

Building Drought Resilience through Land and Water Management Project, Uganda



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Integrated Drought Management Program in the Horn of Africa
Global Water Partnership Eastern Africa

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Acronyms

CECF	Community Environment Conservation Fund
DWRM.....	Directorate of Water Resource Management
GWP.....	Global Water Partnership
GWPEA.....	Global Water Partnership Eastern Africa
IDMP HOA	Integrated Drought Management Programme in the Horn of Africa
IGA	Income Generating Activities
IWRM	Integrated Water Resources Management
IUCN	International Union for Conservation of Nature
LC.....	Local Council
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MoWE	Ministry of Water and environment
UNWMZ	Upper Nile Water Management Zone

Summary

This case study is generated from the work of the International Union of Conservation of Nature for a project being implemented in the Aswa River Sub-Catchment in Uganda. The project focus is to build drought resilience of dry land communities through improved land and water management. The recurrence of droughts in the Aswa River Sub-Catchment has for long compromised the ability of populations and ecosystems in the area to recover from the shocks.

The project is located in Aswa-Agago Sub-Catchment and implemented by IUCN in partnership with the Directorate of Water Resources Management and local governments of the three districts Alebtong, Lira and Otuke.

At the start of the project in 2011, communities showed low interest as people at that time were returning from camps following a 20 year civil war in northern Uganda. Their focus was mainly on how best to survive in the harsh conditions. The immediate survival strategies included charcoal burning for sale and reclamation of wetlands for rice growing both for food and for sale. With the impending drought conditions, these activities led to further destruction of the environment.

The project has facilitated the drafting of a management framework involving new guidelines for environment conservation, formation of sub-catchment management committees, demarcation and restoration of wetlands, and enactment and implementation of bye-laws. Key project achievements include restoration of the rangelands, effective management of wetlands and improvement in quality and volume of water sources.

The key lessons from this case study are that: Strong community institutions are a necessary prerequisite for long-term sustainability to promote resilience, manage and conserve common natural resources; coordination and integration of development programs together with local governments across sectors results in more coherent and efficient support to communities to increase impact.

Overall, the project has contributed to promoting sustainable utilization of natural resources while addressing community livelihoods and improving community and ecosystem resilience to droughts.

regeneration rate. In addition, the existing governance arrangements were weak, unable to enforce existing guidelines and byelaws to safeguard the natural resources. This contributed to the widespread loss of biodiversity, ecosystem integrity and consequently weakened household adaptive capacity. The most severe effects of these changes were felt by the most vulnerable groups to disasters who included the very poor people, women and children. These groups were significantly affected because they depend mostly on natural resources.

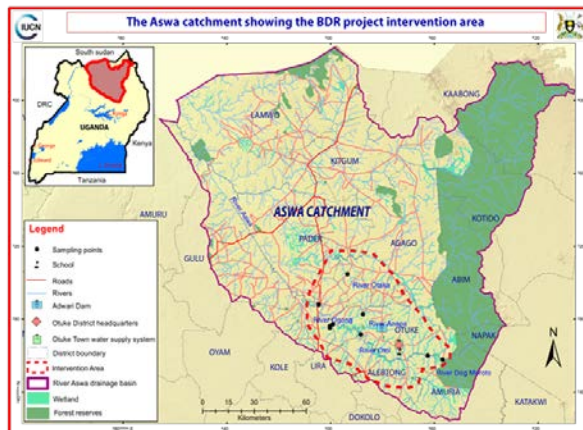


Figure 2. The Aswa Catchment

3. Project Interventions

Figure 2 shows project intervention areas in the Aswa catchment. The total funding of the project was 1 Million euros with a co-financing of 100,000 euros (Hartmann, *et al*, 2014). The project was designed to provide a supportive framework that would promote sustainable utilization of natural resources, ensure governance and accountability of actions, while addressing poverty. These are the main driving force for natural resource mismanagement. The project set out to

promote a sustainable approach by enabling people to understand and analyse the prevailing situation in their areas, in order to increase adaptive capacity and resilience knowledge. This was done through various community dialogues and training sessions aimed at creating an empowering environment for the people to make decisions on how to sustainably manage their resources and landscapes and be able to cope in harsh drought periods.

The project directed effort towards building resilience to strengthen both community and ecological resilience in the face of extreme climate events. This was based on cohesive approaches to diversify livelihoods and markets, improve natural and engineer infrastructure around water points, strengthen natural resource governance processes including water resource management, share experiences and learning across sectors and different governance levels. Sustainable technologies were installed for water development, including the provision of water harvesting structures, ponds, wells, pans and hand pumps.

4. Objectives of the project

The objectives of the project include:

1. Improving ecosystem health and peoples livelihoods
2. Building capacity of institutions to manage natural resources
3. Improving knowledge and skills of communities to implement adaptation, innovation, and change
4. Improving coordination among multi-sectoral institutions
5. Influencing policy based on project experiences

5. Decisions taken

Participation in project activities

The project was launched in Lira district with a representation of key government ministries which included Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Ministry of Water and Environment, district local council members, district technical staff, representation from local community leadership. This contributed to raising awareness about the project. The spectrum of stakeholders also discussed and agreed on the proposed project strategy, work plan, implementation and coordination modalities. Project staff interfaced with communities through government extension structures and local leadership at different levels.

Uniqueness of CECF

- Conservation action planning with consideration of community needs
- Emphasizes participation for entire community (youth, women, men)
- Built on existing governance structures (LC system)
- Benefit is tagged to member(s) participation in natural resource conservation activities
- Has a monthly platform for village members to meet and reflect on progress; quarterly meeting at parish level
- Provides framework for accountability and governance (committees to manage fund & monitor natural resource use)

Although consultations and project sensitisation was conducted with communities at the onset of the project; they still showed low interest in the project. This could be attributed to the fact that project started shortly after the end of the war in Northern Uganda and people had been living in camps for years. Poverty was real and people were working for survival. The only resources that were readily available to them were the natural resources i.e., land, trees and wetlands. In such a situation, issues of conservation were of secondary importance and the communities focus was to survive. Charcoal burning and reclamation of wetlands for rice growing were the major activities. People did not think that their actions to natural resources would culminate into fierce droughts in the future. In addition, while living in the camps the communities had got used to hand-outs like food aid, beddings and other household items. The communities expected the project to operate in a similar manner. This created a challenge for the project to change the mind-set of the communities.

To overcome this challenge, the project employed the Community Environment Conservation Fund (CECF) approach. The CECF approach involves availing community grants at village level managed by a village committee as a revolving fund. The community grant is accessed by community members as a loan for emergencies with a service fee of 5% and is borrowed for not more than 3 months. Applications for loans are assessed by the CECF committee. . The fund is reported to be generating more funds for the village through accumulation of service fees. *For example Arwotngo village was provided with two million shillings but it has now grown to three million shillings (Chairperson LC I, Arwotngo).*The CECF has pre-conditions, whereby for the beneficiary to access the fund, the project pegged environment conservation components. This fund enabled community members to access money to cater for their immediate needs while fulfilling the environmental requirements. For instance, if there is a water source in the village, the user committee selected has to participate in its maintenance. Defaulting beneficiaries are penalised by the village committee and are not legible to access any additional funds until corrective actions are taken. In addition, beneficiary households participate in other community water conservation

activities e.g., controlled grazing, tree planting and stopping bush and charcoal burning. It is important to note that there are community guidelines in water management and livestock grazing in the project area.

The challenge of broken traditional social networks

The breakdown of traditional, social and cultural systems which were much respected prior to the war caused a setback in project implementation. After the war, people were operating in isolation. Mobilising and sensitising them on project interventions became a challenge. Further, the prolonged war disrupted both formal and informal systems of education and exchange of knowledge. This made it difficult to find an entry point for the project to start. To overcome this challenge, tailor made capacity building programmes and learning exchange visits were conducted for targeted communities.

6. Achievements and Outcomes

Management framework drafted and sub-catchment management committees established

The Upper Aswa sub-catchment management framework was drafted to guide planning, use, and management of the natural resources. Committees at village, parish and at sub-catchment levels were established and the sub-catchment management committee was strengthened with guidance from the project and Upper Nile Water Management Zone. Actions in the plan were implemented using approaches that combined restoration of 'natural infrastructure' of ecosystems and appropriate design and operation of engineered infrastructure.

The development of the sub-catchment management plans was conducted with the community in villages and parishes. Vision resource maps were generated, digitalized and geo-referenced. The maps showed the natural resources available in the sub-catchments, different types of land use and user groups and resource utilization patterns. For example, wet and dry season grazing patterns for pastoralist communities and visioning of the communities in terms of efficient and equitable use of resources that will build and enhance their capacity to survive drought and other climatic hazards. Major streams and rivers are demarcated for river bank rehabilitation, community tree nursery sites, woodlots and protected water sources were also marked on the maps. The process guided the identification of hotspot areas for restoration in order to improve their ecosystem health; and the selection of sampling sites for biological monitoring of water resources to monitor the impact of the intervention. Implementation of sub-catchment plans resulted in landscape restoration of the rangelands and pastures as well as wetland resources starting to recover in the project sites.

Demarcation and restoration of river banks

The village and parish committees worked with other community members to demarcate river banks using an agreed formula of 50 metres on either side of the river as the buffer zone. The buffer zone was left free of subsistence or economic activities, with no cultivation or grazing livestock allowed. Parts of the river banks have been restored with about 2,426 households engaged in the ecosystem restoration along river and stream banks in the Parishes where project activities are being implemented; a total of 109.9 km out of over

350km of river Aswa and its tributaries have been demarcated using sisal (*Agave sisalana*) as buffer zone. Following these actions, regeneration, reportedly, has started in some of the areas that previously had been turned into rice fields. Communities now notice an increase in water volumes particularly during the last two dry seasons where streams did not dry up. The women in the community in particular stated that *the protection of the catchment helps to ensure availability of water especially during the dry season especially with regard to traditional water sources.*

Improvement of water sources

A total of 196 water sources were improved and became functional. The management committees were elected with significant number of women who also constitute majority of water users. The micro-catchment areas of 24 out of the 196 water points have been protected following the new environmentally friendly government's water source protection guidelines. Improvement of water sources and strengthening of user committees contributed to increased access to clean water for communities, reportedly reducing instances of water-borne related diseases that impact negatively on communities' livelihoods.

Contribution to policy

Linkages have been created between different sectors at district (Natural Resources, Production and Community Development and national levels (MWE). This has contributed to implementation of important policies related to natural resource management and governance.

The project has facilitated the drafting of byelaws for environment committees in the project parishes. These are being translated into the local language.

Improving community conservation and peoples livelihoods

Following implementation of CECF, project staff observed a remarkable increased interest of communities and a change in their attitudes towards conservation activities.

“Initially our meetings had very low turn ups and we used to pay meeting allowances for participants. But with the introduction of the CECF people mobilised themselves and turned up in big numbers even though we no longer paid the allowances...they still implement activities and only invite us to monitor” Moses Egaru, Water and Biodiversity Programme Officer, IUCN-Uganda.

The success attained with implementing CECF in the hotspot areas (project target sites) created high demand for the interventions in neighbouring non project areas. The demand and probable scaling up of the interventions points towards indication of increased adoption and sustainability. Therefore, the actions taken by the communities will improve resilience to droughts.

The communities that received training in environmental conservation have acknowledged that they are now capacitated in conservation measures with several of them now practising tree planting as a source of fuel wood as opposed to thinking of extracting wood from the forests. Also, they view the woodlots they have planted as an investment for the future. Knowledge, skills and attitudes are important contributors to sustaining long-term interventions and this is being passed on to the younger generation.

We never thought of replacing trees after cutting them, now when a tree dries up we replace it; even our children are learning the culture of planting tree seedlings to avoid the devastation of drought (Female CECF committee member, Arwotngo LC I)

The Chairperson LC I, Arwotngo believes that *it will be very difficult for the community to suffer hard consequences of drought like before since we have been equipped with the required knowledge.*

The local population is now more aware about their roles and responsibilities as observed in their engagement in holding each other accountable in monthly forums.

8. Gaps identified

- *The grant provided to the village as CECF is limited and usually helps members who have emergency situations.* New borrowers have to wait for the earlier loan recipients to pay back before they can also borrow. For members who want to venture into an Income Generating Activity (IGA) that is agricultural based say buying seed with the fund does not help --- *“the season does not wait for you”*.
- *Funding is limited at project Level.* The project is in the second phase, but funds are still not enough to meet the increased interest and demand of the surrounding communities within Aswa catchment.

9. Lessons Learned

- Projects are able to bring different stakeholders together, promote cross learning and strengthens decision –making. Enhanced coordination and integration of development programs together with local governments across sectors results in more coherent and efficient support to communities to increase impact.
- Strong community institutions are a necessary prerequisite for long-term sustainability to promote resilience, manage and conserve common natural resources. Therefore, communities need to be empowered through existing structures with the knowledge and ability to exercise rights and responsibilities for natural resources.
- For project intervention to be successful it has to match with community needs and interests; therefore, conservation objectives have to be linked to livelihoods improvement especially for marginalised groups. Consider linking project interventions to specific livelihoods activities to enhance community understanding of the importance of natural resources and their responsibility towards conservation.

10. Conclusion

The project enhanced the capacities of governance structures within the local government and community leadership. This contributed to drafting of new guidelines for environment conservation. The community conservations committees spearheaded implementation of the sub-catchment plan that in turn would lead to safeguarding the natural resources on the other hand, CECF contributed to changing community attitudes towards conservation undertaking action that address community livelihoods and thus, improving drought resilience.

11. References

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- The Republic of Uganda (2010): Uganda Strategic Investment Framework for Sustainable Land Management (2010 – 2020)

Annexes

Annex 1: Illustration of different Field activities



1. Restored wetland in Arwotngo LC I, Okwang Sub-county Otuke District (Photo credit, IUCN-Uganda)



2. Local water point maintained by water user committee (some members in picture)- (Photo credit, IUCN-Uganda)



3. Community Members working in their in tree nursery - Photo credit, IUCN-Uganda



4. A community tree nursery in one of the selected communities in Aswa-Agago Sub-catchment (Photo credit, IUCN-Uganda)

Annex II:List of stakeholders consulted

List of People consulted during Case study documentation

No	Name	Organization	Designation	Contact
1	Ojok Aruka Daniel	Okwang Sub county	Chairperson LC III	0752954815
2	Obote Denis	Barlwala, Okwang Sub county		0779512023
3	Omara Bosco	Arwotngo LC I (Okwang Sub-county)	Chairperson LC I	0777035810
4	Omuge Tom Charles	Arwotngo LC I (Okwang Sub-county)	Senior Assistant Secretary	0702962024
5	Okello Richard	Arwotngo LC I (Okwang Sub-county)	Chairperson CECF	0777775608
6	Ocen Julius Peter	Arwotngo LC I (Okwang Sub-county)	Member	0774100103
7	Ogwang Francis	Arwotngo LC I (Okwang Sub-county)	Member	-
8	Anna Obote	Arwotngo LC I (Okwang Sub-county)	Member CECF	0788375412
9	Adongo Christine Obote	Arwotngo LC I (Okwang Sub-county)	Member	-
10	Alum Sylvia	Arwotngo LC I (Okwang Sub-county)	Member	078666700
11	Among Vicky	Arwotngo LC I (Okwang Sub-county)	Member	-
12	Gertrude Ogwok	IUCN Lira	Project Assistant	0776633441
13	Moses Egaru	IUCN Lira	Program Officer	0755484527
14	Polycarp Mwima	IUCN	Program Officer	0702602697