

## **Climate Change Adaptation in Water Management for Agriculture: A study based on Suriya Ara, Wijithapura, Usgala in Monaragala District.**

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Sri Lanka's climate is characterized by the tropical monsoon system. The rainfall pattern is of primary significance in defines the island's climate. Where most part of the year experiences scarcity of water for a considerable time period. It is evidence the entire dry zone is highly vulnerable to dry spells or occasionally drought conditions. Not only drought but also are dry spells serious problem setback the economic and Agriculture of that region. The most of Dry areas agriculture is practice with rain fall and irrigation water supply to overcome seasonal water scarcity. But in the Monaragala such water systems are limited. Most prominent agriculture systems are chena cultivation and home gardens. Climatically this area receives of large rain fall on October to November, while rest of the year expediency water scarcity. In seasonal time to overcome the agriculture problems, many water utilization systems have been established by government and NGO's. Domestic wells, Rain water Harvesting Pond systems (R.W.H.P), Rain water tank, Common wells, Tube wells, Irrigation systems and other water utilization projects are among of them. This research is examined how far these water utilization programs affect on climate change adaptation in water management for Agriculture. This is by product of a survey undertaken in 2015 in Monaragala district Wijithapura,Usgala selected 100 frames were taken on the samples (Thanamalwila DSD), The methods of data collection in survey are questionnaire, structural interviewed, in-depth and open ended interviews and key informer interviews a focus group discussion, generally observation were done to identify the environmental condition such as small tanks, soil water, ground water, vegetation and streams. It was found that related to R.W.H.P Systems utilized 40% farmers in the area in additionally Irrigation systems 100% , Rain water tank 80% and Common well 45% water utilization for agriculture. Characteristics of R.W.H.P Systems water utilization in the area 100% for agriculture. Main while 45% farmers are multipurpose processes such as agriculture and animal husbandry and propose of the ponds 36.9% replied for full irrigation and supplementary irrigation. Successfully highly depended on the location of water sources, some sources are active throughout of the year. Some are active only limited period because surface water storage is very limited.

*Key Words: Drought, dry spells, Ground water, Irrigation system, Rain water harvesting Ponds.*

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