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Agriculture and Water Resource Management: Implication for Rural Development in Sub-saharan Africa

STEPHEN KAYODE SUBAIR

University of Botswana, Agricultural Education and Extension, Botswana

Abstract

The planning and management of Sub-Saharan African's agricultural and water resource management by governments and private sectors are increasingly becoming more important in the face of increased agricultural activities, water for domestic and industrial use, and other activities requiring water resources. To enhance this, integrated policy approaches should be adopted to eliminate incomplete execution of policies on water resource management and haphazard implementation and project duplications on water resources. This calls for a comprehensive basic research, soil testing, water budget, and environmental pollution analysis for increased food production and other uses of water resources. Increased in food production will eventually lead to increased agro-based industries especially in the rural areas, thus enhancing even distribution of industries between rural and urban areas. This will further integrate and stabilise the rural population, thus arresting the major problem of rural-urban migration in Sub-Saharan Africa. The enormous volume of water used in raising tree crops, arable crops, fisheries, poultry, cattle, and the use for domestic and industrial purposes emphasises the need for integration of agricultural and water resource management in Sub-Saharan Africa. Production and development in the savannah regions of southern Africa are primarily determined by interactions between the limitations imposed by ecological determinants (such as rainfall and soil quality) and the management strategies of the specific region. Good planning, focusing on both the short and long-term effects of water use, is needed in water management strategies. Botswana is already experiencing so-called 'water stress' which is related to a number of factors such as rapidly increasing population leading to a sharp increase in water demand, low and variable rainfall, high rates of evaporation, and the high cost of exploiting existing water resources. At the current rates of abstraction, the lifetime of surface and groundwater resources is limited to decades. This paper discusses the interrelationships between agriculture and water resources, identifies the need for an integration approach in food production and the essential requirements for enhancing the integrated relationship.

Keywords: Agrobased industries, rural development, rural-urban migration, water resources