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Understanding the Linkages between Climate Variability and Household Food Security in Asegede Tsimbla Woreda, Tigray Region, Ethiopia

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All four food security components availability, accessibility, use, and stability are affected by climate variability, increasing hunger risks in the area. Rainfall shortages or excesses reduce food production, producing food instability and famine. This article examined how climatic variability affects family food security in Asegede Tsembla Woreda, Tigray Regional State. Three home kebeles were chosen using stratified random sampling, whereas 135 respondents out of 5345 households and key respondents were picked using simple random and purposive selection, respectively. Data was collected by observation, interviews, written questionnaires, and FGD. Inferential statistics (one sample t-test) and descriptive statistics (frequency, means, and standard deviation) were used for qualitative data. Data was analysed using chi-square (χ^2), paired t-test, and multiple regression model. Study found that the precipitation concentration index (25.64) is more than 21 and indicates significant rainfall concentration. One-sample t-test analysis showed that the poorest parts of the globe had greater food intake in Kcal/person/day than the study area. There is also substantial correlation between variability occur in your area in the last 10 years and susceptible to climatic variability $X^2(1, N=135) = 58.793, P < 0.05$. There is a strong positive association between family food security and independent factors ($r=+.971, p<0.013$).

Biography

Haftom Teshale Gebre is a Senior Lecturer and Head of the Department of Geography and Environmental Studies at Adigrat University, Ethiopia. He holds both BA and MA degrees in Geography and Environmental Studies from Aksum University and a BA in Accounting from Mullinnem University College. His teaching and research expertise include GIS and Remote Sensing, environmental management, climate variability, food security, land degradation, and post-war recovery studies. Haftom has authored and co-authored numerous peer-reviewed publications in national and international journals and has reviewed over fifteen manuscripts for international journals. He has also presented research papers at national and international conferences. In addition to his academic role, he has coordinated research and community service projects and participated in multiple professional training programs from global institutions, including the University of Toronto and Udacity. His research primarily focuses on environment–society interactions, spatial analysis, and sustainable development in Ethiopia.

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