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Investigations into the impacts of climate change on food security and internal migration in Malawi



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Abstract

Background and aim: Malawi's rainfed, agrarian economy is vulnerable to the impacts of climate change. Changes in crop production may impact household food security and wealth. Popular narratives of 'climate migration' suggests that, amongst other responses, migration (usually rural-to-rural or rural-to-urban) will increase in response to climate change, as households attempt to diversify their income and improve their prospects. The study aim was to explore the relationships between climate variables, food security and internal migration at the household level. Methods: We performed descriptive epidemiological analyses to understand climate change, food security and migration patterns within Malawi, and associations between these factors. Using a conceptual model of the drivers of migration, we informed a step-wise approach to build a set of multiple linear and logistic regression models relating climate and migration variables directly, and as mediated by a range of food security indicators and sociodemographic factors. Models examined intra- and inter-district variability and explored differences between migration profiles of rural and urban districts. Results: Modest positive relationships were identified between migration status and the average number of meals consumed for southern districts and urban migrant families. Flooding was identified as a common driver of food insecurity potentially linked to both climate change as well as future migration. Malawi's four cities and the south of the country demonstrated a modest, negative relationship between rainfall volume and in-migration prevalence.

Conclusions: Findings suggested that changes in rainfall quantities, such as droughts, may impede internal migration through poverty traps. These modest findings also challenge popular narratives which may over-assert the role of climate change as a driver of migration. In the future, as climate change continues, internal migration patterns may alter, with implications for urbanisation rates, food systems and development pathways for Malawi. Key words: climate change, climate migration, environmental migration, Malawi

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