

Abstract

Climate change is a great environmental challenge facing humanity today. In Yatta District, residents report frequent crop failures, water shortages and relief food has become a frequent feature of their life. This study examines the adaptation strategies to climate change adopted by the dry-land farming communities in Yatta District. Study participants included 510 randomly sampled small-scale farmers. Key informants were district departmental heads from the Ministries of Water, Agriculture and Environment. Questionnaires, interviews, Focus Group Discussions and field observations were used to generate the data. Quantitative data was analysed using Statistical Package for Social Sciences (SPSS) whereas qualitative data was analysed through establishing the categories and themes, relationships/patterns and conclusions drawn in line with the study objectives. Findings indicate that most farmers adopted autonomous adaptation strategies that included planting drought tolerant crops (76.5%), charcoal burning (52.9%) and rainwater harvesting (20.2%) among others. Chi square results indicated that age, level of education and knowledge of climate change had significant influences on adaptation strategies. Some of these strategies had serious adverse environmental impacts on social, economic and biophysical domains of the environment like putting future agricultural production at risk since farms have been converted into sand mining fields. Major limitations to climate change adaptation were financial constraints (93.4%), lack of relevant skills (74.5%) and lack of scientific and technical knowledge (71.6%). The study concludes that farmers are engaging in adaptation strategies that are fundamentally changes in livelihoods and mainly unsustainable. Livelihood activities such as charcoal burning and sand harvesting in their fragile arid and semi-arid lands ecosystem are destructive and thus, not sustainable. These livelihood changes are significantly influenced by levels of education and climate change knowledge. The study recommends that agricultural extension services be enhanced to sensitize the farmers about climate change thus improving their perception and adaptation strategies.