Extending Protected Area Networks

to Wetland Community Conservation Areas

- Lessons Learnt from Uganda


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APR	Annual Project Report
BDS	Business Development Services
BMUs	Beach Management Units
CAO	Chief Administrative Officer
CBO	Community Based Organisation
CBWRM	Catchment Based Water Resources Management
CCA	Community Conservation Areas
COBWEB	Community Based Wetland Biodiversity Conservation Project
DDP	District Development Plans
DWRM	Directorate of Water Resources Management
EBA	Ecosystem Based Adaptation
EV	Economic Valuation
GEF	Global Environmental Facility
IPs	Implementing Partners
IUCN	International Union for Conservation of Nature
LECs	Local Environmental Committees
MFPED	Ministry of Finance Planning and Economic Development
MoLG	Ministry of Local Government
NDP	National Development Plan
NEMA	National Environment Management Authority
NFA	National Forest Authority
NGO	Non-Governmental Organisation
NU	Nature Uganda
Pas	Protected Areas
PES	Payment for Ecosystem Services
PIR	Project Implementation Report

PMT	Project Management Team
PMES	Participatory Monitoring and Evaluation Strategy
PMT	Project Management Team
RUG	Resource Unser Group
SACOs	Saving and Credit Cooperatives
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UWA	Uganda Wildlife Authority
UWS	Uganda Wildlife Society
VC	Village Committee
VBIC	Visitor Biodiversity Information Centers
VSLA	Village Savings and Loan Association
WCMC	World Conservation Monitoring Center
WMD	Wetlands Management Department

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We do hope that the book will benefit all those involved in the management and use of wetlands here in Uganda, Eastern Africa and the world over.

We wish you good reading!
COBWEB Project Consortium

FOREWORD

Uganda's wetlands cover approximately 11.9% (WMD, 2009) of its land surface area is a storehouse of globally significant biodiversity. They are also vital providers of a range of ecological goods and services which support and sustain the livelihoods of millions resident communities. However, wetlands remain under represented in the National Protected Area (PA) Network. The PA coverage in Uganda has been heavily skewed to terrestrial landscapes dominated by forest and savannah areas, excluding the country's freshwater bodies and associated wetland ecosystems. Yet the terrestrial Pas have demonstrated capacity to reduce loss. The NFA has indicated that the annual rate of loss averages at 1.86% is more within private land holding at 2.2% compared to protected area at 0.7% (NFA 2009).

Wetland areas are under threat from habitat degradation and the over exploitation of constituent resources and conversion to agriculture and human settlements. As a result, approximately 11,268km2 of the country's wetlands were lost between 1994 and 2008 (WMD, 2009) representing a 4.7% loss in only 14 years. This is having serious consequences including but not limited to reduced water quantity and deteriorating water quality, impact on fisheries, flooding among others.

The need to extend Protected Area Network to include and protect wetland ecosystems to the terrestrial Protected Area Network in Uganda is thus apparent. This was the rationale for the COBWEB (Extending Wetland Protected Areas through Community Conservation Initiatives), a four year (2008 - 2012) UNDP – GEF funded project, from whose implementation progress results we have drawn lessons for the use and management of wetlands adjacent to Protected Area Networks, which are documented in this publication.

Through the Lessons Learnt and Best Practices presented herein, the Project Partners envisage that these will be useful guidelines for policy reviews, harmonization and the decision making processes in regard to wetlands management and developments in Uganda. The Partners also believe that some of the practices can be cascaded to other communities across the country and the rest of the world.

I therefore trust that as you read this document, you will have a lesson(s) to pick for your own use in the crusade to utilize our natural resources particularly, wetlands in a sustainable manner.

Indeed over the last twenty years, wetland management in Uganda has registered good progress although, the challenge still remains for us to inculcate positive attitudes among the beneficiaries on the ardent need for wetland conservation and wise use. In that regard, we are not complacent in the above success; that is why the COBWEB Project was formulated, to address some of the emerging gaps in conservation of these fragile resources. The advantage is taken here of wetlands close to or adjacent to Protected Area Networks. We therefore, need to address the current drivers of change such as population pressure, unplanned developments, changing cultural norms and reducing land fertility, if our natural resources are to be saved at all.

I wish you all pleasant reading.

Hon. Maria Mutagamba
Minister of Water and Environment
Republic of Uganda

EXECUTIVE SUMMARY

This publication focuses on the lessons learnt by the consortium of Partners from Government and Civil Society Organizations namely; Wetlands Management Department, the International Union for Conservation of Nature (IUCN), NatureUganda (NU) and Uganda Wildlife Society (UWS) from the Extending Wetland Protected Areas through Community Conservation Initiatives (COBWEB) Project. The lessons are derived from two project areas in South-western and North-eastern Uganda, that is, Lake Mburo - Nakivale -Kacheera and Lake Bisina - Opeta Ramsar Sites.

The publication presents a brief background of wetland management, including the benefits and threats to the wetland resources. The history of Protected Area Networks in Uganda is also given, including an overview of the COBWEB Project. This is then followed by a chapter on lessons/ Best Practices arising out of nearly 3 years of project implementation.

It is evident that through the COBWEB Project there has been adoption of non-wetland resource based and economically viable livelihood options by communities adjacent to the wetlands will be critical to the successful replication of the lessons/ Best Practices. Soil and water conservation measures in adjacent farmlands, adherence to wetland use and management by-laws with resultant effects such as habitat and species restoration in the wetlands will be key indicators of achievement of intended conservation outcomes of the COBWEB Project.

Furthermore, it is also apparent that the local communities appreciate the importance of wetland conservation because the models promoted by the project have received acceptance among communities. However, there is need to enact by-laws in order to elicit and sustain community adherence to agreed long term conservation efforts. In the Lake Bisina - Opeta although, wetland resource use such as fishing and eco-tourism does not seemingly pose a threat to the sustainability of the wetland, there is need to enhance fisheries production and ensure that there is a well developed biodiversity and tourism center with tangible benefits to communities. In addition, by-laws to control wetland encroachment and conversion for agriculture, settlement and other human activities will be critical.

The main lessons from the project are as follows:

1. Local level Conservation Areas are essentially the application of participatory approaches in the conservation of biological diversity and extension of Protected Area networks;

2. Institutional Coordination and collaboration is desirable;

3. Community biodiversity conservation must integrate livelihood options;

4. Replicable tools promote successful and applicable management interventions;

5. Mutual Learning Exchange visits are essential for appreciating and adapting Best Practices;

6. Building on local experiences and knowledge provides the basis for addressing new emerging issues;

7. By building on the past and empowering communities for the future, their expectations can be managed;

8. An integrated wetlands and livelihoods management approach is key to the success of Community Conservation Areas (CCAs);

9. Representation and accountability is the foundation for effective wetland CCA management;

10. A clear and practical exit strategy sustains interventions.

Based on these lessons it is evident that, CCA models can be successfully promoted and adopted by different communities so long as the process is participatory and builds on existing local expertise, technologies and innovations that are arrived at together with the recipients. The lessons also indicate that the management of biodiversity outside PAs can be made a reality once institutionalized and enforced by the beneficiaries, who should be brought to understand the linkage between conservation and livelihoods. This must of course be approached with hindsight that other things like Climate Change, Population Pressure and Evolving Cultures may also influence success.

1.0 INTRODUCTION

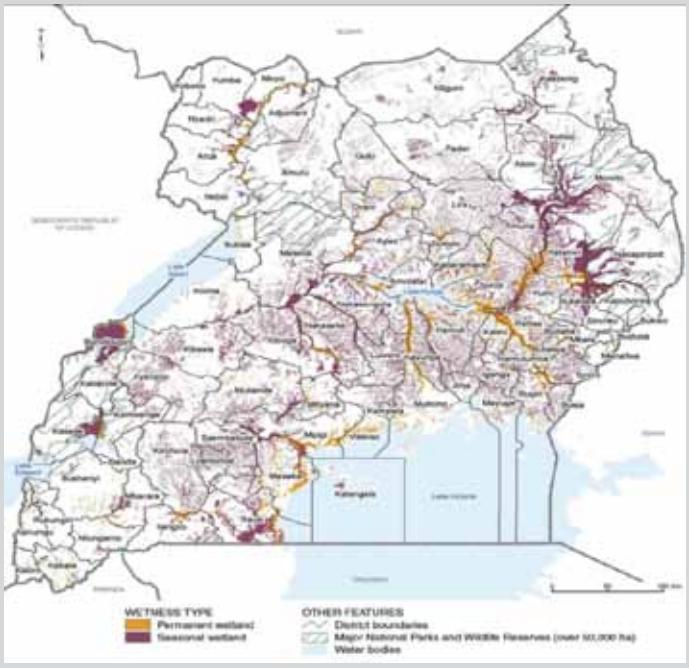
1.1 Background

1.2 The importance of wetlands in Uganda

Wetlands across the world are of huge importance to the functioning of natural systems and supporting the livelihoods, basic needs and well being of people. Wetlands take on an additional significance in developing countries such as Uganda where clear links exist between the wise use of ecosystems and the realization of strategies to eradicate poverty, through improving sanitation, food security and access to clean water.

Indeed, this relationship is especially relevant in Uganda which is exceptionally rich in wetlands covering an estimated 11.9% (26,307.7 km2, WMD 2009) of the country's land surface area. This is certainly the largest proportion of any country in East Africa and is greater than most others on the continent.

Figure 1: Map of Uganda showing wetland distribution in Uganda (Source: WMD, 2009)



Wetlands therefore constitute the most widespread ecosystem in the country. Uganda's wetlands are as varied as they are extensive and cover almost twice as much land as the gazzetted forest area. In central and western Uganda, large papyrus swamps store enormous quantities of water, and provide local communities with a huge stock of raw materials for the production of

mats, baskets, thatch, clay and sand. In the east, there is a network of flood plains sitting in an undulating landscape, many of which have been turned into rice fields and provide dry season grazing for livestock. Uganda's natural rangelands in the cattle corridor, a relatively dry narrow belt running from the south-west to the north-east, are dotted with wetlands critical for the survival of cattle during the dry season. In the far west and south-west of Uganda, many wetlands have been converted into agriculture and livestock farms, catalyzed by Government policy in the 1950s and 1960s as a means to deal with the high population pressure in the surrounding steep hills.

Much as wetlands supply an array of products to many people, the hydrological services that they provide form the single strongest argument for promoting sound wetlands management. In Uganda, wetlands form the backbone of the entire drainage system. Apart from Lake Victoria in the south, Lake Kyoga in the centre and the western rift valley lakes, most of Uganda's surface water is absorbed and stored in its wetlands. They function as fresh water reservoirs that slowly release their water, either underground to replenish aquifers, or laterally towards the major drainage basins. This slow release of water increases water availability during the dry season for domestic use, cultivating on the wetland edges or livestock watering. It keeps bore holes, shallow wells and springs functioning, by trapping silt and pollutants. Wetlands contribute to public health by providing relatively clean water to millions of people.

Lastly, wetlands in Uganda harbour an enormous stock and diversity of flora and fauna. The flora includes papyrus, wetland grasses, palms, wetland trees, rattan cane etc., while fauna include sitatunga, fish, wetland birds etc. Many of these have economic value and are harvested and used locally. Many others have intrinsic values that are usually only appreciated by ecologists and nature lovers until their economic values become apparent, for instance through tourism.

Some attempts have been made to assess the economic value of Uganda's wetlands. Research carried out by the National Wetlands Programme and the IUCN, indicated that wetlands contribute millions of dollars per year to the country's economy. For example, the purification functions of the 5 km^2 Nakivubo wetland in Kampala are valued at an estimated US$ 1.7 million per year (Emerton et al, 1999). Figures for rural wetlands in the east show that papyrus harvesting and mat making contribute in the range of US$ 200 per year to a family's income (Emerton et al, 1999). In addition, wetlands have been recognized in the National Development Plan as a critical Enabling Sector (NDP, 2010). They are also acknowledged in the Environment and Natural Resources Sector Investment Plan (Ministry of Water and Environment, 2007) as vital and must therefore be judiciously used. Indeed, over 5 million people directly depend on wetlands for water estimated at US$ 25 million per annum. While wetlands goods that support subsistence income generation are estimated at US$ 11.4 million per annum, wetlands support tourism, fisheries,

agriculture, building and crafts making; and at least 2.7 million people directly or indirectly depend on wetlands for subsistence employment.

Although wetlands have always been important for local livelihoods and national economic prosperity, they were for a long time considered a nuisance, harbouring disease, and evil spirits, blocking communication and taking up valuable agricultural land. Many people still have this line of thinking. This view was translated into subsidized drainage in densely populated areas, and widespread filling in urban areas to create space for industrial and residential estates. It was only when serious flooding, micro climatic change and rural water shortages were experienced and linkage made to wetland degradation that a conducive policy environment for sustainable wetland management started to emerge, and subsequently taken up, beginning with the Government ban on wetland drainage in 1986 (WMD, 2005).

However, wetlands are still under threat from habitat degradation and the over exploitation of constituent resources, conversion to agriculture, including fish, plant resources, sand and clay and waterfowl, calling for proactive multipronged approaches to address these threats.

1.2.1 History of Protected Area Networks in Uganda and the need for Wetland Community Conservation Areas

Uganda has had a terrestrial dominated Protected Area Network for many years, with areas set aside as National Parks, Reserves, and Sanctuaries for the protection of both wildlife and forest resources. The first Forest Reserves were created by colonial authorities in the early 1900's while the first National Park was established in 1952. There is a detailed policy and legislative framework for Protected Areas, vesting management authority in four major national institutions; the Forest Sector Support Department, Uganda Wildlife Authority (UWA) and the National Forest Authority (NFA) and District Forest Services.

Presently, there are three categories of Protected Areas (PAs) in Uganda.

Table 1: Categories of Protected Areas in Uganda

CATEGORY	TOTAL NUMBER	RESPONSIBLE INSTITUTION
Protected areas established for the purposes of wildlife conservation	10 National Parks	Uganda Wildlife Authority
	15 Wildlife Sanctuaries	
	5 Community Wildlife Areas	Local Governments/Districts
Protected Areas established to manage forestry resources	712 Forest Reserves (known as the permanent Forest Estate) covering 7.6% of Uganda's land surface.	NFA. FSSD
Areas managed under international law of Conventions	12 Ramsar Sites	WMD

With hind sight therefore, the Protected Area approach which has been tested and used for several years around the globe is a system that not only protects and conserves a diversity of species, but specifically, unique species and ecosystems that may be threatened in some cases. This network is quite pertinent amidst the increasing pressure on land due to rising population pressure and the need to have livelihoods. Although the conventional PA network does not fully involve the primary resource users; it still provides a good opportunity to test the viability of CCAs that has been piloted by the COBWEB Project considering that wildlife, particularly animals have no distinct boundaries. Overriding all this however, is the urgent need to extend the network to include and protect wetland ecosystems adjacent to these terrestrial PAs networks, due to the massive pressure they have come under in the last 20 years. This will not only improve the ecological representativeness of the PA networks by including wetland ecosystems, but also "buffer" the terrestrial PAs from pressures by communities through promoting community wise use of wetland resources. It will also provide protection to wildlife outside the terrestrial PAs. Furthermore, the measure is an opportunity for enhancing community and Local Government participation in the management of PAs in Uganda, which requires a concerted effort by all stakeholders. The definition of CCAs used in this document is adopted from IUCN Congress (2003) and UNEP - WCMC.

1.2.2 Extending Wetland Protected Areas through Community Conservation Initiatives Project

The Extending Wetland Protected Areas through Community Conservation Initiatives Project known as "COBWEB" was conceived and approved in 2008. The project as its name suggests was to cater for the need to promote the sustainability of the entire terrestrial PA network in the country, by catalyzing the inclusion of adjacent wetland systems within the existing terrestrial PA network.

In doing the above, the aim was for the Project to strengthen the Uganda National PAs Network by expanding coverage to include the country's biologically important wetland ecosystems. To realize this idea, the project developed, piloted, and adapted suitable PA management paradigms in two representative wetland systems adjacent to two terrestrial Protected Area Networks (Figs. 1 and 2) in Lake Mburo – Nakivale - Kacheera and Lake Bisina - Opeta, which are adjacent to lake Mburo National Park and Pian - Upe Wildlife Reserve respectively. To date a number of CCAs have been created including Magoro, Mukura and Kapir, Kacheera I and II and Nakivale.

Management was geared to the specific needs of wetlands but allowed for the development of protection and sustainable management strategies easily implemented by rural communities and replicable to other PA systems across the country. These CCA models have been designed to optimize the effective management and sustainability of the expanded PA networks.

Figure 2: Map of South Western Uganda showing CCA sites

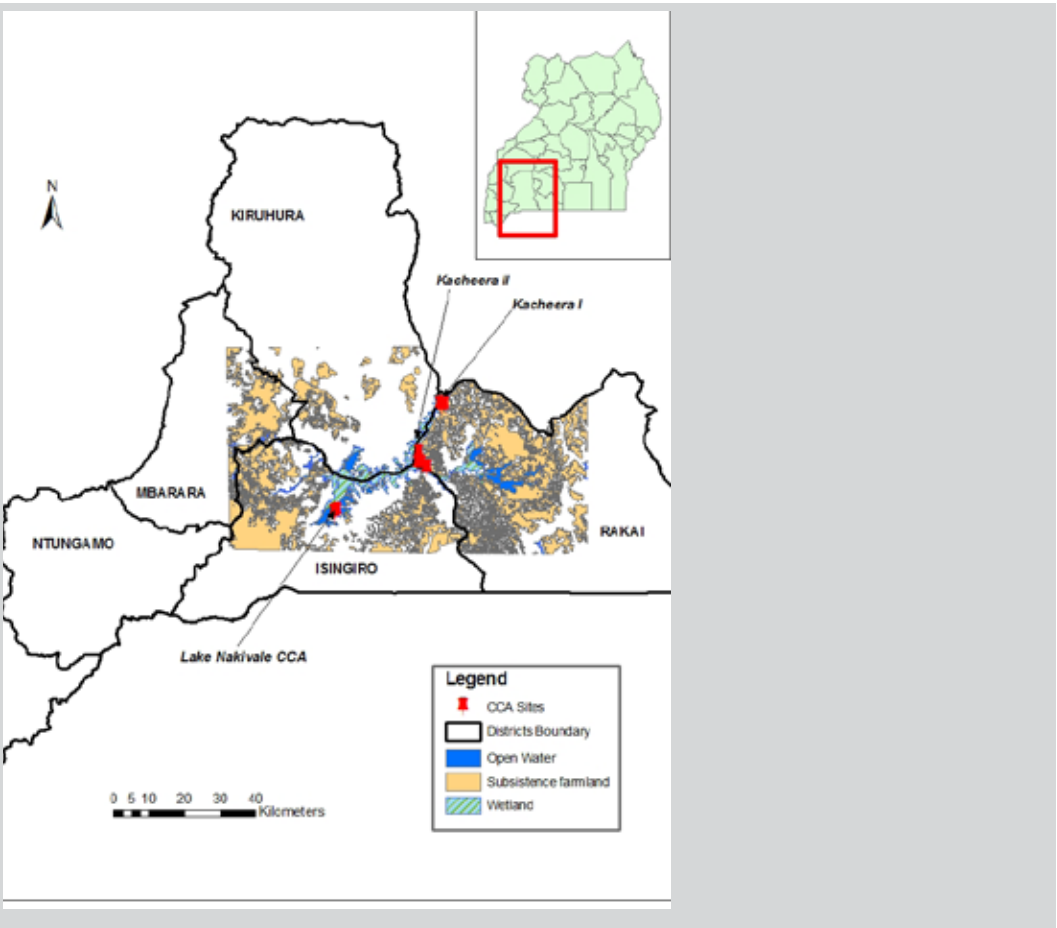
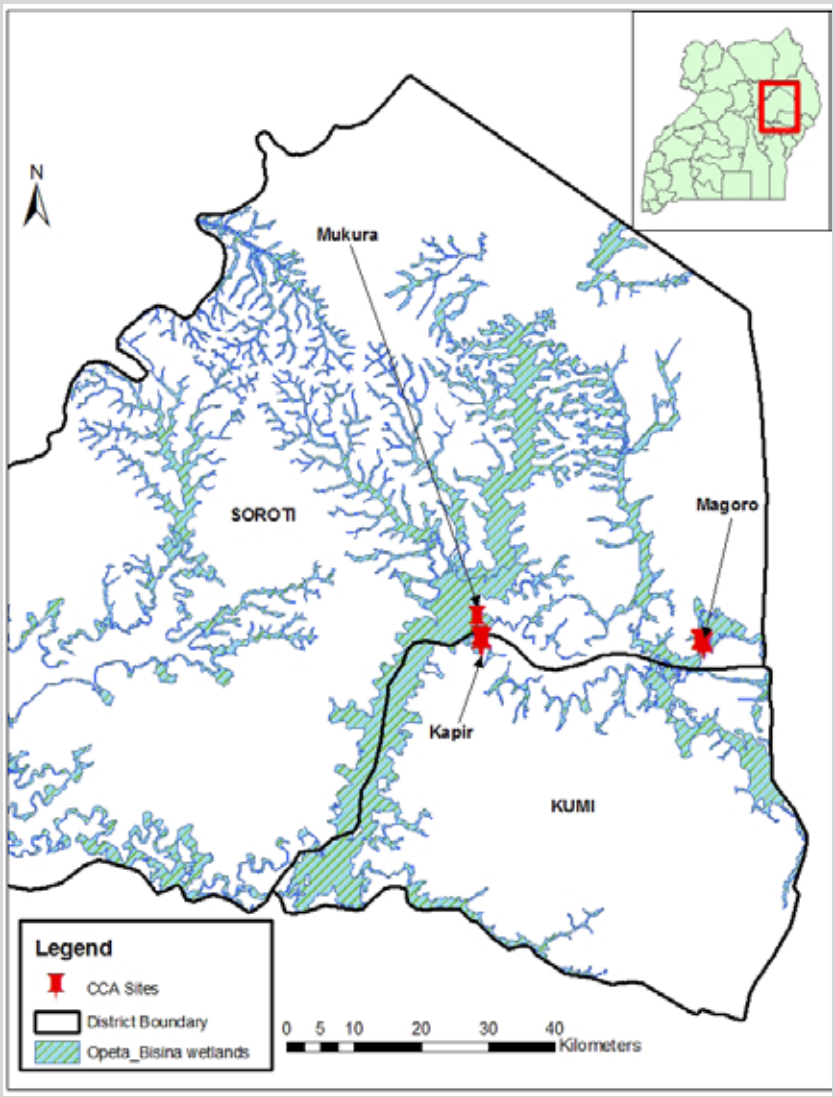


Figure 3: Map of Eastern Uganda showing CCA sites



2.0 PILOTING COMMUNITY CONSERVATION AREAS (CCAS): LESSONS LEARNT

This chapter describes some of the lessons learnt during the execution of the COBWEB Project. The aim is to encourage discussion, in order to initiate changes where they are needed. In addition we hope to foster cross learning from similar efforts, as well as provide practical guidance, in the form of Best Practices that can be adopted. A total of ten lessons are elaborated upon in the subsequent pages.

2.1 Successful Community Conservation Areas (CCA), a part of the Protected Area Networks

Lesson 1: Local level Conservation Areas are essentially the application of participatory approaches in the conservation of biological diversity and extension of Protected Area Networks

Community Conservation Areas (CCAs) have been defined as "natural or modified ecosystems containing significant biodiversity values and ecological services, voluntarily conserved by indigenous and local communities, through customary laws or other effective means" (IUCN World Parks Congress in 2003). This definition is recognized by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP - WCMC) and is elaborated on in the UNEP - WCMC CCA Registry Handbook as a type of Protected Area in which local people are involved in the creation, management and ownership of a conservation or protected area. A unique feature of CCAs is their diversity.

It was on this basis that the COBWEB Project in collaboration with the local communities created the six wetland Community Conservation Areas located in two wetlands ecosystems (Ramsar Sites). The six CCAs include Magoro (Magoro Sub-county, Katakwi district), Mukura and Kapir (Mukura and Kapir Sub-counties Ngora district), Kacheera I and II (Kacheera Sub-county, Rakai district) and Nakivale in Kabingo Sub-county, Isingiro district.

The creation of the CCAs was aimed at combining local governance and current conservation objectives, to protect and restore wetlands in the face of new threats and opportunities. Community Conservation Areas have created strong relationships between local communities and wetlands. However, this relationship is yet to be enshrined in the communities' sense of identity and dependence on wetlands for livelihood and wellbeing without compromising the integrity of the ecosystem. The approach used by the COBWEB Project implementation team during the implementation of the project and specifically creation of CCAs was to emphasize the benefits of wetland resources both direct (papyrus harvesting, sand and clay mining, fishing and water collection) and indirect (water purification, flood control and climate regulation).

The local communities in these conservation areas have now become major players in decision-making and implementation regarding the management of the wetlands. This level was achieved after a number of processes and activities were conducted in a participatory approach. Some of these processes involved continuous feedback mechanism through regular meetings, identification and selection of the right interest groups, development of a comprehensive Communication Strategy, and the use of continuous target specific awareness and sensitization programs, reflection and learning, collective responsibility in identifying the short and long term actions, having a clear vision and putting in place implementation structures at community level with clearly defined roles and responsibilities. In addition, practical pilot activities were carried out at

selected by communities with guidance from the implementation team. These included working with community groups to construct contours in Nakivale CAA to promote soil and water conservation, recordings monthly fish catches by the fishing communities in Nakivale, Kacheera, Magoro, Kapir and Mukura CCAs to monitor biodiversity changes and conducting lake patrols through self-policing by communities to check poor fishing practices.

It is therefore hoped that in the long term, the community's management decisions and efforts will lead to the conservation of wetland, species, genetic diversity, ecological functions, benefits and associated cultural values, even when the primary objective of management is not about conservation alone, but also livelihoods and security. The key lessons that can be drawn include;

1. Conservation practices of local communities depend on a variety of meanings and values underpinned by the relationship between humans and the natural environment (wetlands), it is only through engaging these communities that these are brought out and can then form part of the management intervention.

2. While CCAs by definition embody precious bio-cultural diversity in a voluntary and self-organized way, the related beliefs, practices, and institutions are all context-specific and must be understood in that vein, in order to ensure success.

3. The creation of CCAs near existing terrestrial PAs gives continuity, synergy in management and an expanded ease of working relations with the conventional PA Networks.

2.2 Consortiums equal power

Lesson 2: Institutional Coordination and collaboration is desirable

The COBWEB Project is a collaborative effort between the Government of Uganda represented by Wetlands Management Department (WMD) and an NGO consortium consisting of International Union for Conservation of Nature (IUCN), Nature Uganda (NU) and Uganda Wildlife Society (UWS). By design, the project was also implemented in collaboration with various other mandated institutions such as National Environment Management Authority (NEMA), Uganda Wildlife Authority (UWA), District Local Governments and communities. This wide range and network of partners required a careful coordination mechanism and system. UNDP delegated this coordination responsibility to IUCN. Accordingly, the project secretariat at IUCN sought to guarantee that the project is well coordinated, managed and administered.

To achieve effective coordination, the Project identified relevant institutions and agencies to provide strategic policy oversight and guidance. In addition to that, consideration was taken of the individual role each institution would

play in leveraging resources, adopting, promoting and replicating CCA models. Furthermore, the ability to promote conservation tools and also instantaneously adopt project lessons to inform ongoing policy processes in the country and entrench sustainability beyond the Project, was a critical consideration.

Table 2: The Consortium partners, their roles and impacts

Partner institution	Strategic role alongside providing oversight	Result of the partnership
National Environment Management Authority (NEMA)	1. Leveraging resources 2. Adopting, promoting and replicating the CCA model 3. Embracing project lessons to inform environment policy processes and compliance to environment laws in the country	NEMA contributed 100,000 tree seedlings towards lake buffer re-vegetation at the Lake Nakivale CCA site
Directorate of Water Resources Management (DWRM)	1. Adopting, promoting and replicating relevant conservation tools, specifically for the catchment-based approach to water resources management (CBWRM) 2. Leveraging resources through water catchment management programmes, 3. Adopting project lessons to inform ongoing policy processes for CBWRM	DWRM and the World Bank are considering the Lake Mburo - Nakivale - Kacheera project area for demonstration and scaling up of water catchment management activities in the Lake Victoria Water Management Zone

Uganda Wildlife Authority (UWA)	1. Recognizing, adopting, promoting and replicating the CCA model 2. Adopting project lessons to inform ongoing wildlife policy review processes 3. Leveraging resources for example. staff to manage problem animals at CCAs 4. Guarantee sustainability	UWA is developing a management plan for the Pian-Upe Wildlife Reserve that incorporates the management of wildlife in the 3 adjacent CCAs of Magoro, Mukura and Kapir. It is also considering promoting sport hunting in the area. The project is exploring opportunities for UWA to include the site in its tourist circuit for the region
Wetlands Management Department (WMD)	1. Leveraging resources, 2. Recognizing, adopting, promoting and replicating CCA models, 3. Adopt project lessons to inform ongoing policy processes 4. Entrench sustainability beyond the Project 5. Technical backstopping and support supervision	WMD seconded staff, provided a vehicle and co-financing to the project. Project lessons informed drafting of the National Wetlands Resources Management Bill. It spearheaded preparation of the Lessons Learnt book to promote the wetlands CCA approach
Ministry of Finance, Planning and Economic Development (MFPED)	1. Leverage resources through WMD and District LGs 2. Ensure sustainability beyond the Project	There is evidence and basis for WMD and District LGs to negotiate for increase in funding allocation from MFPED, through the Wetlands Non Conditional Grant to Local Governments
Ministry of Local Government (MoLG)	1. Adopt and replicate project lessons to inform natural resources governance policy processes	Enhanced capacity of local communities, local leaders and technical officers to management biodiversity outside PAs
Ministry of Tourism, Wildlife and Heritage (MTWH)	1. Adopting, promoting and replicating CCA models, 2. Immediately adopt project lessons to inform wildlife policy review processes.	Following continuous engagement of the policy review committee, the draft national wildlife policy reflects the CCA strategy

District Local Governments (Rakai, Isingiro, Katakwi and Ngora)	1. Adopting, promoting and replicating CCA models, 2. Adopt project lessons to inform ongoing district-level environment and natural resources policy processes 3. Leveraging resources	Districts provided staff, vehicles, land and co-financing, and have integrated key activities from the CCA management plans into their development plans, thus ensuring sustainability of interventions

For effective coordination, the COBWEB Project partners held quarterly planning and reporting meetings and monitoring field missions with representation from partner institutions, where they would reflect on progress, discuss the implementation challenges and how to overcome them. Furthermore, in order to ensure smooth and timely delivery of the project outputs, the Project Coordinator also undertook frequent joint field missions to provide technical backstopping and support supervision to project activity implementation.

The Project Secretariat also ensured continuous communication about project implementation issues including progress, emerging issues for uptake on ongoing policy processes, identification of policy opportunities with project IPs in order to maintain regular contact with partners and the donor. In the process, several useful lessons can be drawn;

1. The setup of the consortium should be strategic, with a purposive selection of members, in this case Government and Civil Society. Consideration should be made of the strengths and weaknesses of each institution, so that where there is need to consolidate efforts, this is easily done in a timely and effective manner. This also ensures a strong convening power, with the ability to influence government policy processes; for example through its unique set up, the consortium was able to influence the Wetlands Resources Management Bill formulation and the Wildlife Policy review process. Furthermore, in order to further leverage its influence, the consortium held annual policy meetings at the national level where outcomes of the project were presented and discussed. As a result of this process, project outcomes have been used to inform local and national decision making processes.

2. Implementing a wetlands biodiversity conservation project through a consortium gives partners an opportunity to build on each other's strengths and complement one another to overcome some of the technical challenges on the ground. NU is strong in biodiversity monitoring and therefore spearheaded this component. WMD as the technical and mandated government institution for wetland management supported local planning and bye-law development processes at LG level, whereas, IUCN and UWS spearheaded the wise use and livelihood aspects of the project, including lobbying and advocacy.

3. Another important lesson is that the consortium setup plays a dual role; one being ensuring the effective implementation of the project, but the other is that it enhances capacities within the implementing institutions in their area of expertise. This is because they are open to criticism by the other members since it is an equal partnership and there are several forums for discussion and feedback. For example through the consortium, partners were able to work on larger geographical scale and reach a wider area in a much shorter time. COBWEB was able to cover the wide Bisina - Opeta wetland complex in North-eastern Uganda and the Lake Mburo - Lake Nakivale wetland system in South-western Uganda. To ease the work and maintain the coordinated approach, Nature Uganda spearheaded all activities at the North-eastern project site area, while Uganda Wildlife Society took lead in those at the South-west project site area.

4. There is need to build and setup clear institutional arrangements for continuity in the event of the project closure. This may involve capacity development and strengthening. In this regard, the COBWEB Project supported the implementation of the decentralization policy through strengthening local structures, and informed the local planning cycle to ensure that CCA management plans were integrated into Local Government Development Plans and implemented. Ngora and Katakwi LGs, for example, provided land to construct the visitor biodiversity information centers, improved access roads to the centers. They also allocated some funds and materials to support building of canoes for bird watching, sport fishing and lake patrols to promote sustainable fishing. This not only promotes sustainability but also continuity in resource allocation for the interventions through existing planning and budgeting processes. The strategy also helps translate lessons "from policy to practice", and "from practice to policy".

Despite the positive aspects above, there was a challenge in implementing the project through the consortium. Partners' approaches to conservation work sometimes differed. Partners' priorities and mandates also varied. During implementation of the COBWEB, it took time to harmonize partners' approaches of work and also agree on prioritizing COBWEB activities. The regular joint reflection, planning and reporting meetings and field missions helped to address this challenge. It is therefore advisable to invest, time to harmonize approaches, principles and also prioritize project activities for implementation if a consortium is to work effectively.

2.3 Community Biodiversity Conservation is not an illusion

Lesson 3: Community biodiversity conservation must integrate livelihood options

Community biodiversity conservation seeks to restore or safeguard biodiversity

patterns through community-based sustainable management actions that will enhance the livelihoods of the people in the area. This is most successful when the process develops the biodiversity management capacity of community groups in enterprise development, conservation activities such as wetland management planning and restoration, resource management and monitoring through training, education and awareness campaigns. Additionally, the process should support review, enforcement of community environmental bye laws and dissemination of basic facts on wetlands to influence policy and decision-making process for both community and biodiversity.

In this way biodiversity conservation is able to benefit from diversity of business opportunities from a wetland and interests from communities, as well as conservation practices. The diversity should be used as an opportunity to develop the strength of biodiversity conservation and encourage business links.

The COBWEB Project has clearly demonstrated that when a relationship is built between an enterprise and resource conservation with a community-based management approach, the result is sustainable. An example is community policing of illegal fishing in project sites. The long-term tenure-ship of associations is driven by tangible economic gains that the community may obtain from the venture. This reflects the commitment of community associations to the sites that have been identified as conservation priorities, and to the communities that use, depend on and appreciate them.

The project experiences in the six CCAs showed that, the economic gains from natural resources could be a factor through which local communities and community resource user associations can be mobilized to share resources and experience, and bring local voices to national and international decision-makers. The project organized groups to promote (i) eco-tourism in potential tourism sites and (ii) sustainable fishing in other sites. The creation of CBOs formed part of the network, connecting local people locally, nationally, as well as with other institutions at national, regional and international level.

In the six CCAs, the PMT supported the development of local eco-tourism enterprises, credit saving schemes, soil and water conservation and development of CBOs. These initiatives were consolidated through building capacity of such institutions, helping them to protect their resources against illegal use, raising awareness of relevant legislation, providing training in the production of quality products from materials harvested from wetland, and helping to provide access to new markets. The initiative benefited both biodiversity and the local community.

Before the COBWEB Project started, conservation oriented CBOs were non-existent in project sites and where they existed, they had no formal scheme through which conservation messages could be channeled. In project sites, the legal status of the individual groups was addressed through the Sub County

and district registration processes. The registration of such associations helped focus the groups and the groups' objectives. Through this process, bye-laws against which the communities will protect the resource can be drafted and schemes such as rotational credit and saving can also be legalized. The ultimate goal achieved through this process was the establishment of a community level management system. This enabled people to participate and make decisions about resource management.

A number of lessons can be derived from the foregoing;

1. Community empowerment and education to recognize the value of their natural resources, particularly the priceless value of biodiversity involves a number of interventions including the following:

    - Creating and promoting enterprises that best bring out the intrinsic and economic values of the resource;

    - Setting up and strengthening local structures to promote good governance of resources through proper accountability from all stakeholders involved in natural resources management is very important;

    - Strengthening community capacity to look after their resources and also enforce local laws.

2. Another lesson is that for communities to appreciate the biodiversity, the link to the livelihood should be made clear and most importantly in the long term. For example, linking community biodiversity conservation and livelihood enterprises through CBOs enabled local councils and leaders to plan and implement decisions that address the needs of the community and biodiversity conservation. The CCAs were now able set sustainable targets for harvesting of wetland resources.

2.4 Adoptable tools are crucial

Lesson 4: Replicable tools promote successful and applicable management interventions

A number of tools were used in the project each addressing a specific need, but overall helping to ensure that interventions were applicable and would be sustained during and after the project life time. In addition, information generated would form the basis for development and implementation of several interventions, as well as monitoring project impact. The following is a brief description of each tool, outcomes and key lessons that informed the consortium.

Communication Strategy

A Communication Strategy is a tool that defines the communication goal, objectives, messages and the channels to be used for dissemination. The overall objective of the COBWEB Communication Strategy is that stakeholders understand, appreciate and participate in the conservation of wetland biodiversity and integrate it in the planning and management of National PAs.

The development of the tool entailed a number of processes including; i) situational analysis to establish the information gaps and issues; ii) review of existing documents; iii) baseline surveys whose results form a baseline for measuring success of project interventions; and iv) stakeholder consultative workshops.

The tool includes a communication matrix that clearly outlines the target audience, the key messages, activities, the tools and channels to be used. It further includes an implementation strategy with key players, their roles and responsibilities and also looks at issues of sustainability, funding, monitoring and evaluation.

From the development and implementation of this tool, it has been realized that i) a communication approach that is participatory promotes ownership and enhances knowledge within and around the wetland systems; ii) the tool can also be used for marketing where promotional materials are developed to market local sites, in turn contributing to people's incomes and improving livelihoods; iii) stakeholders from technical institutions, Civil Society and the resource users are able to interact and share information which can be integrated in district and national plans; iv) the tool has been found effective in promoting attitude change towards conservation. An example is in Kapir (Lake Bisina) where the communities have shown willingness to co-support the project intervention, through financial contribution towards the establishment of the biodiversity and eco-tourism centres.

Knowledge, Attitudes and Practices survey (KAP survey)

KAP survey is a tool that was used in order to assess the knowledge, Attitudes and Practices of the stakeholders on wetland management and conservation. The data generated from the survey was a critical input into the participatory community conservation planning process and development of the communication strategy.

The surveys were conducted in two wetlands systems that are Lake Mburo - Nakivale wetland system in Western Uganda and Lake Bisina - opeta wetland systems in Eastern Uganda covering a total of 11 districts. The process involved administering of questionnaires at household level and key informant interviews for Local Council leadership from all the 11 districts.

The tool brought out the following lessons, which are useful in ensuring the successful implementation of wetland management i) political leaders, such as Councillors, and Resident District Commissioners, are important stakeholders, because of the political will they can cultivate and also buy into the interventions; ii) Civil society should be engaged in the process specifically for mobilization of communities, lobbying and advocacy for uptake of the project by the communities; iii) public mobilization should be given a priority to ensure ownership, replication and continuity of interventions; iv) schools are an important target audience and medium for highlighting Best Practices and developing positive attitudes within recipient communities; vii) for monitoring of effectiveness of interventions and also project impacts, the tool needs to be administered before commencement of the project and after the project; and viii) the tool informs the packaging and target outreach mediums for the different programmes.

Ecological surveys

The ecological survey is another tool that the COBWEB Project engaged in order to assess and determine the biodiversity and physio-chemical parameters in the two wetland systems of Bisina – Opeta and Mburo – Nakivale. The tool was used to document the baseline information of the two target wetland systems. Data on birds, fish, insects, water quality, mammals and plants were collected, analyzed and will form the basis for future monitoring of any changes. It also provides information for decision making. The tool was designed to document baseline ecological information, establish a standard method for biodiversity monitoring and identification of indicator species for biodiversity monitoring,

Through the application of the tool, the main lesson is that sampling should take into consideration seasonal factors, such as species turnover and changing weather patterns which have a bearing on the species and may increase the sampling error. The sampling frequency therefore, should largely be dependent on the monitoring needs, logistic constraints and seasonal variations. Furthermore, another survey will be critical after 3 years, in order to assess the impact of the COBWEB Project, particularly on the ecological character of the different wetland systems and the livelihoods of recipient communities.

Ordinances and Bye-laws guidelines

Ordinances and by-laws localize, enhance and support the existing national legal framework related to the management of natural resources. The Ordinances and By-laws support local enforcement, regulation and ensure compliance. The development and enforcement of ordinances and by-laws for the management of wetlands is therefore, very important and requires active participation of grass root communities both in the law making process and environmental management. Such laws ensure rational utilization of resources, promote wetland conservation and prevent wetland degradation.

Despite the numerous success stories in development and implementation of ordinances and by-laws by some districts, the process of development and implementation is met by challenges and these include; limited technical and financial capacity, lack of political will, lack of clarity of legal, policy and institutional framework, lack of commitment about environmental issues and poor coordination between the concerned institutions.

As a key intervention of the COBWEB Project and in order to address some of the enforcement challenges, guidelines for developing District wetland conservation and management ordinances and bye-laws were formulated. The formulation of these guidelines was based on prior experiences and lessons learnt from wetland conservation in Uganda. The exercise entailed review of existing National policies and laws relevant to wetland management, interviews were conducted with various stakeholders ranging from selected districts, government institutions and Non - Governmental Organizations.

The guidelines are thus a critical tool that will help the LGs that are yet to develop and those that have yet to implement the ordinances. This is because the guidelines provide for details that may not be included in the ordinances. The guidelines also place the management of the CCAs under a recognized legal framework. Through the process of development of the guidelines some key lessons were learnt and they include; (i) securing support from the political leadership through regular engagement is crucial; (ii) public participation and stakeholder involvement at all levels is important; (iii) the need to harmonize the ordinances and by-laws with existing policies and laws is important; (iv) conflict of interest within the various institutions should be resolved to avoid sabotage; (v) stakeholders central to development and implementation of the ordinances need to be trained regarding the process of developing the ordinances and by-laws; (vi) once districts and lower councils make ordinances or by-laws, they should develop guidelines to operationalize such laws; (vii) for purposes of ensuring quick certification of the ordinance or by-law the local leadership should follow up with the Central Government; (viii) in order to have sustainability, there is need to have a fund for developing ordinances/ by-laws at the district level and a specific budget set aside for implementation; (ix) awareness needs to be created across all levels and should remain a constant process; (x) traditional knowledge, rules and norms should be integrated into the guidelines, ordinances and by-laws for effective management of wetland resources.

Once developed the by-laws and ordinances will address very pertinent issues such as the Polluter Pays Principle, public participation/ collaborative management of wetlands between the local communities and the regulators; Ecosystem approach to wetlands management, sensitisation of the communities on the wise use of wetlands so as to encourage voluntary compliance; and financial sustainability of wetlands management and enforcement programmes by the districts.

Community Wetland Management Plans

A management plan is an important tool when it comes to management of any natural resource. The plan ensures that the resources are shared equitably and that sustainable utilization is part and parcel of the formulation process of these plans. Community Wetlands Management Plans were developed for the six CCAs and are currently being implemented. Prior to development of the plans input was obtained from the various surveys to inform project implementation. It was realized that management plans formed the basis for implementation of wise use strategies and without which the risk of degradation and loss of biodiversity was high. The planning involved a participatory approach. Through the process, the communities were able to resolve resource user conflicts and problems associated with the resource itself, because of the platform for dialogue provided by the tool and management measures proposed take into consideration wetland issues in the different user and conservation zones proposed

A key lesson from the use of the tool is that the process of management planning must be open, transparent, and participatory. In other words, the process should take into consideration the concerns and interests of the various stakeholders. In the process, the communities agree on a clear vision, objectives and management actions, and eventually own up to the process and the interventions proposed. Empowerment, commitment and ownership by the communities are therefore, key to realizing success.

Monitoring and Evaluation Strategy

The COBWEB Project developed a participatory Monitoring and Evaluation (M&E) Strategy as a tool to assess CCA management practices and progress towards the achievement of the project objectives. The aim of the strategy was to provide a systematic learning framework that can be monitored on the spot and interventions instituted to address any gaps and in that way better planning for future action is promoted. The tool thus provides a participatory framework for which achievements and outcomes of the project can be monitored and evaluated. It is designed with intention of being able to track and monitor specific changes in the project area from the different interventions. Results obtained from the project pilot areas will be used to strengthen the design and replication of effective interventions and strategies within the project area and areas where replication will be done.

The tool emphasizes the use of local and simple indicators which are developed and agreed upon with the communities. For a monitoring and evaluation tool to be appreciated and applied across all levels right from communities to LG and Central Government, it should be easily understood and quick to use.

Therefore, the COBWEB M&E Matrix has enabled stakeholders track, manage and evaluate the progress, success, lessons and emerging models from the

COBWEB Project. The Matrix will be useful in planning, management and decisions making for future interventions.

From the application, the lesson for the project is that the tool has been able to pick up how interventions have enhanced awareness of the need and elicited willingness among communities to engage in wetland biodiversity conservation. In addition, communities have been able to adopt the project community conservation models. However, the communities affirm that for these conservation initiatives to work, they need be tied to economically viable alternative sources of livelihoods and income generating ventures. The tool therefore is a useful tracking mechanism for both project outputs and outcomes.

Socio-economic survey

The Socio-economic survey tool was designed and administered with the overall objective of collecting baseline socio-economic information in and around Lake Mburo/Nakivale and Lake Bisina/Opeta wetland systems. The survey involved identification of stakeholders, competing uses, wetland based economic activities, social interactions and the contribution of wetland systems to the local socioeconomic conditions of the households. Through field consultations, the survey was able to identify and understand community livelihood needs that are obtained from the wetland systems, and the associated values they attach to them.

The survey is critical in informing the Communication Strategy, selection of livelihood related project interventions and in generation of a Monitoring and Evaluation framework for the project against which the project measurement of the process and impact can be done. The survey used both qualitative and quantitative methods that include literature review, key informant interviews and focus group discussions.

Arising from the use of the tool the learning point is that most of the communities around the pilot areas were agriculturalists and largely dependent on wetlands for a number of products. For the project to be able to record success stories, it should advise or even provide economically viable alternative livelihood sources so as to reduce the ecological footprint, increase awareness and where possible meet the capacity needs of the communities.

Overall, the key lesson from the various tools used is the need to triangulate them so that baseline information, trends in resource use and community livelihood and the existing capitals (human, social, financial, physical and natural). All this should be done as much as possible in a participatory manner, for ownership and commitment.

2.5 Exposure is a must!

Lesson 5: Mutual learning exchange visits are essential for appreciating and adopting Best Practices

Sustaining benefits and services from ecosystems without compromising their existence requires a high level of awareness and knowledge, innovation, well planned management as well as tested and proven tools. The COBWEB Project did this through demonstrating wise-use, promoting and integrating good community conservation practices into national processes and this was made possible through community exchange mutual learning visits to other CCA groups with related programs in the country. The Lake Bisina - Opeta Group went on such a trip to Kibaale Association for Rural and Environmental Development (KAFRED), Bigodi Eco-tourism Centre in Western Uganda. KAFRED is a membership organization that works with different stakeholders, with a goal of promoting ecotourism and conservation. It was started in 1992 with 6 members and has grown to over 100 members now. The mission of KAFRED is to "promote conservation and enhance community development."

Lake Mburo - Nakivale group on the other hand, visited a soil and water conservation program in Kabale District, Western Uganda with an objective of exploring approaches to managing soil erosion through digging terraces and their benefits on the environment and the community.

The exchange visits were organized with the objectives of: (i) learning from fellow community members who are already established and understand the functions and operations of similar ventures, (ii) understanding the community functions in relation to the established eco-tourism project and how the community can benefit from projects such as eco-tourism, (iii) understanding the basic fundamentals in community group initiated and managed projects.

The outcomes through the exchange visits are that communities from the respective project sites have been able to: (i) mobilize fellow community members to share experiences from the mutual learning trips and sensitization on importance of conservation and the need for community initiatives, (ii) form CBOs with conservation committees to steer the work within their localities, (iii) explore marketing opportunities for eco-tourism centres through the media and creating links with tour companies to ensure sustained income and conservation of the resources, (iv) collaborate with LGs and other Project Partners through capacity building.

From these outcomes it is important to note that; (i) community programs cannot be developed or managed single handedly they require diverse skills, resources and support from stakeholders – particularly leadership at various levels; (ii) community programs such as eco-tourism do not translate to personal benefits, but rather should aim at the wellbeing of the entire community and survival of the ecosystems on which they depend; (iii) small

initiatives can translate into a big success if handled through a collaborative approach; and (iv) community interventions work better when there is evidence that it has worked somewhere else; building more confidence that the recipient community can, because their colleagues have already achieved.

The key lessons include the following;

- Exchange visits provide an opportunity for communities from the project sites to gain hands on skills and learn new economically viable innovations from communities that are already established, and understand the functions and operations of similar ventures.

- Understanding how communities function in relation to promotion of conservation and livelihood enhancement requires dedication, appreciation, patience and continuous application of models that are successfully applied in similar or related settings.

- Understanding the basic fundamentals and dynamics in community group initiated projects. Community managed projects can best be achieved through sharing lessons and experience from people of different geographic and diverse ethnic backgrounds but able to work on similar programs productively

Overall, the exchange learning trips were a benefit to communities since they learnt from a wide range of programmes including: establishment and designing of eco-tourism activities, community projects, soil and water conservation programs, site management, meeting visitor expectations and managing community expectations.

2.6 Climate Change - the unforeseen visitor

Lesson 6: Building on local experiences and knowledge provides the basis for addressing new emerging issues

The case study presented here is a classic example of how variability in climate conditions can influence the economic activities and coping strategies. The example is a wetland system, on one hand pastoral communities in drier lands and on the other hand cultivators in wetter areas. This kind of scenario presents a huge potential conflict amongst local users; but provides conservation opportunities for local organizations to ensure sustainable resource use and management.

Adaptation to Climate Change

The farming community in Lake Bisina – Opeta wetland system have suffered from droughts, change in weather patterns, floods, high temperatures, land degradation and crop failure. These have threatened food security

and settlements, forcing farmers to opt for new alternatives in search of better conditions. Traditional farming communities in this wetland system are surviving amidst climate change, focusing mainly on their agricultural practices and their cultural norms. The most common coping strategy during drought is cultivation and grazing in wetlands. The coping strategies therefore, need to be promoted with a broader national understanding on the extent of climate change impacts and how people are adapting to them. In that case, the consortium encouraged regulated wetland activities, with informed principles that take into consideration local norms and practices.

The community reports indicated that "the lake was sinking" and the wetland around our intervention area was "disappearing". Translating this community observation into context made more conservation sense. The silting of wetlands and change of habitat conditions has been attributed to poor farming methods in the upstream catchment. This problem is compounded by the immigration and camp establishment by refugees from neighboring countries and unsustainable use of resources. Amidst the changing climate, coping mechanisms that take into consideration community local knowledge were important, for example the soil and water conservation technologies upstream helped control the silt load. For communities living along the shores of vulnerable lakes, an agreement to create buffer zones led to the establishment of control belts and an improvement in the water quality. Generally, little is known about how affected communities respond to climate change but perhaps more proactive approaches and acceptance of new innovations by the communities are themselves coping strategies.

Through the COBWEB consortium, it has been possible to create the conditions for the conservation of critical wetland habitats, as well as for sustainable development in the area. The capacities of the CCAs to influence decision at both Sub County and district levels have been enhanced. This answers some objectives in sustainable development and local district level wetland management initiatives and strategies for actions.

The communities now also recognize that one good example of sustainable wetland use option is the development of eco-tourism. Eco-tourism and other nature-based tourism activities are being promoted as a sustainable economic alternative for the areas with real potential for tourism development. This has stimulated local interest and support for the development of eco-tourism initiatives managed by local people. Some community members have already been trained on guiding and visitor handling. The income from such eco-tourism ventures can be used to support other community initiated projects.

The PMT was impressed by the level of knowledge within the community in relating changing climate and resulting consequences. For example potential floods which seem to be preferred by the fishing communities as fish stocks increased during the El Nino' yet these are worst times for the cultivators. Such preferences and the changing climate need to be considered when

incorporating traditional knowledge and activities for conservation with the local actions.

The main lessons that can be drawn include;

1) Communities have a wealth of knowledge and have over time been putting in place coping and adaptation strategies to the impacts of Climate Change and variability. These once considered provide viable sustainable blocks to addressing the issue, and indeed informed the project. Therefore, preferences, changing needs and coping strategies should be derived through community knowledge and experiences as well as external influence.

2) It is also important that policies for climate change recognize the role of local people and give local and indigenous people a share in the responsibility for wetland conservation. Much of the response to the challenge of living with Climate Change will also need to be local, and should be facilitated through empowered local organizations. Different organizations will then focus on building local capacity to address such local challenges. There is considerable interest in Payment for Ecosystem Services (PES) and there is evidence to suggest that PES programmes will be more sustainable when they act to empower local institutions and reinforce intrinsic motivations, thus ensuring ecosystem based adaptation.

2.7 Long term empowerment of communities is vital to success

Lesson 7: By building on the past and empowering communities for the future, their expectations can be managed

Local-level involvement and participation is one phase in communities' longer-term learning and improvements in their natural resource management and livelihoods. This follows the general concept of community development and participation to facilitate change and creativity by taking them through different learning processes and phases. Lessons learnt in one phase can considerably accelerate and improve the next phases.

This is because, community involvement and participation in projects is often prone to antagonism depending on the recipients and also unrealistic expectations. The first step in managing the expectations in the project areas was to ensure that the communities and their representatives had a good understanding of the project goal, objectives, outcomes and the respective roles of all the players. This was done through several consultations and planning meetings and dialogues with the communities and their representatives. This message was re-echoed throughout the project time frame and through various awareness programmes and production of different awareness materials the community was kept abreast on what to expect from the project and what was

expected from them.

It is of high importance for a successful local level wetland resource management programme, to identify the direct stakeholders for that specific resource. This includes; the resource users, for example papyrus harvesters, rice cultivators, cattle keepers and water user groups being defined as the people who were positively benefiting from the resource before the project intervention started and not the village as an administrative entity.

The local administrations have an important role to play in the subsequent steps of consolidating resource user plans and providing the legislative backing for them. Only if local resource users and their wetland resources are sufficiently protected by local by-laws, they will be willing to invest in the proper management of their resource. If the role of the local administration is not to manage the resources, but to support the resource users in their management endeavors, interventions at that level should consist of strengthening the capacity of Local Environment Committees (LECs) to formulate the necessary by-laws.

In this regard, communities were also empowered through strengthening linkages with Local Government and, better coordination with the consortium members and possible funding agencies. This prepared them much better for not only the sustainability of the current project investments but also for any next and other project. Indeed, the project interventions have been integrated into the respective Local Governments' plans for continuity and sustainability of the project efforts and also ensuring that the community and project expectations are met.

For communities' longer-term empowerment, an important skill learnt through the participatory needs assessment, visioning and compilation of action plans in the Community Conservation Areas was the ability to design good time and budget-bound livelihood and conservation interventions. A number of lessons can be drawn;

1) The use of a multipronged, interdisciplinary approach in ensuring success in executing the project is vital and should include stakeholder mapping and needs assessment to ascertain the players and their respective interests and possible impact on the project. A distinction should then be made through a participatory process of what the project would handle and the rest referred to relevant sector agencies in respective Local Governments. This in it's self-narrows down the expectations of the community from the project, and also provides a window for addressing some expectations outside the project jurisdiction.

2) Keep interventions clear in terms of magnitude and why it has limits in terms of extent. As the project executors there must be a deliberate

attempt to facilitate and cultivate community responsibility and commitment by tasking them to make own contribution whether in cash, time or material form. In all this, ensure that there is adequate stakeholder analysis so that you are furnished with information on the varied stakeholder interests, which you can use to map the coverage of the interventions.

3) Documentation and use of testimonies on the benefits accrued by some beneficiaries and Mutual Learning visits to other communities, clearly helps to keep community expectations in the correct perspective, because they are informative.

2.8 Livelihoods: the impetus for successful CCAs

Lesson 8: An integrated wetlands and livelihoods management approach is key to the success of CCAS

Practical demonstration can be used to show the direct link between the benefits of wetland conservation and people's livelihoods. The COBWEB Project demonstrates how to use a given livelihood issue like poverty or water scarcity as an entry point to promote sustainable wetland use and management. In the COBWEB Project, the primary focus was the direct link between wetland conservation and livelihoods. Focusing on the direct livelihood needs and working with the communities to demonstrate this value instigated the interest to get more people involved, to guard and manage the resource.

As a first step, baseline assessments were done to reveal entry points based on either challenges or the opportunities that exist. However it is important to note that sometimes the entry points are very simple and require removal of barriers while others may be difficult and require synergies with other institutions for them to work. For example, the land owners at both COBWEB sites only needed exposure to the practice of soil erosion control to address their problem while the fishers only required being encouraged to catch bigger fish sizes so as to attract higher prices. It is these assessments done in a participatory manner that enabled people to understand the link between wetland conservation and their livelihoods.

Considering this integrated nature of wetland-livelihood issues, the assessments took into consideration entire wetland catchment areas, and as a result, project interventions later extended to cover various parishes around the wetlands, for example construction of soil and water conservation structures along surrounding hill slopes to control soil erosion and reduce wetland and lake sedimentation at the Lake Nakivale and Lake Kacheera sites in south-western Uganda.

The community-based biodiversity and livelihood monitoring approach is also an innovation the COBWEB Project has used to highlight the integrated

wetland-livelihood management approach. When the communities established the first soil and water conservation trenches in the catchment area of Lake Nakivale CCA, they were amazed at the impact one trench made in reducing the flow of the run off. Because of these early achievements, more people and the LG were encouraged to get more involved. The evidence played a big role for maintaining momentum of the project. The participatory M&E strategy enhances the motivation to continue with the process.

However, it should be noted that the CCA model may not be effective for demonstration of the wetland-livelihoods integrated approach in extensive wetland systems. This is because managing huge wetland systems is quite complex, because they are characterized by a diversity of people, communities and governance structures, and their needs and aspirations may vary across the wetland system. Accordingly, a single management structure, for example, may not be feasible and effective. It is therefore recommended that, smaller and manageable areas should be mapped out as CCAs to be overseen by communities while building upon the wetland-livelihood linkage. The smaller CCAs can then be consolidated later within a broader framework (for example, a framework management plan) whose approval can then be sought at higher governance levels for effectiveness to be achieved. From the processes, key lessons to learn therefore are that;

1. Integrated wetland-livelihoods approach facilitators need to patiently invest in time. This is because the processes to identify the wetland-livelihood issue, build appreciation about it, rapport, confidence and skills to effectively engage communities in planning and implementation of appropriate interventions take time. The processes took the COBWEB Project a full year, but subsequently promoted effectiveness and relevance of the approach. The point to note here is that it is a process, that is refined overtime, as opposed to a single day exercise or activity, requiring the use of different participatory tools.

2. Evidence of success and visibility of benefits that enhance livelihoods, especially those from conservation motives easier up-scaling of the project, and also uptake of the interventions. This is because there are visible results and lessons on which to build upon. For example, on seeing the benefits of lake buffer re-vegetation and soil and water conservation in the catchments of Lake Nakivale, 3 new farmers' groups have emerged and are replicating the soil and water conservation measures in other villages, and 4 other Village Councils (VC) are demarcating and regulating the use of wetland buffer zones.

3. Interventions can only receive meaningful success if the correct entry point is used to promote it. For the project, an integrated approach was used to develop the CCA models; promoting enterprises that promoted conservation and livelihood enhancement for example eco-tourism regulated. In doing this, several possible entry points were

explored and feasibility assessed to get the best use scenario. However, for such an integrated approach to be effective, behavior change needs to happen at community level through appreciation of the link between wetlands/ conservation and livelihoods.

4. Engagement of the different stakeholders in the community is not necessarily the same. Instead, this should be guided by the category of stakeholder in question, this is because their interests, aspirations and interaction with the resource (wetland) in question is not necessarily the same, not even the impacts can be measured equally.

5. Adopt a community-based biodiversity and livelihood M&E approach. The early achievements present evidence to attract more people and institutions to get involved in wetland conservation activities.

Once livelihood issues have been identified and addressed for example reduced sedimentation of a water reservoir through Lake Buffer re-vegetation, then wetland conservation initiatives are bound to be sustainable, even after project phase-out. A case in point, on appreciating the wetlands-livelihoods link, Katakwi and Ngora District LGs and communities contributed land to build visitor biodiversity information centres, funds and materials towards improvement of access roads and construction of canoes to promote eco-tourism. The fishing community at Kacheera CCA contributed the equivalent of US$ 1,041 to build a canoe for lake patrols to support sustainable fishing.

2.9 Transparency and responsibility a key necessity to CCA success

Lesson 9: Representation and accountability is the foundation for effective wetland CCA management

For the wetland CCA model to be successful, local communities and leadership need to be fully involved in all decision-making processes, about its set up and management objectives. With this, they become supportive in the implementation of CCA management activities.

To facilitate this in the COBWEB Project, an initial assessment was conducted to understand the various pre-existing institutional structures, both formal and informal that influence use of the wetland resources. The analysis provided a better understanding of the social, political and economic contexts, and the dynamics of a community as it interacts with the wetlands resource. In the meantime, this can be used as the chance to identify opportunities and barriers that could provide the entry points to facilitate the process to negotiate and plan for the sustainable management of the resources.

The guiding principles were: the existence of local governance structures with convening power that is respected and able to actively mobilize the community to participate in various activities; exhibits mechanisms that allow it to be held accountable by the community; provides the opportunity to represent the entire community rather than specific interest groups to enhance free expression of views and promote a sense of belonging and representation among all community members. For most of CCAs of the COBWEB Project, these principles were mainly met by the BMUs which usually had the power to convene, as well as have accountability measures for their constituents. However, although they did not represent all interest groups, they were used as entry points and integrated into the wetlands management organization formed to represent the wider community. In addition, direct links to statutory LECs that are mandated by the Local Government Act of 1998 to manage natural resources in respective jurisdictions were made. Most of the LECs had been unable to function due to their very low capacities however; through the intervention of the COBWEB Project this has been addressed.

Furthermore, because the basis for CCA is community participation, local governance structures are best placed to implement or over see them since communities easily identify with them, in the daily decision-making processes as well as conflict resolution. It works best when local knowledge and structures are respected and built upon, because communities have a better understanding of their areas and implications of various resources management decisions that may be made.

In all this, the role of the facilitators of CCA governance structures should simply be complementary and advisory. They should facilitate discussions at equal levels between communities and statutory local governance structures in order to identify the best route to the desired change. It is prudent to respect their customary norms, rules and regulations. These usually form the basis for acceptance, sustainability and commitment. The COBWEB Project adopted some aspects of the customary rules and regulations that were relevant to the management interventions, and successfully transformed them into sections of the by-laws that supported management of the wetland CCAs. For example, all CCA drew on their customary guidelines that prohibited fishing during particular seasons that were considered high breeding season, marking and banning fishing in breeding grounds. In Kacheera, there was official recognition and designation of areas for cattle watering points and banned discriminate watering of animals that had contaminated most of the water. At these points, the project supported the construction of water troughs to reduce on direct watering of animals in the river.

Once the governance structure is determined, it is important to build capacity of the local governance structure based on a self-evaluation to enhance their performance. For the case of COBWEB, various capacity development exercises were undertaken and complimented with exposure visits. In addition, tools such as guidelines to By-law development, wetlands edge gardening,

were provided for use in guiding the implementation process. A number of lessons can be derived from this process and they include;

1. The need to set up clear roles and responsibilities as well as accountability measures for the governance structures. This is with the objective of reducing on conflicting mandates, ensuring accountability and also timely delivery of outputs. For example in the structure, Resource User Groups (RUG) agreed to spearhead daily policing of resource use and in that regard, decided on areas of protection and management that contribute to the health of the overall ecosystem. In addition, a clear monitoring and reporting system was drawn and this included participatory checks among and by the various user groups to assess each other's progress in implementation of their plans. They also provided forums were all stakeholders, including the community were convened and it was during this, that self-assessments and reflections were done making all concerned accountable. As implementation progressed, the regular forums for reporting on implementation by various stakeholders were used as policy platforms that discussed other issues even beyond the CCAs. These enhanced the cohesions among the community. The community used these platforms to engage their Local Government Policy Makers to demand services. For example, the land at Kapir and Magoro at the CCA centers was as a result of this demand. At the Lake Nakivale CCA, owing to local priorities and demand, the district local government had to post an Agricultural Extension Officer that was specialized in soil and water conservation.

2. The CCA wetland management plan and governance structures agreed on; need to be anchored to government structures or structures that will ensure continuity after the project. This was to ensure that the legal framework provides formal recognition and sustainability of the agreements and the governance frameworks adopted. The advantage for the project is that, the natural resources management in Uganda is under a decentralized system of governance thus providing a conducive environment to implement CCA. But whatever the governance system, it is the principle which matters. In effect in this case, the COBWEB played a catalytic role to enable implementation of the decentralization policy. For example, as a result the CCA governance group at Kapir applied for and received financial support from Kapir sub-county Lower Local Government for the construction of a canoe to transport tourists for bird watching, and also supported lake patrols against unsustainable fishing practices. The management structures developed was registered as Community-Based Organizations at sub-county and district levels since they were the best opportunity for formal recognition by the policy organs. The community rules and procedures for managing the wetlands such as observing the buffer zone and protecting fish breeding grounds were turned into by-laws

which were agreed and recognized at the Local Government level.

These early lessons can indeed guide replication of these wetland CCA governance approaches elsewhere. However, the biggest challenge still concerns the sustainability of the governance systems, considering the new challenges that keep emerging; for example, population growth and its associated pressure on wetland resources. COBWEB's sustainability plan therefore, deliberately seeks to integrate its local governance structures into the more robust formal government structures and seeks their formal recognition.

2.10 A clear and practical exit strategy sustains interventions

Lesson 10: Sustaining CCAs: How to integrate a sustainability plan

To entrench sustainability aspects into CCAs requires that the project builds upon a number of opportunities that were either created or identified during implementation. The sustainability plan is therefore, to continue engagement in these different policy processes which take time. However, effort should be made to ensure that the key players in the legal framework formulation, implementation and review processes are kept abreast of events, as they unfold through continuous engagement and briefings so that the CCA are integrated in the mainstream policies for continuity. A number of lessons can be drawn;

1. Strategically link project activities to ongoing policy processes. For instance, the collaborative approach with Government of Uganda has created an opportunity for evidence-based project lessons to directly inform the drafting of the National Wetlands Resources Management Bill under preparation and the National Wildlife Policy under review.

2. Strategically select Project Board members through whose institutions the lessons and Best Practices can be replicated and resources leveraged to finance them. For example the Government of Uganda – Joint Sector Review of October 2009 recognized the need to promote Catchment-Based Water Resource Management (CBWRM) as the Best Practice to ensure rational and sustainable utilization, effective management and safeguard of water resources so that there is adequate quantity and quality of water to meet the social welfare and economic development needs of the people. In this regard, the Government of Uganda, through the Directorate of Water Resources Management (DWRM), has started to operationalize CBWRM in the entire country. Considering that DWRM was adopted as a member of the COBWEB Project Board, the project will promote up-take, replication and leveraging of resources towards CBWRM activities initiated by the project for example soil and water conservation in the catchments to reduce lake sedimentation, wetland boundary demarcation, lake buffer zone and tree planting in the catchment.

3. Seek opportunities and synergies with other programmes and partners in order to leverage resources for up-scaling and replication of Best Practices. Once built, such synergies also help to address risks and concerns that are external to the project. For example, although Climate Change was not a component for the COBWEB Project to address, options have been explored to seek synergy with programmes that will support adaptation activities. The Ecosystem-Based Adaptation (EBA) project of the UNDP, UNEP and IUCN, and the "Strengthening Sustainable Environment and Natural Resource Management, Climate Change Adaptation and Mitigation in Uganda" project of UNDP provide such opportunities for building synergy and leveraging. Leveraged resources can also support Business Development Services (BDS), including development of business plans, market linkages, and development of complementary nature-based enterprises and formation of income-generating structures such as SACCOs for financial sustainability.

4. Entrench and implement a community-based biodiversity monitoring system, with feedback mechanisms institutionalized and linkages created with existing research processes and mandated institutions. COBWEB's community-based biodiversity monitoring system was linked to Nature Uganda's bi-annual bird counts; which is linked to an education institution namely; "Makerere University's biodiversity data bank." Strong links were also being created with UWA to train and build capacity of "community rangers" to monitor and manage wildlife outside the Lake Mburo and Paid-Up Protected Areas thereby, contributing to a reduction in human-wildlife conflicts and improving livelihoods without loss of biodiversity at these sites.

5. Integrate interventions including the resource needs into local or national planning, and budgeting mechanisms to ensure continuity and replication. This was the case for the COBWEB and involved the integration of community management plans, CBO registration at the district and also capacity development success to be ensured. For instance owing to this, Local Governments at COBWEB sites contributed substantial resources in form of land, finances and staff time towards project implementation. Even after project phase out, this will ensure budget allocation towards implementation of the biodiversity conservation activities integrated into the development plans.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 Conclusions

Uganda's wetlands are extensive and form a complex network of fresh water reservoirs that release water, recharge underground aquifers, regulate floods and purify water. This is not to forget, the important and varied products that they avail to the communities hence, contributing to peoples livelihoods. However, the management of these important resources still requires a lot of effort and involvement of the various stakeholders at all levels. The urgent need to extend Protected Area Network to include and protect wetland ecosystems adjacent to the terrestrial Protected Area Network in Uganda, has now become very apparent.

Although, Protected Area Networks have for long been the focus of natural resource management in Uganda, wetlands were not given the endorsement they deserved but rather focus was on forest reserves and wildlife reserves. To this effect, the COBWEB Project did initiate a project where protected area management paradigms were developed, piloted and adopted in two wetland systems of Mburo - Nakivale in South-western and Bisina - Opeta in Eastern Uganda. After three years of implementation, the project has so far registered a number of success stories which have been shared in this Lessons Learnt book.

The consortium of the different partners and government, has proved the fact that actively engaging government right from the on-set creates direct avenue to inform and influence policy and planning processes. The power of an invigorated consortium coupled with good leadership has shown that partners can complement each other through their comparative advantages and be able to achieve the desired goals within a short time frame.

For a long time, conservation was regarded as a tool that only considers natural resources protection and in some cases preservation, and does not cater for people's livelihood options. However, through this project, emphasis was placed on the need to integrate livelihood options into Community Biodiversity Conservation. This is in realization of the fact that sustainability of such conservation measures are largely dependent on the tangible economic gains accrue to the communities. The project then built on the people's creativity and helped enhance their skills which in turn empowered the community to appreciate the relationship between the wetlands and people.

Owing to their importance, quite a number of tools have been developed and applied in the pilot sites. Most of the baseline surveys formed the basis for entry either based on challenges or opportunities and enriched the targeted awareness programs. However, the biggest challenge remains the continued emerging issues such as population pressure and Climate Change. A case in point is the noted species decline and habitat loss in Nakivale-Kacheera

Wetlands System, which gave a clear indication that population pressure, had hindered the achievement of some of the project objectives. Therefore, the tools should stand the taste of time and be able to capture and address all the anticipated issues that could have a bearing on project intervention during and after the project.

Reflections on the Mutual Learning Exchange Visit points, particularly the fact that exposure of the communities to other successful initiatives is the best approach and motivation through which communities can appreciate, share, translate and adopt economically viable innovations without the project imposing on them the given interventions. However, the communities need to appreciate the importance of starting small as a learning process, and that collaboration are key since the programs cannot be handled single handedly.

The role of local experience and rich traditional knowledge when tapped and incorporated into local actions remains an important element and lesson for fostering acceptability, and also guiding timely project interventions. During project implementation, it was realized that different Resource User Groups appreciated the different seasons and changing climatic conditions which they informed planning such as planting seasons and fish harvesting.

Another important lesson learnt through working with the various players, that community participation and empowerment was pivotal in the success of project interventions, and this ensures that ownership and sustainability of current project interventions and other similar projects is obtained. However, important to note is that communities and other stakeholders have expectations and their involvement from the start would ensure that their expectations fit into the objectives of the project. Good governance mechanisms and continued involvement and strategic engagement of all players are the cornerstone for success.

Lastly, for any intervention to succeed there is need to have a clear well documented sustainability strategy and exit plan to engrained in community planning as well as other relevant planning and budgeting structures. Mobilising Public Private Partnerships can then crown this, as the corporate sector undertakes to "give back" to the communities.

3.2 Recommendations

The viability of Wetland Community Conservation Areas as a management option has been tested and proven that it is feasible and can considerably contribute to biodiversity conservation. Having registered success, it is imperative to make the following recommendations;

- In view of all the emerging issues such as Climate Change and the discovery of oil and gas in Uganda, the project interventions should be

proofed against such eventualities and all future plans should integrate Climate Change issues or any other emerging issues relevant to the success and sustainability of the interventions.

- The need to enact by-laws is prudent as this would ensure compliance and sustain community adherence to the agreed modalities so as not to overrule the success stories and project achievements.

- Capacity building of Local Governments and other relevant stakeholders, particularly the beneficiaries (local communities) play an important role, but this should be based on the established capacity gaps as identified through self evaluations.

- Evidence based learning and registered early achievements can turn around the perceptions of the community members, and therefore while designing the project, it is important to include some activities that can easily register achievements.

- Institutional strengthening to promote and ensure enhanced performance is critical and should incorporate good governance and a practical exit strategy.

- Community empowerment and self learning, will promote the much needed appreciation for natural resources and the importance of conserving them for sustainable livelihoods.

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GLOSSARY OF USEFUL TERMINOLOGY

TERM	DEFINITION
Baseline survey	A study that looks at the particular set of conditions at a given time before the onset of an intervention
Biodiversity	The variety of life species in an area, plus the genetic wealth within each species plus the component ecosystems which these organisms live
Catchment	Is an area of land containing a wetland from which all water drains to the lowest point
Conservation	Managing a resource so that it is able to continuously fulfill its functions and provide goods for present and future generations
Community Conservation Area	These are natural ecosystems that the indigenous communities manage both for their livelihood improved but also for biodiversity protection
Degradation	This means the reduction in the quality and quantity of habitats, soils, water and other natural components of the environment
Incentives	A reward that gives extra motivation and encourages more production or involvement in a given intervention
Livelihood	A means and capability by which one obtains or earns a living
Management planning	A systematic and participatory tool which looks at the current situation and puts in place sustainable measures for which to get to the desired state
Participatory Approach	An approach where everyone with a stake in a given intervention has an opportunity to contribute, plan and make decisions about the project
Protected areas	Areas that designated and regulated for conservation because of their ecological or cultural values
Stakeholders	Stakeholders are all the people who stand to gain or lose something as a result of the project.

Sustainable Use	Wetland utilization which will ensure that the production of goods and services derived from use, are available at the same level that can be maintained for the foreseeable future
Wetlands	Areas, which are permanently or seasonally flooded with water and where plants and animals have become adapted.[The National Environmental Statute (1995), Uganda]
Wise use	Is the sustainable utilization of wetlands for the benefit of mankind in a way compatible with the maintenance of the natural properties of the ecosystem
Central Government	Administrative jurisdiction for centralized services
District	Highest Administrative Jurisdiction for decentralized services, for planning and budgeting
Sub county	Third level Administrative jurisdiction for decentralize services, for planning and budgeting
Local Environment Committees	Local structures provided for by the Local Government Act, 1998, to oversee and manage environment issues at all Local government governance levels
Community Based Organizations	Are local organizations formed by community members to oversee community led programmes, these for the case of Uganda can be registered, to give them a legal status

Extending Protected Area Networks to Wetland Community Conservation Areas

Lessons Learnt from Uganda

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