

HOUSEHOLD VULNERABILITY TO FOOD INSECURITY AND CLIMATE CHANGE: EVIDENCE FROM RURAL DRY ZONE OF SRI LANKA

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Marginalized rural farming communities in Sri Lanka, particularly in highly climate-vulnerable regions such as *Horowpothana*, face a growing risk of food insecurity due to the impacts of climate change. While extensive research has explored the link between climate change and food availability, limited attention has been paid to how climate vulnerability influences other dimensions of food security, particularly food access. This study investigated the relationship between rural household vulnerability to climate change and food insecurity, utilizing data collected from 200 farming households in the *Horowpothana* Divisional Secretariat Division. Households were selected through a multistage proportionate random sampling method. Data collection involved questionnaire surveys, key informant interviews, and focus group discussions ensuring a comprehensive assessment of household food insecurity and climate vulnerability conditions. Household vulnerability to climate change was analyzed using a framework incorporating sensitivity, exposure, and adaptive capacity metrics, while food insecurity was measured with the Food Agriculture Organization (FOA) Food Insecurity Experience Scale, with a focus on food access. The findings revealed that the majority of households were food insecure, with about one-fourth experiencing severe and mild to moderate food insecurity, highlighting significant climatic vulnerabilities. Furthermore, the majority of households exhibited medium or high levels of climate vulnerability. Ordered logistic regression analysis showed that climate vulnerability and household dependency ratios significantly ($p < 0.05$) increased food insecurity. Conversely, higher monthly household income and participation in agricultural projects significantly ($p < 0.05$) reduced food insecurity. These results highlight the critical interplay between climatic and socio-economic factors in determining food insecurity status. To mitigate these challenges, the study recommends contextual vulnerability-specific development interventions focused on enhancing adaptive capacity and improving livelihood assets, particularly income-generating activities, to enhance household food security.

Keywords: Adaptive capacity, Climate vulnerability, Food insecurity experience scale, Livelihood assets