

## **Challenges Influencing Domestic Water Consumption in the Dompe GN Division**

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Water is essential to life. It serves as the base for social and economic development of any country in the world and domestic water is a fundamental requirement for human welfare and a better living standard. As a result of urbanization and population growth, more water is likely to be demanded for domestic purposes, and it has become the third largest water consumer from total water consumption after industry and agriculture. The aim of this study was to identify the major challenges associated with the water consumption in the urban and semi urban sector the in Dompe GN Division. Research data collection was mainly conducted through a questionnaire survey (N=100). The sample was selected based on main drinking water source (groundwater and tap water) using stratified random sampling method. In addition, focus group discussions were conducted to identify the major problems and challenges influencing domestic water consumption in the study area. The Problem Tree Analysis, ranking methods, inferential analyses and spatial point pattern analyses become the main data analysis method for identifying the major problems related to water consumption. All analyses were carried out using ArcGIS 10.1 and Excel 2013 software. The study of 392 domestic ground water wells reveal that the distribution density of groundwater wells was 0.4274. The daily average water consumption of the study area is 119.44 liters person per capita per day. In the wet season the majority of household (65%) use groundwater resources for their daily activities, but in the dry season most of them used the government water supply for their daily activities. In this situation the households face different problems such as lack of drinking water sources, poor water quality, spatial and temporal drinking water quantity etc. The + analyses of the questionnaire survey reveals that the majority of household (80%) face the problem of inadequate the water storage during the dry season. Finally, the result of the study would benefit the sustainable water resource development and to provide an adequate water supply to the study area.

**Keywords:** Domestic water consumption, Problem tree analysis, Point pattern analysis, ArcGIS 10.1