

26th World Congress on

NURSING CARE

May 21-23, 2018 Osaka, Japan

Adaptation mechanisms and coping strategies to the effects of climate variability on maize yield with focus on Matungulu West, Machakos County Kenya

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Climate variability is a phenomenal challenge to the citizens of the globe. It is noticeable from many documented studies that climate variability is taking place at an alarming rate. The globe has been experiencing an increase in temperature of approximately ≈ 0.20 C after every ten years for the last three decades. It is also established that rainfall increased significantly from 1900 to the 1950 then dropped from 1970 to present. The total sum of such extremes is a terribly affected livelihood in particular those living below the dollar. However, farmers in Matungulu West, in Machakos County Kenya have established their own measures and strategies to address the effects posed by climate variability. That informed the main objective of this study which was To determine adaptation measures and coping strategies being practiced by households in Matungulu West in Machakos County Kenya in addressing climate variability. A structured questionnaire which was developed and pre-tested was used to interview 380 randomly selected household heads to elicit information. Findings of the study indicate that most (52.2%) of the farmers have reduced or spread risks by replanting with early maturing maize, (26.4%) staggering planting dates, (2.9%) changing crops when replanting, (6.6%) grazing of failed parcels of land and (11.9%) carrying out varietal selection of stress resistant to suit the prevailing conditions. It was established further that (64.8%) of the respondents preferred early sowing as an adaptation option while (1.4%) indicated that they were practicing irrigation farming to combat climate variability. This study made a conclusion that there is a broad range of contrasting diversification strategies employed between different types of households headed by either females or males with the ownership or lack of ownership of cattle being a key factor that cuts across household types and which provided considerable additional flexibility.

Biography

Richard Kerich completed his PhD 27 years ago from Kenyatta University. In addition he has undertaken on the job intensive training programmes first on Environmental Impact Assessment from Aberdeen University Scotland and Harare University Zimbabwe and Secondly Water Resource Management and Resource conflict resolution – La Collombella, Italy. Currently is a senior lecturer and post-graduate student advisor in the school of Environmental Studies, Kenyatta University, Kenya, where he has also served as a faculty Dean for the School and chairman of the department of Environmental Sciences. He has supervised over 4° post graduate research projects and theses, with several publications in reputable journals in his area of specialization. He has been appointed external examiner in several universities in the region including University of Nairobi, Technical University of Kenya, Maseno University and Masinde Muliro University, all within Kenya.

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