

The Role of Indigenous Environmental Knowledge in Sustainable Resource Utilization and Environmental Management in Tanzania: The Case of Irrigation Schemes in Usangu Plain 1945-2000

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The United Nations Conference on Environment and Development (Earth's Summit), held in Rio de Janeiro in 1992, discussed the urgent need to develop mechanisms that would lead to the protection of the World biodiversity. The need to conserve the indigenous ecological knowledge that is being lost in many communities was among the documents signed in the conference. The reference to traditional ecological knowledge is a clear manifestation of its importance in policy and decision-making. The feasibility of applying the indigenous ecological knowledge to contemporary resource management is not been fully recognized. With the advent of modern scientific knowledge, the African traditional knowledge almost faded away and generally has come to be seen as irrelevant and non-scientific. Today, the potential of indigenous ecological knowledge, its development and application in the sustainable use of the environmental resources is quickly disappearing. This study has documented the role of indigenous ecological knowledge in sustainable resource utilization and environmental management; irrigation schemes in Usangu Plains are the case in point. The findings reveal that, the knowledge has been tested over years through sustainably utilizing the environmental resources during agricultural production. The study also reveals that indigenous knowledge is scientific as it is being subjected to improvement through site practices and experimentation over time and space. The indigenous people improved their knowledge with the advancement of science and technology and were also ready to adopt new technologies from their neighboring communities and from outsiders through interactions with those communities. The adopted knowledge was evaluated and modified before being put into practice. The study has shown the impact of the modern irrigation knowledge and practices on the environment in the study area. It is generally recommended that into the 21st century, Tanzania needs to take decisions required to effect its transition to environmentally sound and sustainable development that which meets the present without compromising the ability of the future generations to meet their own needs.