Water Management Practices as Adaptation Strategies for Drought: A Case Study in Huruluwewa Irrigation System, North Central Province in Sri Lanka

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Huruluwewa is a major Irrigation System, which is also known as a colonization scheme that facilitates farming activities covering a massive capacity. However, in the drought period, farmers in the left bank of the system face serious issues of inadequate water supply for cultivation due to the geographical setting of the left bank. Therefore, this study was aiming to find the availability of water management practices among farmers as adaptation strategies in dry periods. This was a cross-sectional study done by using an interviewer-administered questionnaire. The study sample consisted of 113 farmers of the left bank and the data were analyzed by using descriptive-analytical methods. According to the result, 78.2% of farmers used adaptation strategies, 19.3% avoided farming in the dry season and 2.5% were in moderate. Among the farmers who were using adaptation strategies, five approaches were found. One is using water from huge wells dug close to the canal and one well is owned by 2-3 farmers mostly. However, it is a successful technique, although they have not taken any permission or advice from the authority when constructing. The others are; making land as moisture protected, cultivating paddy only on a part of the farmland where has higher moisture level, using alternative short-term crops which require less water, using multiple types of crops as in *chena* cultivation. Using multiple crops also a wise method, as destroying 1-2 crops may not significantly affect the farmers' income. Finally, it can be concluded that, the majority of farmers in the Huruluwewa Irrigation Scheme have succeeded in their cultivations using different water management methods as adaptation strategies for drought. Further, the intervention of authorities in constructing huge cultivation wells using precise techniques and promoting multiple crop cultivation can be recommended.

Keywords: Adaptation strategies, Cultivation, Drought, Water management practices