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Partnership building and stakeholder participation in soil erosion management: A case study of Kasitu sub-county in Bundibugyo district, Mt Rwenzori region

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Abstract

Partnership building and stakeholder participation is a key element for sustainable natural resources management. Soil is a natural resource, which is much under threat to degradation and exhaustion due to poor management practices by users. In Kasitu sub-county Bundibugyo district, in the Rwenzori region, many unsustainable practices and neglect to conserve, and replenish the resource have exposed the soils to much erosion, loss of productivity as well as landslides. The extension system that trained farmers on different soil management practices and enforced bylaws to practice and manage soils during the colonial era is long collapsed. This paper narrates the participatory processes, methods and management approaches the ECOSTAR project, a partnership between the Bundibugyo district and the World Agroforestry Centre in partnership with stakeholders including the grassroot communities used to formulate, adapt and implement innovative methodologies for sustainable soil management. The experience generated would ensue into identification of best practices and scaling up of interventions in other areas of the district for the sustainable management of soils and curbing of erosion, which is a major problem facing this mountainous region.

Key words: Conservation, soil management practices, Uganda

Introduction

Land degradation is a major constraint facing Bundibugyo district with adverse effects which led to disasters like cyclic occurrences of land slides every 30-40 years and periodic flooding. The district suffers from soil erosion at large and this is could be attributed to its steep mountainous nature that predominate the district area, with little effort being done to curb the problem. The mountainous parts of Bundibugyo District have had a history of landslides, which have been difficult to manage (ECOSTAR report 2003a). Although Bundibugyo as a district suffers from land degradation, according to respondents during a preliminary survey to select project area Kasitu is the most prone sub-county in the district (Chapter three, ECOSTAR report 2003b). Other affected areas are Karugutu, Rwebisengo and Busaru sub counties.

In 2000, a disaster of flood and landslide hit Kasitu Subcounty that claimed 19 lives. The disaster led the district leadership to solicit for stakeholders to partner with to address the escalating problem of land degradation, where soil erosion and land slides management ranked high on the agenda. With funding from the Household Agriculture Support Programme (HASP) of DANIDA, Bundibugyo local government approached World Agroforestry Center (ICRAF) to use their technical expertise to forge ways of curbing environmental degradation with special interest in soil erosion and landslides management. A project, ECOSTAR, which is Empowering COmmunities for SusTainable Agriculture and Rural development was thus conceived which is a partnership between Bundibugyo District and the World Agroforestry Centre as principal partners in the endeavor to address land degradation in this mountainous region.

The overall goal of the partnership is to empower agricultural communities in Bundibugyo district to manage and conserve natural resources for the development of income-generating enterprises and sustainable household livelihoods. While the project has a wide mandate of promoting sound environment management and technologies for improved livelihood and rural development, this paper narrates the process of partnership building in natural resources management, particularly to address soil erosion which is one of the major constraints facing the project area.

Methodology

Description of the project area

Kasitu sub county is found in Bundibugyo District located in western Uganda bordered by Kabarole District in the East and Kasese in the South, all located in the Mountain Rwenzori region. Kasitu subcounty is composed of six parishes, four which include Burondo, Bugando, Ntororo and Ngamba lie in the plains, while the two, Kikyo and Kasitu are found in the mountainous part of the subcounty. Steep slopes and deep mountain valleys characterize the mountainous areas of the sub-county and stands at elevation of 6200-8900ft above sea level.

This region has fertile predominantly black clay soils, the rainfall is bimodal type and the climate is conducive for all year round agricultural production. However, the crops grown vary from the plains and progressively change as you ascend in the mountains (ECOSTAR, 2003b). Generally, in the lower plains and gentle slopes, there is substantial cash crop production, an integrated perennial mixed cropping of banana, cocoa and now with the introduction of vanilla. Robusta coffee is also grown but production declined due to coffee wilt. The annual crops grown include upland rice, cassava, beans, soybeans, and groundnuts. The crop enterprises gradually change as you move up in the mountains from perennial cash crops to food crops and largely produced on a small scale.

Land for agriculture production and settlement is increasingly a major concern in the subcounty which is sandwiched by protected areas of Semuliki national park and North Rwenzori forest reserve. This is probably due to the high population growth rate in the district. According to the 2002 population census, the population increased drastically from 0.38% in 1991 to 5.3 % per annum (Uganda Bureau of Statistics, population and housing census 2002). As such, the population is settling indiscriminately even along steep slopes. Agricultural production practices are mainly poor, using unsustainable methods like tree cutting and bush burning as methods for field clearing and preparation, minimal crop rotation, limited integration of crops and livestock, and inadequate soil conservation practices (Chapter four, ECOSTAR report 2003b).

Kasitu subcounty is prone to high levels of land degradation, like massive soil erosion and incidences of land slides due to the steep terrain and valleys. It is reported that water tends to converge and build up momentum in specific spots, thus the area experiences cyclic occurrences of land slides and floods. The most infamous landslide and flood took place in 2000, killing 19 people in the sub-county trading centre and destroying property.

Bearing in mind the terrain, population growth, land pressure and history of human displacement from the gazzetted reserves, lack of land protection measures, land degradation inevitably exists. In such a myriad of complex factors, lack of stakeholder empowerment with technical skills and sensitization to manage their soil resources for sustainable livelihood, it is critical to involve all stakeholders to map out institutional, policy, and technical interventions that would highlight the urgent need to management of soils for sustainable livelihoods.

Stakeholder identification and involvement

After the conception of the partnership, a preliminary survey on institutions involved in natural resource management (NRM) was conducted to identify major stakeholders in the sector in Bundibugyo district. Focus group discussions were held with selected district and local community leaders as well as district technical staff. The group discussions aimed at involving stakeholders in identifying key trends in natural resource management and the most urgent problems at both farm and landscape levels. The discussions also identified social assets (community strengths) that may serve as the foundation to community participation in development and NRM initiatives.

Having identified major stakeholders, a stakeholders' project design workshop was conducted. At the workshop preliminary findings of critical NRM problems and issues raised during discussions with selected stakeholders were discussed. The stakeholders also identified key areas of interventions where soil erosion management was identified as a priority intervention area among others (ECOSTAR , 2003a)

Stakeholder participation in diagnosis of natural resources

A participatory diagnosis of natural resources management practices and systems and biophysical characterization of selected project pilot sites (Kasitu-Burondo watershed) was undertaken between July-September 2003. The exercise was undertaken with the involvement of local leaders (LC's), district technical staff who included the District Production Coordinator (DEC), District Environment Officer (DEO), District Forestry Officer. The field staff of the three NGO's involved in the NRM sector, with active field presence in the project area also participated in this exercise. Using participatory rural appraisal (PRA) tools which included; resource /social map, transect walk, seasonal calendar, historical trend analysis, farm mapping and farming system analysis, daily calendar / task analysis and wealth ranking, baseline information on biophysical, socio-economic, and institutional characteristics of natural resource systems in the pilot project area was generated (ECOSTAR, 2003b). In addition, many natural resources and development constraints facing the watershed community were identified. A participatory visioning on issues identified, analyzing the status over a period of ten years back, at present and where the community see themselves created an understanding on the natural resource constraints and what has caused them, and the opportunities available in the area (ECOSTAR, 2003b).

Among a list of constraints the community was facilitated to carry out a pair wise ranking of the most pressing problem in line with ECOSTAR's technical competence of natural

resources. Soil erosion ranked high in all the focus groups of men, women and youth as a major constraint facing the catchment area.

Feedback of findings as a partnership building process

In recognition of the fact that rural development requires a multi-sectoral and integrated approach, the ECOSTAR project sought to identify partners with local organizations and national partners whose competences can contribute to achieving its goal. In addition as a strategy, the project sought to strengthen the link between project, local community leadership and the communities as partners through sharing information, involvement in decision making through continuous dialoguing, resources sharing, and involvement in action planning as the project progressed into the implementation phase.

The feedback of the findings was made at two levels: first at the district level where stakeholders from district technical staff, leaders, Kasitu subcounty leadership, and parish chairpersons of all parishes in the sub county, and NGO's in the natural resources participated and at the pilot watershed level where community member representatives from all villages participated.

The workshops shared and reviewed the natural resources management and development constraints identified and community developed plans to address the problems. In the workshop, priority intervention areas of the project were highlighted and ranking high was soil erosion management, which was also identified as a priority area from the diagnosis exercise at the community level. In addition, the workshops discussed partnership opportunities according to respective interests and comparative advantages of the stakeholders. The feedback of findings from the diagnosis exercise further contributed to strengthening commitment of stakeholders and building partnership linkages as entry point to initiate soil erosion management initiatives.

Selection of soil erosion hotspots

The selection of soil erosion hotspots in the watershed involved local leadership and the watershed community. A meeting was conducted at the sub county to discuss and select a catchment area where soil erosion management initiatives would be undertaken. The criteria for selection discussed was; an area that has high land degradation through floods, land slides and erosion, food insecurity, and high population. Based on these criteria, Kasitu – Isura watershed, located in Kasitu parish was selected.

Following the selection of the hotspot, a community meeting of the selected hotspot catchment was conducted in order to create general awareness as well as initiative mobilization towards collective action for soil erosion management initiatives. During subsequent interaction with the community, they were facilitated to draw a village farm map and highlight and rate according to their knowledge the farms, which are most and less prone to erosion and landslides.

In order to involve the community in identification of approaches and interventions to sustainable soil ersoin management, they were facilitated to carry out a visioning exercise on the landscape units, their uses and management in relation to soil conservation and erosion management. They were divided into groups of elderly men, youths (men) and women. In the groups, the community identified the major landscape units in the catchment and discussed the good and bad that used to take place ten years ago, what is taking place now, the change desired and what they can do to cause the change if the degradation is to be reversed. The ideas of each group were presented in the plenary and later formed basis for development of a community soil erosion management action plan. In addition, the visioning exercise culminated into identification of methodologies used to implement the soil management initiatives in the catchment.

Setting mechanisms for promoting the initiatives

In the view of establishing sustainable ways of managing erosion in the region, the project strategy was to build technical capacity of stakeholders so that they can effectively support the farming communities to address the problem. In this regard, a technical training for local agriculture extension staff and development partner organizations as well as selected community members was done. The training involved both theoretical and practical aspects in setting up soil erosion management structures and was done with technical assistance from Ministry of Agriculture Animal and Fisheries (MAAIF).

The trained community members are community own resource persons organized in what is termed as a soil and water conservation committee. A soil and water conservation committee is a community-based mechanism that is composed of community members, selected by the community interest group in the watershed, which addresses soil and water conservation in the watershed. The main responsibility of SWCC is to discuss, coordinate and support operationalisation and implementation of community watershed plans in regard to soil erosion management with interest groups e.g. train community members in technical aspects of soil erosion management, spearhead development of watershed management plans, spearhead establishment of community assets like tree nurseries, management of the nurseries, distribution and access to trees, setting up demonstration as well as resources mobilization for purposes of promoting soil erosion management initiatives.

Generally, building the capacity of agriculture extension agents and the soil and water conservation committees to promote and implement appropriate soil erosion management technologies is a strategy to create a knowledge base and competence of the stakeholders so that they can scale up interventions where ECOSTAR project is not able to reach.

Achievements

Partnership building

A collaborative partnership was initiated with two local development organisations namely; NORRACOL and AMA. The partnership focuses on ECOSTAR building capacity of their staff in soil erosion management technologies, so that they can effectively initiate and upscale soil and water conservation activities in the project area as well as other parts of the district. The capacity of the staff of these organizations has been built in the initial training and is expected to continue during the project lifespan.

Setting up the soil and water conservation committees

Four SWCC committees were set up in the four watershed villages were soil erosion initiatives have been piloted. The committee members were selected by watershed community. The committee members are aware of their roles and responsibilities and have been trained in technical and practical aspects of constructing soil conservation structures.

Support to community own mechanisms

ECOSTAR project supports the SWCCs to spearhead the soil erosion management initiatives. However, several community own initiatives and mechanisms for working are emerging from different watershed villages. Common interest groups (CIG's) of 14 to 25 people in various locations are emerging to work on individual farm as a collective action. These mechanisms directly supported by the SWCCs' in the respective villages. However, the project is providing a supportive and monitoring role in order to enhance the group dynamics among the CIG's as the SWCC's becomes fully empowered to take over. Figure 1 shows the mechanisms set up by ECOSTAR for the implementation of the soil erosion management initiatives at the watershed level.

Factors contributing to stakeholder participation

Several factors can be attributed to the current status of stakeholder interest and participation in soil erosion management, an initiative that is a core intervention area for ECOSTAR project. These may are closely related to project design. ECOSTAR project was designed and conceived as a partnership between of Bundibugyo District with ICRAF, HASP and the Ministry of Local Government. The project was initiated through problem identification by HASP project in Bundibugyo District. The main problems identified among others are in the natural resource sector. Several development players in the district have ongoing programmes to address these problems especially environmental degradation, among which soil erosion management is a high priority intervention area.

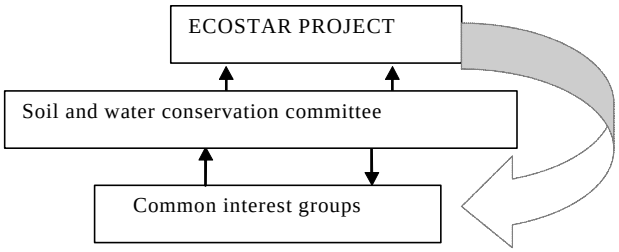

Figure 1. Organisation of mechanism for implementing soil erosion initiatives

Participatory diagnosis and planning process

The participatory diagnosis and planning phase provided an enabling environment to get stakeholders involved and participate in identifying, analyzing and prioritizing natural resources and development problems. This created a participatory environment and ownership of the interventions suggested and commitment to support their implementation as seen with the soil erosion management initiatives.

Awareness raised by disaster

The memory of the landslide and flood that occurred in November 2001 claiming 19 lives in Kasitu subcounty is fresh in the minds of both the locals (community and leadership as a whole) as well as the development partners. The disaster that occurred could be seen as a stimulant that is bringing stakeholders together to apply innovative solutions to curb environmental degradation in the district. The phenomenon of stakeholders participation to contribute resources and expertise in order to curb disaster and soil erosion has for example registered tremendous success in Kyantobi watershed in Bubaare subcounty in Kabale district (Amwine and Ariho, 2000).

Participatory diagnosis and planning with stakeholders

The participatory diagnosis phase provided an enabling environment to get stakeholders involved and participate in identifying, analyzing and prioritizing natural resources and development problems. This created a participatory environment and ownership of the interventions suggested and commitment to support their implementation as seen with the soil erosion management initiatives. This approach shall be used as an entry point since it has proved to be an effective approach.

Conclusion

To ensure sustainable adaptation of promoted technical options in natural resource management, several innovations have to be integrated and encouraged through stakeholder participation. The participatory diagnosis phase provided an enabling environment to get stakeholders involved and participate in identifying, analyzing and prioritizing natural resources and development problems. This contributed to commitment and ownership of the interventions suggested

and support their implementation as seen with the soil erosion management initiatives in Kasitu subcounty.

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