

Effects of water use regulations on household food security in Halali river catchment in Njombe district, Tanzania

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This study investigated the effects of water use regulations on household food security in Tanzania using Halali River Catchment in Njombe District as a case study. The main objective of the study was to assess the effects of water use regulations on household food security. The specific objectives of the study were to: assess smallholder farmers' participation in formulation of water use regulations, investigate the role of water management organisations in enhancing management of water resources, examine the status of food production during dry season before and after establishment of water use regulations and evaluate the effects of water use regulations on household food security. Both primary and secondary data were used in this study. Primary data was collected using survey questionnaires, key informant interview, focus group discussion and field observations. The sample of the study involved 338 heads of households and 23 key informants comprising 16 elders and 7 government officials. Secondary data were collected from published and unpublished materials. The study revealed that 98% of the respondents in the study area engaged in dry season irrigation farming. The type of farming contributes to about 40 % of household food sources. The study noted that local communities in the study area were lowly involved in formulation of water use regulations. The study further established that water use regulations have resulted in a decline of food production during the dry season in the study area. This is because some smallholder farmers have lost entire or part of their farm plots for dry season farming. Thus, some smallholder farmers have access to water resources for irrigation while others do not. Nevertheless, despite the negative effect of water use regulations on household food security, the study found that water use regulations have played a very significant role in reducing water use conflicts and in management of water resources and river flow. Therefore, if properly and fairly implemented, water use regulations can result into equitable distribution of water among users and constant flow of water into rivers. This might enhance food productivity through irrigation and reduced water use conflicts thus, ensure household food security. The study further found that some of the strategies adopted by heads of households during food shortages have some weaknesses, for example, making and selling of charcoal, bricks and sand mining cause environmental

degradations. Borrowings of money or food face the problem of high interest rates resulting to failure to pay and loss of household properties. Seasonal labour migrations results into loss of household's labour force and single parenthoods. In addition, most of the activities are sex selective as most are predominated by males. These weaknesses might trigger household food insecurity. The study recommends that water use regulations should be strengthened so as to reach the target of water resources management. Communities at grassroots levels should be fully involved and educated on issues related to the management of water resources. It is further recommended that smallholder farmers should be given title deeds for their land to assure them of compensation or acquisition of land in new locations when their land is taken by government for various reasons. Furthermore, it is important to train smallholder farmers on simple and water efficient irrigation techniques so as to enhance irrigation farming and conserve water resources.