

**ASSESSMENT OF ADOPTION OF WATERSHED  
MANAGEMENT APPROACHES FOR SUSTAINABLE  
CONSTITUENCY DEVELOPMENT FUND PROJECTS IN  
FUNYULA CONSTITUENCY, KENYA**

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## DECLARATION

This thesis is my original work and has not been presented for a degree or any other award in any other university or any other institution.

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## APPROVAL

This thesis has been submitted with approval as University supervisors.

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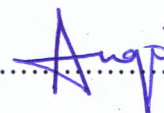
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## ABSTRACT

Management of the natural resource of a drainage basin primarily for the production and protection is considered essential for soil and water conservation. Despite an increase in CDF allocations, watershed management approaches are not integrated in local development projects to realize sustainability. The study assessed the need and ways of considering watershed management approaches in CDF projects. Key objectives included to determine the relative importance of factors that influence the allocation of CDF for community development projects; assess how the local bio-physical environment has been affected by CDF projects activities; establish the relevant community institutions and organizations to enhance watershed management activities; and determine the community perceptions and opportunities for enhancing watershed management activities in the CDF projects in Funyula Constituency. Three level multistage samples of 123 household heads and 8 purposively selected key informants were involved in the study. Quantitative information was mainly obtained using a questionnaire, an observation checklist and interview guide. Participatory mapping, transect walk and photography were used to obtain the qualitative information. Quantitative data was subjected to descriptive analysis mainly frequency distributions, and percentages presented in form of tables and graphs. Perceptions were measured using a 5-point likert scale, while participatory map and transect walk data were used in the analysis to complement quantitative data. According to the findings, 91.1% of households in Funyula earned their income from all farm activities which included both on-farm and off-farm activities with 66.9% earning less than Kshs. 1,500 per month. Poor roads network, health and educational facilities, need for clean and safe water supplies were main local factors that determine CDF allocations to various development projects utilizing a lot of CDF leaving watershed management unattended to. Among the effects, the most common were graded roads, rehabilitated dams, springs and dug fish ponds. Abandoned brick making sites and quarries, silted streams and cleared vegetation along the graded road were most visible effects of CDF activities on biophysical environment. Limited community participation in CDF decision making process, lack of watershed management knowledge and awareness on the need for undertaking Environmental Impact Assessment (EIA) on the CDF projects among the CDF committees and the public were the main limitations in considering watershed management approaches. The major household limitation to watershed management identified included, 82.1% limited credit and inputs, 50% lacked watershed management capacities. However, there was a positive correlation between lack of watershed management knowledge and community participation in watershed management ( $r=0.013$ ,  $n=123$ ,  $p<0.05$ ), more so, 43.1% of the respondents felt that high start up costs were the main limitation, and 19.5% identified interference from their neighbour. To conclude, CDF has undertaken projects which are bound to improve livelihoods through providing social services such as education and health, but they are not sustainable due to lack of watershed management approaches, therefore, the need to urgently address the sustainability need. The study recommends the integration of watershed management approaches such as undertaking EIA on CDF projects, capacity building the public and CDF committees, provision of incentives, alternative livelihood source, to enable community participate in watershed management activities.