

Development of decision support system for sustainable participatory sub-catchment water resources management in the face of deteriorating climatic conditions

Kenya has put in a lot of effort to enhance water resources management for the last 20 years. This is evident in the review of the National Policies on Water Resources Management to focus on separation of functions, decentralization of services, commercialization of services, and community and private sector participation. Water Act 2002 outlined the water sector reforms and provided the legal framework for the implementation of the new water policies including establishment of new institutional structures. At the bottom end and at sub catchment level, Water Resources Users Associations (WRUAs) are established all over Kenya to conserve, protect and manage the water resources. The water sector reforms and the emerging policies place a lot of responsibilities on the WRUAs raising their expectations beyond their ability. This paper seeks to respond to the increasing concern with the 'knowing-doing' gap that exists between water reforms and policy goals and how they are achieved in practice. It narrows the gap that exists between the responsibilities given to the WRUAs and their capacity by developing a decision support tool for sustainable participatory sub-catchment water resources planning and management. It involves training WRUA members to configure their respective sub catchment water resources characteristics within Water Evaluation Model Framework to assess impacts of various management options to facilitate decision making. The study involved review of tools available to the WRUAs, field visits, workshops and interviews to collect information for sub catchment modelling. Awach Tende and Nyangores WRUAs from Lake Victoria South Catchment Area were used for the pilot study.