

Abstract

Growing water stress signifies increased usage of water resources, which has a stronger influence on resource sustainability and a higher risk of user conflict. India, per capita, water availability is decreasing as the population grows. The average annual per capita water availability was estimated to be 1816 cubic meters and 1545 cubic meters in 2001 and 2011, respectively, and is expected to decrease to 1486 cubic meters and 1367 cubic meters in 2021 and 2031. Urban water issues have become increasingly complex in recent years, partly due to the ongoing pressures of urbanization and urban growth, and partly due to the limited amount of water available for urban consumption. Tamil Nadu constitutes 4 per cent of India's land area and is inhabited by 6 per cent of India's population, but has only 2.5 per cent of India's water resources. The demand for water in Tamil Nadu is increasing at a fast rate both due to the increasing population and also due to larger per capita needs triggered by economic growth. The per capita availability of water resources, however, is just 900 cubic meters when compared to the national average of 2,200 cubic meters. Very few studies are available towards the water availability problem and consumption pattern of people on basis of their income group.

Urbanization is a global trend in which urban centers have become hotspots for economic and demographic growth. However, rapid urbanization and population growth threaten the sustainability of natural resources, especially water, due to increasing demands on resources and the subsequent generation of wastewater that is often poorly managed particularly in the developing world. India is the second most populated country in the world with over 1.3 billion people, 377 million people (32.2 per cent) of which reside in urban areas. Climate change is likely to compound these trends through higher frequency and magnitude of extreme weather events as well as by changing the quantum and pattern of precipitation. The present study was carried out in five zones in Coimbatore Corporation. Based on the highest number of Households the wards were selected. In North Zone ward no: 41 which holds 13066 households, in South zone ward no: 86 which holds 9999 households, in Central Zone ward no: 45 which had 7799 households, in East zone ward no: 59 was chosen it had 6999 households and in West Zone ward no: 24 was chosen which had 5887 respectively. Using Rao Sample Size Calculator the study employs 651 sample respondents, among this High-income group were 89 Households, Middle income

group was 245 sample households and the Low-income group was 317 sample households were selected. The period of the study was from the year 2017-2020. The data for the study were collected from both primary and secondary sources. The information on Country, State, and district profile, Corporation details, Source of water supply, water distribution Pattern, Population details, ward details, and other information were collected from the following reports and Government Organizations. Primary data were collected through the personal interview method from the sample Household respondents. Interview schedules were used to collect details related to the study from the sample Household respondents. A pilot study was conducted to identify the gaps in the interview schedule.

From the study, it was identified that the socio-economic factors of the respondents impact their LPCD. There are numerous problems faced by the respondents regarding urban water supply in which the main problem is unpredictable urban water supply, quality of water for drinking due to which the respondents are tending towards other water sources and the decision is been influenced by the income group of the respondents. Where high-income group people are willing to pay extra for other water sources whereas middle and low-income groups are constrained due to their income level. Those respondents who are not willing to go for other water sources are limiting and conserving their regular water supply for future needs. Water conservation is the need of the hour whereas in the study area only limited respondents were found to be willing to water conservation. To find out the water-saving behaviour among the selected respondents theory of planned behavior was used and the result showed that high-income people are found to spend money for water through government schemes and government intervention as they are limited by their income condition.

Keywords: Urbanisation, domestic water consumption, LPCD, Low income group, Middle income group, High Income Group, Coimbatore, willingness to pay, theory of planned behaviour.