

# **THE INFLUENCE OF AGROFORESTRY PRACTICES ON ENVIRONMENT, A CASE OF MAAI MAHIU, NAKURU COUNTY.**

**Degree Programme:** [MASTER OF ARTS IN PROJECT PLANNING AND MANAGEMENT](#) [1]

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An estimated 1.2 billion rural people in the developing world currently practice and benefit from agroforestry. Agroforestry is the deliberate integration, in space or time, of woody perennials with herbaceous crops and/or animals on the same land management unit. With only 8 percent of the land capable of being cultivated for crops and 75 percent of the Kenyan workforce engaged in agriculture, Kenyan farmers face growing problems of soil erosion, deforestation, water pollution, and desertification.

In Maai Mahiu Division, the environment and the natural resources have been degraded and destroyed through deforestation, desertification, poor farming practices and overgrazing. The land has been left bare and susceptible to wind and soil erosion. Therefore, the research sought to find out the influence of agroforestry practices carried out in the area on the environment. The objective of the study was to find out the influence of alley cropping, wind breakers, Silvopasture, tree farming and live fences on the environment.

The methodology of the research highlights how the study was carried out. The study used survey design to collect quantifiable information from the sample. The target population was 500 people who were practicing agroforestry in Maai Mahiu Division. The sample population was 10% of the target population which was 50 respondents. The research tools for data collection used were questionnaires and observation schedules. The collected data was coded and analyzed using the STATA data analysis software.

The data has been presented in a descriptive form with the aid of tables and numerical data. The most common agroforestry practice is life fences with 100% and their major role is to provide security in the area and ornamental. The wind breakers are practiced by 96% and the main role is to break the wind as the area experiences very strong winds. Alley cropping follows with 68% and its role is to improve soil fertility. The Silvopasture practice had 56% and the role is to provide feeds for the livestock and to control soil erosion. The least practice in the area is tree farming where only 46% are practicing and their role is to provide firewood, timber and as a source of income. The major challenges with agroforestry in the area are inadequate rainfall causing the trees to dry and inadequate knowledge on the agroforestry practices, kinds and other vital benefits.

The study has made some recommendations which will help to curb some of the challenges in the area. First, the government in collaboration with other stakeholders should empower the communities in the area in order to promote tree farming so as to prevent deforestation and degradation of forests for firewood and timber. Secondly, the communities should be empowered on water harvesting structures during the rainy seasons for use during the dry seasons. Thirdly, the capacity of the communities should be built on agroforestry practices, kinds and the benefits so that the communities utilize all the practices effectively. Lastly, the extension services on agroforestry practices should be increase so that the farmers can be given hands on practical on how to carry out agroforestry.

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