SMALLHOLDER FARMERS' ADAPTATION STRATEGIES TO CLIMATE CHANGE EFFECTS IN THE HIRAN REGION, SOMALIA

BY

ABDIWALI ABDULLE ODAWA (*BSC. AGRICULTURE*)

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DECLARATION

Declaration by Candidate:

This thesis is my original work and has not been presented for a degree at any other university.

Abdiwali Abdulle Odawa
Reg. No.: N50F/27939/2019

Signature ..... Date 25/09/2024

Supervisors:

We, the undersigned, confirm that the work presented in this thesis was undertaken by the student under our supervision and with our approval as the University supervisors.

Prof. Monicah Mucheru-Muna
Department of Environmental Sciences and Education

Signature ..... Date 25/09/2024

Dr. Benson Kamau Mburu
Department of Environmental Sciences and Education

Signature ..... Date 25/9/2024

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ABSTRACT

Climate change remains a key barrier to achieving the Sustainable Development Goals in Somalia, concerning food security. It seriously and directly endangers national food security by compromising agricultural production. Climate change adaptation can diminish many of the consequences of climate change while maximizing its benefits. Yet, farmers' perspectives about these effects of the changing climate, adaptation strategies, and the accessibility of information about climatic conditions are not addressed or covered in Somalia, which is crucial when planning policy interventions. This study's objectives were to; (i) assess how socioeconomic factors influence smallholder farmers' perceptions of climate change effects, (ii) analyze the factors influencing the adaptation practices adopted by the farmers, and (iii) evaluate the factors that influence accessing climate information and the information sources for the farmers. Quantitative research designs used both descriptive statistics and econometric techniques. From August 2022 to December 2022, 222 smallholder farmers were surveyed using a questionnaire. Using SPSS and STATA, the study used descriptive statistics, probit regression, and binary logistic regression models. The probit regression model showed that gender, family size, farm size, and communication gadgets significantly influenced farmers' perception of climate change. The binary logistic regression results showed that farmers' different adaptation measures in the region were influenced by age, family size, marital status, non-farm income, access to credits, access to extension, and, support from extension agencies. Binary logistic regression results also showed that distance to the market, education level, gender, marital status, farm size, and support from these agencies had a significant association with farmers' climate information access. Further, the sources of climate information were significantly influenced by their age, access to credits, possession of communication devices, and support from agricultural extension agents, NGOs, and international agencies. Socioeconomic and institutional factors such as gender, marital status, size of family, farm size, access to communication devices, age, non-farm income, education status, access to credits, access to agricultural advisory services, and support from various agencies (including NGOs and international organizations) significantly influenced farmers perception, adaptation measures, climate information access and sources in Hiran region. The federal/State institutions and local/international agencies are recommended to develop adaptation programs that consider the specific demographic characteristics of smallholder farmers, create gender-sensitive agricultural programs and inclusive policies, improve access to communication devices, and provide targeted training.

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