

## **Farmers Perception on Climate Variability and Its Impact on Paddy Cultivation: Special Reference to the Three Irrigation Schemes in Dry-Zone Sri Lanka**

Dananjaya P.K.V.S.<sup>1\*</sup>, Shantha A.A.<sup>2</sup>, and Patabendi K.P.L.N.<sup>3</sup>

<sup>1</sup>*Faculty of Social Sciences & Languages, Sabaragamuwa University of Sri Lanka, Sri Lanka*

*\*chandusridananjaya@gmail.com*

Climate variability significantly impacts the global agriculture sector, particularly paddy cultivation, which is highly vulnerable due to its direct relationship with climatic parameters. This study focused on paddy farmers' perceptions of the impact of climate variability on paddy cultivation. Three irrigation schemes in Anuradhapura district; Rajanganaya, Nachchaduwa, and Huruluwewa have been selected for the study. 120 samples were collected from each scheme by using the multistage sample method. For the data collection, a semi-structured questionnaire has been used. Descriptive statistics and SPSS 27 were used for the data analysis. According to the findings, 95% of paddy farmers agreed that they are experiencing climate variability in the region. All the farmers in the three schemes agreed that there is a change in rainfall patterns. According to the farmers of the Nachchaduwa and Huruluwewa schemes, there is a temperature increase and a decrease in rainfall. In the Rajanganaya scheme, paddy cultivation has a moderate impact, and in the other two schemes, these changes have a major impact on paddy cultivation. 80% of farmers are assured that these changes do not have an impact on irrigation. High temperature is the most influential factor in paddy cultivation. According to the farmers of the Nachchaduwa and Huruluwewa schemes, the impact of animals and disease on paddy cultivation has increased. The majority of farmers in the three schemes agreed that there is a medium impact on their income from climate variability, and to overcome it, they are practicing other income sources while continuing paddy cultivation.

**Keywords:** *Climate variability, Paddy cultivation, Irrigation scheme, Dry-zone*