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Title	:	<i>Dynamics in Water Resources Utilisation Peri-Urban areas: A case study of somangalam village near to Chennai city</i>
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Background:

Tamil Nadu is one of the rapidly urbanising states in India. Rapid urbanisation always has some implications on peripheral areas. Large scale migration to the city from the peripheral villages is reducing labor force, particularly for agriculture activities. Urbanisation always leads to increase in the land value of the sub-urban villages. Even though from farmers' point of view "Agriculture is not at all profitable", and this is the reason behind their mindset in dropping out from farm works, there is a controversial statement given by the research reports about profitable results in land and water productivity, especially at the place where higher water potential is available. Nevertheless, many of the peri-urban villages welcome water market since they experience it as more profitable than agriculture. The study of Somangalam village is an attempt to examine the above mentioned issues, particularly in the water resources perspective.

The Somangalam tank was modernized by the government with financial assistance from European Economic Commission in the year 1992 with available funds of Rs. 40 lakhs. Monitoring and Evaluation work was done by the Centre for Water Resources, Anna University and the report illustrates a vast improvement in supply channel efficiency, storage capacity of tank, field channel efficiency, productivity and net income. In spite of all those mentioned above, the current situation shows that agriculture has been drastically reduced over time and concentration of water resources usage has totally shifted towards non agricultural activities due to the impact of urban expansion of Chennai city. Therefore, rehabilitating tank in peri-urban areas for the purpose of farming activities has become questionable. This study gives an idea that, while planning for Peri-urban tank renovation policies, more weightage should be given for tank improvement rather than development of command area structures. This would ensure that peri-urban tanks are used as storage structures for better ground water recharge for the nearby areas. Also, in spite of huge volumes of surface water availability in good quality, reasons behind dropping out from farm activities will be thoroughly analysed in this study

Objectives:

In order to find out the changing scenario of water resources utilization and current non-form activities in Somangalam Village, this study would also strive

1. to examine the reasons for decline of the irrigation water demand in the village.
2. to examine the quality of water.

Research Methodology:

The methodology used for finding out the impact of the role of urbanization on the peri-urban village was by conducting a questionnaire survey in different reaches (Head, Middle, and Tail) of all the four sluices of the Somangalam tank. Focus group discussions were conducted with the villagers who were involved in off-farm activities, eg. water packaging, concrete cement blocks business, shoe making and gravel Quarrying. Discussions were done both at higher levels (owners) and lower levels (labourers) so that the results can be arrived at why the owners selected off-farm businesses at the cost of reduction in agriculture and why villagers are preferring other jobs rather than doing agricultural labor. Water quality and quantity is analyzed to support the above issues. Both secondary and primary data were used in the analysis. Primary data consisted of questionnaires and focus group discussions with the respondents and the secondary data collected were from relevant revenue records such as land regulation records (Adangal register), documentation from government agencies, figures from censuses, documents maps from survey and land records, etc.

Research Findings:

This study was carried out in high water potential areas. However, reduction in agriculture is taking place with the current utilization practice of water resources. The main reasons for doing off- farm activities are

- Water quality
- Water quantity
- Labor scarcity

These are the main reasons for the people of Somangalam shifting from agricultural work to off-farm activities like water marketing, concrete cement block business, leasing the land for gravel chips mixing plants etc. which gives higher income than agriculture.

The quality of water is good and the pH of water range from 6.6 to 8.2, alkalinity, hardness, chloride, sulphate, and nitrite contents are all within the limits. So, Public Works Department can permit water marketing by giving licenses to farmers for extracting water from the village within the sustainable limits. Alternatively, the Public Works Department itself can use the water directly by considering the treatment cost for other kind of processes like reverse osmosis, sea water treatment processes etc. Since large quantities of water are available throughout the year, this tank can be used as storage structure for the surrounding areas. Ground water would not deplete even if extraction takes place. For sustaining cultivation and to avoid scarcity of labor, farmers may plan to cultivate gardening crops like vegetables, flowers and perennial crops. For better marketing, government should start cooperative society within the village.