in the peninsula -India faces acute drinking water shortage due to salinity of the ground water on one hand and low erratic rainfall (500-700 mm) on the other. Traditionally people in this region used to collect the rain water in 'Oorni' for household purpose and for the cattle. Oorni is a shallow pond like structure, the clay soil of the area neither allows the water in the Oorni to percolate down nor does it permit the saline ground water to mix up with the Oorni water. Normally, a village has two types of Oorni: the first one is used only for drinking water/cooking purpose and the second for bathing, washing and for animals. In a village there can be at times only one (used as multipurpose) or six to seven Oornies depending on the population, availability of land etc. Traditionally, water is cleaned for drinking as follows. The water is first collected in an earthen pot (no other material other than earthen pots can be used for this purpose) and then a seed which is locally called "Tathamkottai" is rubbed inside the rough edge of the earthen pot in a rhythmical manner making the water clear allowing the sediment to settle down.

REASONS FOR NEGLECT OF OORNIES

Traditionally Oorni was the only source of potable water in this region. However, as time passed it could not cope up with the water requirement due to various reasons. The population growth itself was one of the reasons making the per-capita availability of water very low. The impression given by outside agencies, including the government that the Oornies are not a hygienic source was the other reason, that led to neglect of this source by the people. In

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addition, promise by the government to provide an alternative source of drinking water also resulted in the neglect of Oornies as a source of drinking water.

The attempts by the government since '70s to provide drinking water by bore-wells and overhead water tanks etc. (under Rajiv Gandhi Drinking Water Mission) failed in this area in majority of the cases due to brackishness of the ground water, and other technical and managerial reasons.

By '90s, the people more or less realised that the government cannot provide satisfactory solution for their chronic drinking water problem. The Government also realised that it was not easy to provide drinking water in these areas and one has to support and augment the traditional sources of drinking water. One can observe that in the late '90s the government did take measures to provide financial resources for maintenance and repair of the Oornies, and also for constructing of additional Oornies in the villages. (Table 3).

STUDY AREA AND METHODOLOGY

This study was conducted in Michaelpattnam village of Mudukulathur block in Ramnathapuram district of Tamil Nadu state in India (2000&2005). (Block is an administrative unit within the district). In Mudukulathur block, the level of dependence on Oorni for drinking water is higher compared to the other blocks in the district.

For the study, the Participatory Rural Appraisal method was used and a team of multi-disciplinary experts spent a week's time in the village. Techniques like Time Line, Focus Groups Discussion, Resource Mapping, Social Mapping etc, were used.

Michaelpattnam village with 300 households has an approximate population of about 2000 (Table-1). Most of the households depend on agriculture. The soil is generally of black cotton type with high salinity. In the fifties, the major crops grown were ragi, sorghum, horse gram and coriander. In the seventies the crops raised were cereals, like maize, sorghum, ragi, paddy etc. The other crops like chillies, coriander, gingelly and cotton were also grown. At

present the major crops which are cultivated include chilly (a variety suitable for saline soil), cotton (MC7) and paddy. Other crops like coriander and gingily are also cultivated.

THE TRADITIONAL VILLAGE PANCHAYAT

The informal or traditional panchayat has been in existence for the last few generations. The villagers were not in position to pinpoint when exactly and how this traditional system was introduced. For the process constituting the traditional panchayat the households in the village are divided into fourteen clusters or wards and two members are selected from each cluster. Thus twenty-eight members are selected for the traditional panchayat. Apart from this three to four elder members of the community are also selected making a total of thirty two members in the panchayat. From among the thirty-two members, one is selected as the head of the panchayat. However, the selection of the head (leader) by the selected panchayat members has to be ratified in the general body of the village panchayat. Women are neither members of the traditional panchayat nor are they allowed to attend the village traditional panchayat meeting. The Panchayat body is changed every three years. The panchayat is empowered with necessary powers to deal with problems that affect the village including management of common properties. However, their main responsibility of the traditional panchayat is the management of the Oorni (the drinking water source) including the judicious distribution of water.

MANAGEMENT OF OORNIES BY TRADITIONAL PANCHAYAT

The traditional panchayat takes the responsibility of Oorni management. The annual operation starts with cleaning and desilting of Oorni before the rainy season. For this the Panchayat requests one member of the family to come on a fixed day and clean the Oorni. The labour is free and voluntary; however, the families who cannot provide labour, have to pay one-day's wages. During the rainy season it is the responsibility of the traditional panchayat to see that the channels which allow the rain water to come into the Oorni is cleared and the entry

sluice opened so that water is filled in the Oorni. Care is also taken to see that when the water in the Oorni is full, the sluice is properly closed. When there is good rain it is mandatory for the entire village to see that maximum water is collected in all the Oornies.

There is a strict control on the use of water from the Oorni, especially the drinking water Oorni. Care is taken that no family draws excess water, and that the water is utilised only for the purpose of cooking and drinking. Moreover during summer it is seen that the quantity of water that is lifted is judiciously used. Anybody found misusing water is fined by the panchayat. Even after the formal panchayat came into existence, the Management of Oorni is by the traditional panchayat.

FORMAL PANCHAYAT VIS-A-VIS THE TRADITIONAL PANCHAYAT AND PROVISION OF POTABLE WATER

Even though the formal panchayats were in existence in India from the fifties, it started functioning with renewed vigor only after the 73rd and 74th Constitution Amendment in 1993-94. Provision of drinking water is the responsibility of the formal panchayat as per the 11th schedule of the 73rd Constitution amendment. In this way the responsibility of managing the Oorni formally rest with the formal panchayat

During this period there was a realisation by the Government that the Oornies cannot be neglected as a source of drinking water, and efforts should be made to clean, fence and maintain the Oornies. For this purpose money was channelised through the formal panchayat and works were taken up by the formal panchayats. When works were taken up by formal panchayats, people worked for wages. There is a shift from people maintaining Oorni by free labour to maintaining Oorni by wage labour. There is no conflict between traditional and formal panchayats in the management of Oornies but now people expect Government funds for the maintenance of Oorni. However, even now the moral authority of the traditional panchayat still

holds in that in times of scarcity only, the traditional panchayat can regulate access to water from Oorni. It also helps in amicable settlement of many issues in the village.

GOVERNMENTAL INTERVENTIONS IN SOLVING THE DRINKING WATER PROBLEM

The Government's efforts in providing potable water started in the early Seventies. Initially wells were dug and bore wells were installed. These efforts, however, could not achieve the desired results due to the high level of salinity of the ground water (Table-3).

The efforts were then shifted to finding a potable water source in the neighbouring villages and providing water through pipes with the help of an Over Head Tank (OHT). A bore well and OHT were installed about 5 kms away. This OHT was expected to supply water to four villages including the study village. In this village, 14 taps were installed in strategic positions to supply water. However, as this village was at the tail end, it could hardly get any water. The water in OHT was supplied once in two days, as the availability was limited. As a result the households could get only one or two pots of water once in two days. Even this was not available in summer. Rajiv Gandhi Drinking Water Mission was responsible for the management and distribution of water. The villages proximal to the OHT have appropriated the major share of water by taking additional connections etc. One interesting aspect of this project is that (villagers) were not involved in the distribution of water and no Users Committee was constituted.

Based on the population, the four villages shared the cost of maintenance. So, even though this village got no drinking water the water bill used to be around Rs.1500 to Rs.2000 per month. The villagers felt this was an additional burden especially when they got no water. The formal panchayat, which had to pay the bill, refused to pay it and did not do so even while the study was in progress.

Next the Government efforts turned to the Oornies. The first attempt was to provide a filter well within the Kovil Oorni, so that the villagers could get filtered water or clean water from the Oorni. However, this worked only for one year after which it failed.

Presently, there is a realization on the part of the Government that Oorni as a source of potable water cannot be neglected. This has led to the Government investing money in repairing, disilting, and protecting the Oornies. Efforts have also been made in constructing additional Oornies in the village.

COPING STRATEGY IN SOLVING THE WATER SCARCITY

Historical trend (Table 2) shows that in the fifties the villagers depended on its own indigenous source i.e. "Oornies" for potable water. The neglect of this source for the above-mentioned reasons has led to people placing less reliability on Oorni as a source of water. The governmental efforts also could not provide potable water to the people. This resulted in people depending on outside sources for potable water from the eighties. The study of the mobility matrix has shown that (Map 1) people had to travel a distance of around 2.5 km to 4.5 km for potable water during summer. In many cases villagers of one village had to face hostility of those villagers from where the water was collected.

WOMEN'S WORK LOAD AND DRINKING WATER SCARCITY

One of the important findings of this study is that women's workload has increased from 1950 to 2000 on two accounts. One because of the shift in cropping pattern i.e., from a near subsistence cereal based cropping pattern to cash crop based. In the 50's ragi, sorghum, horse gram etc. were cultivated where the women labour requirement was considerably less. In the 1990's this was shifted to cash crop i.e., chillies and cotton where the women's labour is considerably high. Apart from this the scarcity of water during summer made their work more

strenuous. The comparative study of the daily routine of women showed that during the summer season they had to spend considerable time fetching water (figure (2)). It is surprising to note that in this remote village many women learned cycling just for the sake of fetching drinking water from distant places. The scarcity of water increased the workload of women to almost an unbearable extent in the study village.

CONCLUSION

The traditional management of Oorni by the informal panchayat has ensured equitable distribution (access) of available water. Until outside interventions were made, the villagers were self-reliant and sustained their resources. The governmental approaches were mostly top down in nature and did not involve people at any stage either in planning or implementation. The government less understood the fact that technology and resources by itself cannot solve the problem. Even though the formal panchayats were constitutionally entrusted with the responsibility of provision of drinking water, the importance of traditional panchayat, has not been reduced. The introduction of the formal panchayat system has brought in the participation of women, which was otherwise not there in the traditional system. However, the formal panchayat also brought in the dependency on governmental funds for maintenance of Oorni, which was otherwise managed by the traditional panchayat with free labour. But the crucial element is that the moral authority to equitably ration the available water still rests with the traditional panchayat.

Table - 1
TREND - MICHAELPATTANAM VILLAGE

	1950	1975	2000
No. of households	150	200	300
Population	850	1100	1800
Cattle	470	350	185
Sheep	1000+	Stopped rearing	Stopped rearing
Goats	--	500	200
Composition of Fuel consumption for cooking	Cow dung 60% Crop residue 30% Twigs 10%	Cow dung 55% Crop residue 25% Kerosene 5% Twigs/ fuel wood 10%	Fuel wood 55% Twigs/ crop residue 12% Kerosene 10% LP Gas 8%
Cropping pattern	Ragi, Sorghum, Horsegram, Coriander	Maize, Sorghum, Ragi, Paddy, cotton, Gingily	Chillies, Cotton, Paddy, Coriander, Gingily

Table - 2
SOURCE OF WATER
Historical Trend

	Before 1950	1980	2000
Drinking	Kovil Oorni provided for 100% requirement of the village	Kovil Oorni + Bore well/ well inside Oorni etc. People very rarely went to other villages for collecting water	Kovil Oorni (water available for 4 to 5 months). Piped water, one or two pots of water once in two days and at times no water in summer. Water collected from neighbouring villages in summer at a distance of 2.5 km to 4.5 km
Washing vessels etc.	Kovil Oorni	Vellaikan Oorni Borewell near the Oorni	Bore well. Moderately salty in rainy season. Salty in summer
Bathing/ washing clothes etc.	Vellaikan Oorni/ a well near the Oorni	Vellaikan Oorni/ other Oornis in the village	Vellaikan Oorni/ hand pump in Vellaikan Oorni (summer) salty water

Table - 3**GOVERNMENTAL EFFORTS IN PROVIDING DRINKING WATER**

Year	Efforts by the Government	Present condition
1970	A well with parapet wall inside the Kovil Oorni	High salinity led to closure after some time
1980	Handpump in Vellaikan Oorni	It was in use for four years but not in use at present
1985	A bore well within Kovil Oorni	Used for two years but abandoned due to high salinity
1986	A borewell adjacent to Kovil Oorni	Saline water. L Low salinity in rainy season, which increases in summer. Presently used for washing vessels etc.
1992	A borewell near the southern side of Kovil Oorni	Abandoned due to high salinity
1995	A overhead tank and pipeline about 5 km away to provide pipe water supply	The pipe line is for three villages and this tail end village hardly gets any water for drinking
1996	A filter well was constructed within Kovil Oorni on the eastern end	Functioned for one year but could not be maintained properly. Filtering system failed. Not in use at present
1996-1997	Desilting, deepening and fencing of Kovil Oorni	Improved the Oorni condition
1997	Handpump in Vellaikan Oorni	It is in use now. However, water is salty and used only for animals.
1998	Water inlet was constructed on the western side near the old inlet (Kovil Oorni)	In good condition
1999	Retaining wall around half of the Kovil Oorani	In good condition
1999-2000	Two more new Oornies constructed under the watershed development programme	Under construction at the time of study.