

RAINWATER HARVESTING TECHNOLOGY AND WATER USE PRACTICES: A STUDY FROM PURULIA DISTRICT OF WEST BENGAL, INDIA

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ABSTRACT

Identified in the category of semi arid regions of West Bengal, the district of Purulia suffers from acute water crisis irrespective of seasons. Rainwater Harvesting Structures are being constructed under the Integrated Watershed Development Programme (IWMP) to address the problem of water scarcity. The paper attempts to focus on the prevailing water use practices in the regions and tries to examine the general perceptions and attitude of the people about environment and eventually assess the determinants of willingness to pay (WTP) towards sustainable water supply through Rainwater Harvesting technology in the region. The paper is based on primary survey carried out in 6 blocks (Baghmundi, Balarampur, Arsha, Barabazar, Joypur & Jhalda 1) of the district. A sample of 540 households was surveyed using multistage sampling method. Descriptive statistics and a logistic regression model were applied to explain household preferences for improved domestic water supply and derive estimates of WTP for such a service. The estimates show that the factors that influence willingness to pay for improved sustainable water supply include main source of domestic water used by the household, distance and average time taken to fetch water from the rainwater harvesting water source, education level of the household's head and the general perception or attitude towards environment conservation practices. The results confirm that household average income has a positive and statistically significant impact on WTP. The estimates of WTP obtained in this study indicate the possibility of introducing awareness cum demand driven program to expand the coverage of rainwater harvesting water schemes.

JEL Classification: Q52, Q56, QC350, C870

KEYWORDS: Rainwater Harvesting, Willingness to Pay, Contingent Valuation Method, Water