

Effects of weather and climate variability on fishing activities and fishers' adaptive capacity in Mbita Division - Homa Bay County, Kenya, 2014

Odhiambo, Tom Mboya

Abstract:

Fisher-folk depend for a major part of their livelihood on natural resources whose distribution and productivity are known to be influenced by climate dynamics. Research has shown that small-scale fisher-folk in the developing countries are more vulnerable to climate variability due to their high reliance on fisheries and poor adaptive capacity. However most studies so far have concentrated on climate-driven changes in ocean productivity and its impact on fish distribution and production particularly in relation to oceanic regime changes of large-scale industrial fisheries and have not considered effects on the fishing activities and the fishers coping and adaptive strategies, especially in freshwater systems such as in Lake Victoria. It is against this background that the study sought to investigate the effects of weather and climate variability on the fishing activities and the fishers coping and adaptive strategies in Mbita Division, Homa bay County, Kenya. The study was guided by the premise that weather and climate variability can change the natural, physical and financial capital of the small-scale fisher-folk. It can also have an impact on human and social capital. The main objectives of the study were to find out the effects of weather and climate variability; specifically changes in temperature, rainfall and wind on the fisher-folk and the fishing duration, to investigate the effects of the seasonal variability of climatic elements on the fish catch, to assess the effects of weather and climate variability on the choice of fishing techniques and equipment being utilized by fisher-folk and to establish the coping and adaptive strategies of the fishing community in Mbita Division. To realize the purpose of the study, a descriptive survey design was adopted. The required data was collected from 343 randomly selected fisher folk from four locations in Mbita division, 1 official from the Fisheries Department and 1 official from Meteorological Department who were purposively sampled to provide information on various issues on weather and climate variability, fishing and other economic activities. Secondary data collection was done through review of documented information such as topographical maps, documents on weather and climate variability, and fishing from Fisheries and Meteorological departments, while primary data was collected through observations and face-to-face interviews using a structured questionnaire. The data generated was edited, coded and entered into Statistical Package for Social Sciences (SPSS). Data analysis was done using qualitative methods such as content analysis and quantitative analysis using frequencies, percentages and means and the summary presented using tables and graphs. The study established that climate variability particularly strong winds and storms, drought and high temperatures have an impact on fishing activities such as reduction in fish catch, long duration of fishing, loss of fishing gear, change in fishing techniques, change in coping strategies, effect on health of fisher folk and even loss of life. The study therefore concludes that weather and climate variability affects fishing activities in

Mbita Division. Based on the findings of the study, it is recommended that the government and other stakeholders should help enhance resilience of fishing communities by supporting existing adaptive livelihood strategies and management institutions that are designed to support adaptation to climate change and variability. The fisher folk should invest in improved vessel/stability and safety, harness opportunities brought about by climate change and diversify their livelihood activities.