

SUSTAINABLE WATER RESOURCE MANAGEMENT FOR FOOD SECURITY IN BWATHONARO CATCHMENT, KENYA

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Food security is an important issue in Kenya today. Bwathonaro catchment is experiencing food insecurity and severe water related challenges due to high population pressure and over-reliance on irrigated agriculture for livelihood. Nyambene Hills, which is the source of the Bwathonaro River, provides 7% of the flow of the Tana River. Bwathonaro River supports irrigated agriculture, which is a major source of livelihood for people in the watershed. The reserve flows of the river are important for watering wild animals in the Meru National Park and for recharging the Tana River further downstream. Water related challenges are reflected across all catchments within the country. Particularly in the Bwathonaro catchment, these challenges comprise of among others; water pollution, inappropriate solid waste disposal, illegal water abstraction and over-abstraction of water, inefficient irrigation practices, encroachment on and drainage of wetlands as well as inappropriate use of agro-chemicals in wetlands. Others include; Soil erosion on the farms, footpaths and roadsides, lack of water resource information (water quantity, quality, rainfall, water use, and sediment yield), human and wildlife conflicts and dependence on a single external source of water. Furthermore, the introduction of 'high water spending' eucalyptus tree species has had a negative effect on the water resources in the catchment.

This paper presents preliminary findings of an ongoing project which aims to enhance water resource management as a national food security strategy in Bwathonaro watershed, Meru Central District. The specific objectives are (a) to document the current status of water resource use in Bwathonaro watershed, (b) to propose a strategy for enhancing subsistence food crop farming within the existing khat (*miraa*) farming system in the Bwathonaro watershed (c) to promote efficient irrigation systems that will reduce conflict over water resources and increase equitable distribution in the watershed and (d) to work with the community and put in place mechanisms to improve water quality and quantity.

Key words: Bwathonaro, water resources, watershed management, food security

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