

Exploring the Link between Livelihood Capital Assets as Index of Climate Change Adaptive Capacity and Socio-economic Issues: A Case of Small Scale Maize Farmers in South Africa

Oluwaseun Samuel Oduniyi¹ and Seyi Olalekan Olawuyi^{2*}

*¹Department of Agriculture and Animal Health, University of South Africa,
Florida Campus, South Africa*

E-mail: sammiey2007@yahoo.com, ORCID: orcid.org/0000-0001-6118-2061

^{2}Department of Agricultural Economics and Extension, University of Fort Hare, Alice,
Eastern Cape, South Africa*

E-mail: seyidolapo1704@gmail.com, ORCID: orcid.org/0000-0002-7405-2802

KEYWORDS Finite Mixture Model. Shocks. Smallholders. South Africa. Welfare

ABSTRACT The economies of many African countries are largely agrarian driven and there are increasing revelations that climate extreme events present a negative influence on biophysical, social and livelihood system of human sustenance. This research therefore investigated farmers' adaptive capacity in the North West Province of South Africa. Cross-sectional data obtained from the randomly drawn 346 maize farmers were analysed using descriptive statistics, composite technique and finite mixture semi-parametric model. From the result, majority (60.69%) have a moderate adaptive capacity, while farmers' adaptive capacities are distinguishable in terms of farmers' characteristics and livelihood capital assets. Further, the results also indicated that about sixty-three percent of the farmers are likely to be in the low AC class, and twenty-two percent are expected to be in the moderate AC class. However, approximately fifteen percent are expected to be in the high AC class. Consequent on these findings, a sustainable adaptive capacity driven policy is of paramount importance to ensure functioning food systems and agrarian welfare.