



## **STUDY ON THE STATUS OF WATER RESOURCES MANAGEMENT OF IRRIGATION TANKS UNDER VAVUNIYA URBAN COUNCIL AND ITS EFFECTS ON THE GROWTH OF PADDY CULTIVATION**

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### **Abstract**

The dry zone of Sri Lanka contributes 70% to national paddy cultivation. Paddy cultivation in dry areas relies primarily on irrigated water. Agriculture is the main economic activity of the district of Vavuniya, where irrigation plays a significant role. A number of reasons for the existence of water scarcity in the study area were established on the basis of the role of irrigation ponds and tanks in agricultural production and the challenges faced by irrigation. The most important issue is the restricted water capacity of ponds and tanks. However, the key challenge is to retain the necessary water capacity of ponds and tanks during the year, which decreases the amount of water available to arable land in due course. The aim of this study is, therefore, to find out how the management of irrigation ponds and tanks' water supplies influences paddy cultivation in the region under the Vavuniya Urban Council. Fieldwork was performed in Vavuniya Urban Council, Vavuniya district. The study followed the integrated design of the Mixed Methods Research Methodology, as the analysis dealt with a realistic and complex problem. Quantitative data was the primary source in the context of embedded design, while qualitative analyzes were used as supporting evidence. To collect quantitative data, respondents were randomly selected to conduct a questionnaire survey and semi-structured interviews were used as qualitative data-gathering methods. Quantitative data were analyzed using SPSS and Excel and the coding was used for qualitative data analysis. The findings of the study included a number of suggestions for addressing issues such as the periodic rehabilitation of ponds and tanks, the prohibition of illegal land invasiveness, proper legal action to prevent the dumping of solid waste, and compliance with water management strategies.

**Keywords:** Irrigation, Irrigation Challenges, Water Management Strategies

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