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INTEGRATED CO-MANAGEMENT OF ZAMBEZI/CHOBE RIVER FISHERIES RESOURCES

Project No.: WWF –9F0792
WWF-Norway –NORAD – 5012 - GLO-08/449-29

Phase 2

January 2010 – December 2012

WWF-Norway Final Project Evaluation Report

Project Name

Project Nos.:

WWF:	**9F0792**
WWF-Norway:	**5012**
Norad:	**GLO-08/449-29**

FINAL EVALUATION REPORT

16th December 2012

Prepared by

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Commissioned by

WWF, Namibia

CONTENTS

ABBREVIATIONS AND ACRONYMS

AWF	African Wildlife Foundation
CAADP	Comprehensive Africa Agricultural Development Plan
CCRF	Conduct for Responsible Fisheries
DoF	Department of Fisheries
EU	European Union
FAO	Food & Agriculture Organisation
FMA	Fish Management Areas
FMC	Fish management Committee
FPA	Fish Protected Area
IRDNC	Integrated Rural Development and Nature Conservation
IUCN	International Union for Conservation of Nature
KAZA	Kavango Zambezi
KIFI	Fisheries Research Institute
LFA	Logframe Analysis
MCA	Millennium Challenge Account
MFMR	Ministry of Fisheries and Marine Resources
MSc	Master of Science
NEPAD	New Partnership for Africa's Development
NRM	Natural Resource Management
NGO	None Governmental Organisation
NNF	Namibia Nature Foundation
Norad	Norwegian Agency for Development Cooperation
NRM	Natural Resources Management
PE	Project Executant

SAREP	Southern Africa Environmental Programme
SADC	Southern Africa Development Community
SAIAB	South African Institute for Aquatic Biodiversity
TFCA	Transfrontier Conservation Area
TOR	Terms of Reference
UNAM	University of Namibia
UNDP	United Nations Development Programme
WWF	World Wide Fund For Nature
ZAMCOM	Zambezi Watercourse Commission

ACKNOWLDEGEMENTS

I am most grateful to WWF, Namibia for contracting me to evaluate the Integrated Co-management of the Zambezi/Chobe River Fisheries Project, a task that was inspirational, particularly in seeing community members passionately talk about their role in management of the shared fisheries resources. I also thank Mr. Denis Tweddle of Namibia Nature Foundation, who tirelessly organised meetings and provided transport for me to meet relevant stakeholders during my assignment. Lastly, I thanks all the people I met, and for their enthusiasm in sharing views regarding the project's performance.

EXECUTIVE SUMMARY

The **Integrated Co-Management of the Zambezi/Chobe River Fisheries Resources Project** was designed to ease the problem of unsustainable exploitation of the shared fisheries resources, through implementation of a suite of interrelated strategies that included: (i) promoting cross-border collaboration in the management of the fisheries resources for the benefit of the riparian communities, and other stakeholders; (ii) piloting the establishment of Fish Protection Areas; (iii) brokering agreement between the lodge owners engaged in sport fishing activities and the local fishing/conservancy committees to reduce conflict between anglers and local fishers; and (v) capacity building in research and monitoring of the fish resources. The project's goal was: "***The shared Zambezi/Chobe River fisheries resources sustainably managed by promoting transboundary coordination and collaboration on the introduction of fully integrated fishery management systems***". Its purpose was to: "***Attain a fully integrated management system for livelihood and sport fisheries, that provides optimal benefits to all stakeholders reliant on this valuable resource in place in targeted pilot communities by 2012***".

This project was implemented between January 2010 and December 2012, covering the Chobe and Zambezi Rivers, including more than 300,000 hectares of floodplains in the eastern Caprivi, which in times of full inundation extend to the Kwando/Linyanti System and connects with the Chobe River and permanent backwaters to the Zambezi River.

To assess progress in the project implementation, a mid-term review was commissioned by WWF, Namibia in November 2011, which provided recommendations where specific intervention were required to improve effectiveness and efficiency in its implementation.

This report presents results of the final evaluation of the project, commissioned by WWF in Namibia, through NNF, forming part of the requirements of the funding agency, Norad/Norwegian Ministry of Foreign Affairs, through WWF-Norway. The main purpose of the Evaluation was to assess and review the relevance, effectiveness, efficiency, impact and sustainability of the project; and determine if the project had delivered on its intended benefits and ultimately provided value for money. This evaluation also serves as a guide for the design of similar projects in the future and contributes to organizational learning, and forms part of WWF's desire for transparency.

The final evaluation was carried out from 3-16th December 2012 by reviewing various project reports, attending the Transboundary Natural Resources Forum meeting, inspection of some project sites, meetings with key stakeholders, and undertaking one-to-one interviews with representatives of various stakeholders, such as NGOs, government officials, local communities, private sector/lodge owners and the Project Executants on the project's performance, i.e., relevance, effectiveness, and impact on

various aspects, including biodiversity, governance of the fisheries resources, and socioeconomics of communities reliant on fish and fishing.

Overall, the project's performance is summarised below as follows:

Relevance

This project was very relevant as it contributed to the abatement of overexploitation of the shared fish resources of upper Zambezi and Chobe Rivers. At global and regional levels, it contributed to the attainment of various conservation initiatives, protocols and frameworks, including:

a) The WWF 2020 Biodiversity Goals ("*Places - Biodiversity will be protected and well managed in the world's most outstanding natural places*");

b) The United Nations Code of Conduct for Responsible Fisheries (CCRF);

c) The NEPAD's Comprehensive Africa Agricultural Development Plan (CAADP) framework for sustaining fish production through integrated water resource management, supporting transboundary management, development of governance systems that protect the interests of the poor;

d) SADC Protocol on Fisheries which provides a framework for managing shared fisheries resources, trade and investment, law enforcement, and harmonisation of fisheries legislation;

e) The KAZA TFCA has adopted FPAs' concept, a product of this project as a tool for promoting aquatic resources conservation and fish production in its partner countries of Angola, Botswana, Namibian, Zambia and Zimbabwe; and

f) The Zambezi Watercourse Commission (ZAMCOM) objective, which is "*promote the equitable and reasonable utilization of the water resources of the Zambezi Watercourse as well as the efficient management and sustainable development thereof".*

Effectiveness

This project's effectiveness was achieved at various levels, including:

a) Having a lean project implementation structure, incorporating local community members who were trained and participated in capturing fish monitoring data, at field and market levels. The project's capacity also benefited from close collaboration with fisheries ministries, and departments in Namibia and Zambia, and NGOs, such as IRDNC and AWF;

b) Implementing the project within budget, and timeframe;

c) Having a well organised and systematic way of compiling and disseminating information generated through the project; and

d) Successfully establishing FPAs (Namibia) and FMAs (Zambia), with communities undertaking voluntary surveillance of FPAs in Namibia and voluntary handing over of some destructive fishing gear in Zambia.

Efficiency

This project's implementation was guided by a "project management plan", which was used as a communications tool, with clear set expectations and indicators for evaluating delivery on the planned tasks. The project's logframe provided useful platform for assessing the project's overall performance. In addition, project funds were efficiently and effectively utilised, with no over-expenditure, or extension of the project beyond the agreed time frame of three years.

Sustainability, Replicability, Magnification opportunities

The project had an exit strategy, based on securing additional donor funding from EU and other donors (Norad, SASSCAL, SAREP, MCA, Nedbank & National Research Foundation of South Africa), which provides limited financial relief on a programme that is obviously a long-term undertaking. In the follow-up EU funded support, strategies for sustaining this project beyond donor funding should be developed.

Achievement of the project goal and purpose

This project's achievement on output delivery ranged from good to very good and its contribution towards achieving the goal and purpose was good. The project's goal and purpose, however, could not be achieved within a short-term of 3 years. Co-management and transboundary collaboration in management of fisheries, which were the underlying strategies for achieving the project's goal and purpose, are long-term undertakings – requiring sufficient time to build governance institutions at local, national and transboundary levels; and for innovation; conflict resolution; knowledge generation and social learning. This requirement was recognized by the project implementers who designed a fall-up project to be funded by EU, titled "***Community-based management of river and floodplain fisheries in Namibia, Zambia, and Botswana***", which essentially builds on the foundation of this project.; thus providing

opportunity to fully deliver on additional milestones that will contribute towards the attainment of the project's goal and purpose.

Contributions to socio-economic situation in the project area

Although no follow-up socioeconomic survey was carried out, the importance of fish in community livelihoods is likely going to improve, more especially once the local regulatory frameworks have been fully implemented and the local governance structures have acquired sufficient capacity (financial, human & equipment) to sustainably manage the shared fisheries resources. The baseline socioeconomic information exists; the Project Executants will commission a follow-up socioeconomic study as part of the tasks to be undertaken during implementation of the EU funded project.

Contributions to natural resource governance and management

This project strengthened grassroots' fisheries governance institutions, and transformed the "open access" that characterizes the Zambezi and Chobe fishery to a "common property resource" governed under locally and collectively constituted byelaws. Through the community Transboundary NRM Forum, communities have identified elements of the Fisheries Legislation (*e.g.*, Regulations on fishing closed season, mess size of gillnets & abolition of monofilament and drag nets) that should be harmonized to promote standardized approaches to the management of the shared fisheries resources. This project exemplified a rare phenomenon of devolving the responsibilities of fisheries management from the state to local communities, providing a unique opportunity to provide lessons at SADC Region level on fisheries co-management at transboundary scale.

Recommendations

Project sustainability

a) NNF should further pursue amendment of the Namibian Inland Fisheries Act to allow for full decentralisation and delegation of fisheries management to Conservancies, and the gazettment of FPAs. Similarly, AWF should facilitate the process of Gazetting FMAs in Zambia.

b) NNF should facilitate the process of developing mechanisms for community self-reliance in undertaking and sustaining fisheries management, conflict resolution, knowledge sharing and social learning. This process should be supported by:

- WWF negotiating with the governments (Namibia & Zambia) for the transference of licensing responsibility to local fisheries governance structures, so that revenues generated through these can be ploughed back in fisheries management.

- WWF and other NGOs lobbying for the abolishment of the current system of lodge owners paying natural resource use rights rentals to the chiefs in Namibia. Instead, payment of such fees, inclusive of all uses (game viewing, and sport fishing) should be paid to Conservancies, through their governance structures.

c) NNF should broker formal signing of Agreements between the lodge owners and Fish Management Committees/Conservancies, stating exactly the responsibilities of either party in the management of the FPAs and the fisheries resources. Similar Agreements should be signed among all primary stakeholders.

d) NNF, and other NGOs should further build the capacity of local governance institutions so that they can undertake, and sustain surveillance and management of their FPAs into the distant future

e) WWF/NNF should adopt an adaptive co-management approach to facilitating co-management of the transboundary shared fisheries resources as an overarching strategy to allow for learning-by-doing and flexibility in dealing with uncertainty and complexities of projects of this nature, which take a long time to fully deliver on their goal.

Transboundary co-management of the fishery

a) NNF, supported by KAZA TFCA Secretariat should facilitate formal harmonisation of the transboundary approaches to fisheries management and utilisation.

Biodiversity, ecosystem health and services

a) NNF/WWF should develop criteria for assessing the project's impact on aquatic biodiversity, including ecosystem's health and services, and implement these during the EU follow-p project implementation.

Socioeconomics

a) NNF should broadly share information on the follow-up socioeconomic survey, as this information will demonstrate impact of the Integrated Co-management of the Zambezi/Chobe River Fisheries Resources Project on the people who rely on fish and fishing.

1. INTRODUCTION AND PURPOSE OF THE PROJECT EVALUATION

The fish resources of the Zambezi and Chobe Rivers substantially contribute to rural livelihoods of the riparian communities, in terms of food and employment (van der Waal, *et. al*, 2011). Sustenance of this important fishery is however threatened by over-exploitation, which is being aggravated by open access to the fishery - where the right to fish is accorded to anyone and the individual fisher's incentive is to capture as many fish as possible, without attendant responsibilities. This scenario has increased the number of fishers who, over the past few years, have significantly increased fishing pressure, which is being exacerbated by the use of monofilament gillnets, drift netting, large dragnets and bashing, leading to much higher catches from the already depleted stocks (Hay & van der Waal, 2009). Such increased fishing pressure has potential to diminish the production of fish, limit the economic productivity of the fishery, reduce the subsistence and recreational uses, and reduce the genetic diversity and ecological resilience of the Zambezi and Chobe ecosystems (Gordon *et.al* 2006).

Conventional fisheries management, based on governments' sanctioned restrictions on the number of nets, mesh sizes, net lengths, and imposition of closed fishing during the fish breeding season have been difficult to enforce, due to governments' partial effort to enforce these restriction (Tweddle 2009), and this has been compounded by lack of broad-based stakeholder participation in the decision-making process for fisheries management; hence the governments' top-down fisheries management approach, has had limited credibility, and lacked social support for their implementation among the fisher communities and anglers. Furthermore, the subsistence and transboundary nature of the multi-species fishery, coupled with the dynamic characteristic of the floodplain fishery, make fishery management impossible through governments' sanctioned restrictions alone (Tweddle 2009).

To abate the observed negative trends, the **Integrated Co-Management of the Zambezi/Chobe River Fisheries Resources Project** was designed to ease the problem of unsustainable exploitation of the shared fisheries resources, through implementation of a suite of interrelated strategies – including,: (i) promoting cross-border collaboration in the management of the fisheries resources for the benefit of the riparian communities, and other stakeholders; (ii) piloting the establishment of Fish Protection Areas; (iii) brokering agreement between the lodge owners engaged in sport fishing activities and the local fishing/conservancy committees to reduce conflict between anglers and local fishers and optimise benefits to local communities and lodge owners from sport fishing; and (v) capacity building in research and monitoring of the fish resource .

This project was implemented between January 2010 and December 2012, and had a mid-term review in November 2011, specifically to assess progress in the project implementation and provided recommendations where specific intervention were required to improve effectiveness and efficient in its implementation. In this evaluation report, delivery on the mid-term review recommendations has also been examined.

1.2 Purpose of the Project Evaluation

The final evaluation of the **Integrated Co-Management of the Zambezi/Chobe River Fisheries Resources Project** was commissioned by WWF in Namibia, through NNF, and forms part of the requirements of the funding agency, Norad/Norwegian Ministry of Foreign Affairs, through WWF-Norway. The main purpose of the Evaluation was to assess and review the relevance, effectiveness, efficiency, impact and sustainability of the project; and determine if the project had delivered on its intended benefits and ultimately provided value for money. This evaluation also serves as a guide for the design of similar projects in the future and contributes to organizational learning, and forms part of WWF's desire for transparency.

The evaluation was undertaken from 3rd to 16th December 2012 by Dr. Simon Munthali, an Ichthyologist and independent consultant. Dr. Munthali has extensive experience in evaluating environmental, ecotourism and natural resources projects funded by a number of international donors and governments, including: IUCN, WWF, FAO/UNDP, World Bank, SADC, SARDC, EC/Tanzania, ULG, Norwegian Embassy/Zambia, Ministry of Environment/Malawi, and Mpumalanga Tourism and Parks Agency/South Africa.

2. METHODOLOGY

This evaluation was carried out by reviewing various project reports, attending the Transboundary Natural Resources Forum meeting (attended by 34 people), inspection of some project sites, meetings with key stakeholders, and undertaking one-to-one interviews with representatives of various stakeholders, such as NGOs, government officials, local communities, private sector/lodge owners and the Project Executants on the project's performance, relevance, effectiveness, and impact on various aspects, including biodiversity, governance of the fisheries resources, socioeconomics of communities reliant on fish and fishing, etc.

3. PROJECT BACKGROUND AND CONTEXT

3.1 Summary of project Information

Project Name	Integrated Co-Management of the Zambezi / Chobe River Fisheries Resources
Project Location	*Caprivi Region, Namibia* *Western and Southern Provinces, Zambia*
Project reference numbers: WWF WWF-Norad NORAD	 9F0792 5012 GLO-08/449-29
Project budget	*Total: 2 893 645* *2010: NOK913 582* *2011: NOK995 668* *2012: NOK984 395*
Donor(s)/ funding sources	*WWF-Norway via NORAD/Ministry of Foreign Affairs*
implementing agency and partners	Namibia Nature Foundation/Ministry of Fisheries and Marine Resources through WWF In Namibia
Contact person	Chris Weaver, Director: WWF In Namibia

Start Date:	*2010-01*	**Expected End Date:**	*2012-12*

Network Initiative / Ecoregion Programme / Priority Place(s)
Zambezian Flooded Savannahs – Ecoregion 98 Central and Eastern Miombo Woodlands – Ecoregion 88 (Slight influence)

3.2 Project background

The Integrated Co-Management of the Zambezi/Chobe River Fisheries Resources Project was a follow-up on the Phase 1 Project, titled "***Integrated Management of Zambezi/Chobe River System-Transboundary Fishery Resource, Namibia/Zambia/Botswana***", which piloted and tested alternative community fishery management practices intended to contribute towards integration of the fisheries management system for optimal benefits to all stakeholders. However as sustainable management of the fisheries through transboundary coordination and collaboration is a long-term goal, this ambitious project could not achieve its goal within 3 years of its implementation (Tweddle 2009; Weyl 2011). Accordingly the ***Integrated Co-Management of the Zambezi/Chobe River Fisheries Resources Project***, besides being expected to deliver on the specific outputs as outlined in Section 4.3 of this report, further consolidated the enabling environment for both local fisheries management and transboundary coordination and collaboration, such as, setting up of effective local

fisheries governance institutions, identification of fish policies and legislation that required harmonisation, and building the requisite capacity to manage the shared fisheries resources. By delivering on these, this project addressed the problems that have characterised the Zambezi/Chobe fishery; notably increased fishing pressure, which has been aggravated by the states' limited capacity to effectively enforce restrictions on fishing, limited stakeholder participation in the decision-making process regarding fisheries management, and inadequate local fishers' compliance with the states' sanctioned legal instruments for restraining the fishing pressure.

The success and sustainability of this project depended on a number of interrelated factors, including establishment of appropriate community-based institutions/local fish management committees, development of enabling environment for co-management of fisheries, and devolution of fisheries management responsibilities to the local fish governance structures. These factors have been given special attention in this report. Furthermore, there were many assumptions associated with this project's successful implementation, which have also been addressed in section 5.5 of this report.

3.2.1 Project location

The ***Integrated Co-Management of Zambezi/Chobe River System-Transboundary Fishery Resource Project*** covered the Chobe and Zambezi Rivers, including more than 300,000 hectares of floodplains in the eastern Caprivi, which in times of full inundation extend to the Kwando/Linyanti System and connects with the Chobe River and permanent backwaters to the Zambezi River (Fig. 1).

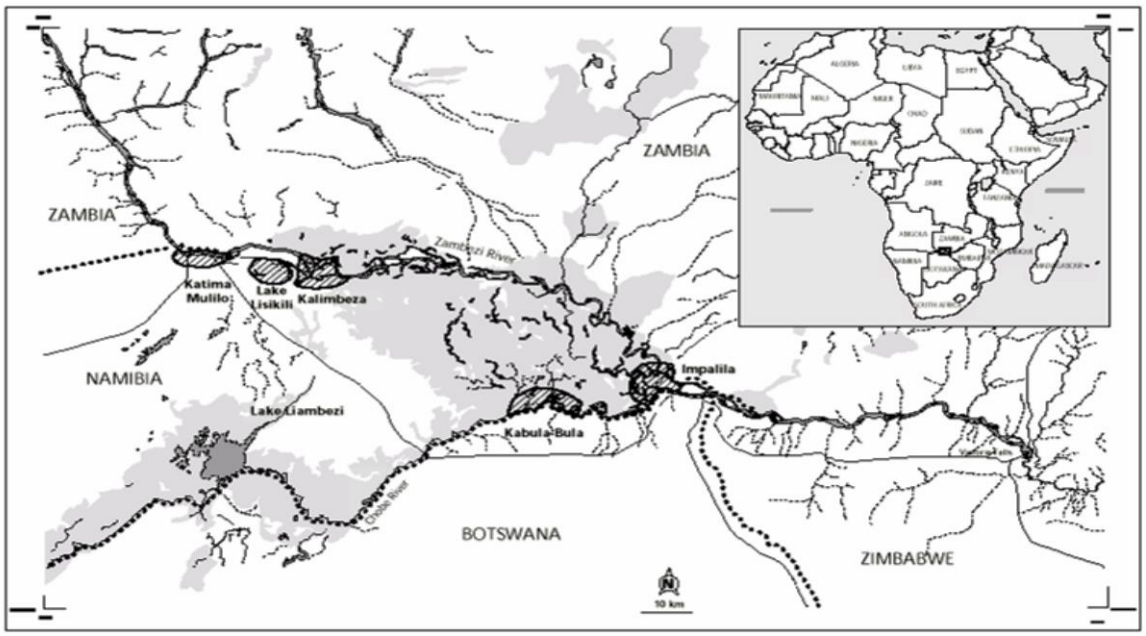


Figure 1: Catchment Area of the Integrated Co-Management of the Zambezi/Chobe River Fisheries Resources Project

The Zambezi River borders Namibia and Zambia for approximately 120 km between Katima Mulilo and Impalila Island, where it connects with the Chobe River. Depending on the magnitude and duration of the annual flood, both the Chobe and the Kwando/Linyanti Rivers flow into Lake Liambezi, which has sustained a large and valuable fishery since it refilled in 2009. Besides a section of the Chobe River which passes through Chobe National Park in Botswana, where fishing is not allowed, elsewhere in the project area, fishing is an open access activity, exerting unacceptable pressure on fisheries resources shared by Botswana, Namibia and Zambia.

3.2.2 Global and national biodiversity values

Timberlake (2000) provides details on the biodiversity of the Zambezi Basin. Floristically, three distinct vegetation covers can be distinguished in the Zambezi Basin. The wetland is dominated by *Parinari capensis*, *Annona stenophylla*, *Cryptosepalum exfoliatum*, *Trichilia quadrivalvis* and *Syzygium guineense* subsp. *huillense*, papyrus (*Cyperus papyrus*), rushes (*Typha*), reeds (*Phragmites*), and water lily (*Nymphaea*).

The floodplains are mostly covered by *Parinari capensis*, *Annona stenophylla*, *Cryptosepalum exfoliatum*, *Trichilia quadrivalvis* and *Syzygium guineense* subsp. *Huillense.*

The riparian areas are dominated by a wide range of vegetation cover, depending on the soli type. The most common species include: Mopane (*coleosperma mopani), Brachystegia spiciformis*, *Julbernardia globiflora, Julbernardia ,* Mchibi (*Guibourtia coleosperma*) and Bloodwood, Mukwa or Kiaat (*Pterocarpus angolensis*), Pod Mahogany (*Afzelia quanzensis*), African Ebony (*Dalbergia melanoxylon*), Panga Panga (*Millettia stuhlmannii*) and Leadwood (*Combretum imberbe*).

Zoogeographically, the Zambezi Basin is considered to be in the Afrotropical (formerly Ethiopian) realm and shows similarities in its fauna to many parts of the savannah or woodland zone of southern and eastern Africa, with no major centres of endemism or particular "hot spots" for most groups (Timberlake 2000). At least 195 species of mammals have been recorded in the Zambezi basin, which is renowned for its assemblage of large mammal species such as elephant, buffalo, giraffe, and lion and, until recently, rhino. Compared to East Africa there is preponderance here of browsers rather than grazers as the basin is mostly woodland rather than highly productive grasslands associated with the East African Rift Valley (Timberlake 2000).

With respect to the ichthyofauna (which was the main focus of this project), the fish species of the basin have been fairly well documented, principally owing to their

economic interest. At least 160 species have been identified in the entire Zambezi River (Timberlake 2000). Among which, 87 fish species have been identified from the Namibian section of the system, where 11 additional species have not yet been described (Tweddle & Hay 2009).

These fish species exhibit two distinct lifecycles, with most species in the floodplain environment being small, fast-growing and early-maturing, demonstrating characteristics of *r*-strategist species (*Cf*: Pianka 1978). They make spawning migrations out on to the floodplains as the water level rises and occupy all available habitats, from small rivulets to shallow ponds, large lagoons and lakes, i.e., taking advantage of the high productivity generated by flooding of terrestrial vegetation and other organic matter (Tweddle & Hay 2012). In contrast, the larger cichlid species and the predatory tigerfish take much longer to reach maturity (*K*-strategist species, *Cf*: Pianka 1978), and are dependent on deeper water such as main river channels, backwaters and lagoons to spawn. The young are found in the shallows close to vegetation in which they avoid predation, only moving out into open water when they are large enough to be safe from predation.

These two groups of fish species also respond differently from the fishing pressure, with the floodplain species being less vulnerable to the existing fishing methods, while the larger cichlids, such as *Oreochromis andersonii, Tilapia rendalli* and *Oreochromis macrochir* are most vulnerable as they are most targeted for the commercial fishery (Hay, *et. al* 2012), as they fetch a much higher price at the market than other species such as catfishes (van der Waal, 2011). This selective demand may lead to the disappearance of these highly valued species, which in the long term may lead to the economic collapse of the commercial fishery.

The designers and implementers of the ***Integrated Co-Management of Zambezi/Chobe River System-Transboundary Fishery Resource Project*** have argued that the different lifecycles of the Zambezi and Chobe fish species and the large natural fluctuations in recruitment generated by the complex flood regimes defies conventional fisheries management approaches based on setting of uniform quotas, effort, and mesh size restrictions, which are impractical to implement by the governments alone. Hence, the need for integrated co-management practices, which co-opts local fishers, traditional leaders, and other local governance institutions in regulating and managing the shared fisheries resources. This would be achieved through, amongst other strategies, establishment of local fisheries governance/management institutions, including development of the requisite capacity to manage the fisheries resources, and development of locally tailored fisheries governance constitution and byelaws to complement on the extant states' fisheries legislation. In evaluating the outputs of this

project, these requirements have been examined as the key perquisites for this project's sustainability.

3.2.3 Socio-economic value

There is growing recognition of the socioeconomic importance of the Zambezi and Chobe River fisheries, particularly as a source of affordable animal protein and household income. In the the eastern floodplains of the Caprivi, Namibia, for instance, a third of the households depend primarily on the fishery for subsistence and income, with fish vendors earning about N$ 868 (US$140) per month from fish sales. The income generated by fisheries covers the basic needs of the people such as food, clothing and school fees. Fish are important in the diet, especially in years of drought and stress. In Zambia, fish is equally important, with approximately 55% of all animal protein coming from fish, and more than 300 000 households are directly or indirectly employed by this sector (van der Waal, *et. al*, 2011)

3.2.4 Beneficiaries

The beneficiaries of the Zambezi and Chobe fishery can be aggregated into two categories:

3.2.4.1 Primary beneficiaries

This category includes:

a) **Households -** that mainly depend on fishing for subsistence and income. A large percentage of them, about 30% and 55% in Namibia and Zambia, respectively consider fishing as being critical to their families for survival (van der Waal, *et. al*, 2011). The income generated from fishing goes to basic needs such as food, clothing and school fees.

b) **Vendors -** the majority being women, who are the head of the households. The income earned from selling fish sustains their families.

c) **Lodge owners -** tourism and recreational ventures are important activities, bringing new income opportunities and economic benefits to the lodge owners and rural communities through employment opportunities. The Zambezi and the Chobe Rivers have several large fish species for sport fishing. Tourists come from far to catch Tigerfish, Nembwe and Three-spot Tilapia. A study done during a fishing competition held in the Caprivi in 2008 indicated that the value generated for local business per fish caught was N$52 (Tweddle 2009). One of this project's intentions, whose delivery has been assessed in this report, was to ensure that this lucrative undertaking benefited local communities, through conservancies and other local fisheries management governance structures.

d) **Governments** – earn revenue through licensing of gillnets, and recreational fishing. Although the actual amounts earned have not been quantified by the project, the annual revenue earned through licensing could be substantial. Unfortunately these revenues are not entirely ploughed back into fisheries management. The most ideal situation would be transference of fisheries management responsibilities, including revenue collection to the Local Fish Management Governance structures, which could use the revenue to enhance law enforcement and disseminate awareness about the value of sustainable fisheries management and utilisation. This was one of the objectives of this project.

3.2.4.2 Secondary beneficiaries

a) **Conservation NGOs –** such as WWF, NNF, IRDNC and AWF which promote various conservation programmes, both at terrestrial and aquatic ecosystems levels, create employment opportunities that are directly or indirectly linked to the Zambezi and Chobe Fishery. It is therefore in the interest of these NGOs to ensure that these shared aquatic resources are managed and utilised sustainably for the benefit of these ecosystems' integrity and all stakeholders.

b) **Researchers and universities –** the aquatic ecosystems in the project area provide numerous opportunities for research in fish biology, ecology, socioeconomics, etc., with at least two MSc students finishing their degrees, one still busy with his Masters on Lake Liambezi, and three others at various stages of completing their studies, who during the project implementation phase utilised the research opportunities provided through the project.

3.2.5 Total value of the project

The total value of this project was NOK 2 893 645, funded by WWF-Norway through WWF in Namibia.

3.2.4 Implementation structures

This project was funded by NORAD through WWF in Namibia. Its implementation was steered by Namibia Nature Foundation, which recruited the Project Executant based in Katima Mulilo, who was supported by a Co-Project Executant, two Development Officers, four Market Monitors, and eight fish monitors, all recruited from the local communities; thus developing capacity in fish monitoring at a local level, which is essential in the long term sustenance of the project.

In implementing this project, the Project Executant closely collaborated with IRDNC, Katima Mulilo, the Department of Fisheries (DoF), Zambia and African Wildlife Foundation (AWF), Zambia. These collaborators played pivotal roles in establishing, and/or consolidating local fisheries management governance structures, including capacity building of these local institutions, and creating awareness about sustainable fisheries management practices.

WWF in Namibia and the Ministry of Fisheries and Marine Resources (MFMR) through the Directorate of Aquaculture provided oversight on the project's implementation. WWF also commissioned the project's mid-term and final evaluation to ensure that the project delivered on its intended outputs, and contributed to organisational learning, and WWF's desired transparency.

Figure 2 below illustrates the institutional framework under which the Integrated Co-management of the Zambezi and Chobe Fisheries Resources Project was implemented.

It should be noted that this project included Lake Liambezi, which was not part of the original proposal as the lake had very little water and no fishery at the time initiating this project. Once the fishery developed, the project team members started working on it and collecting data - spending a lot of time and effort on the lake; hence had to fit this into the budget; and in the process doing much more work with the original budget.

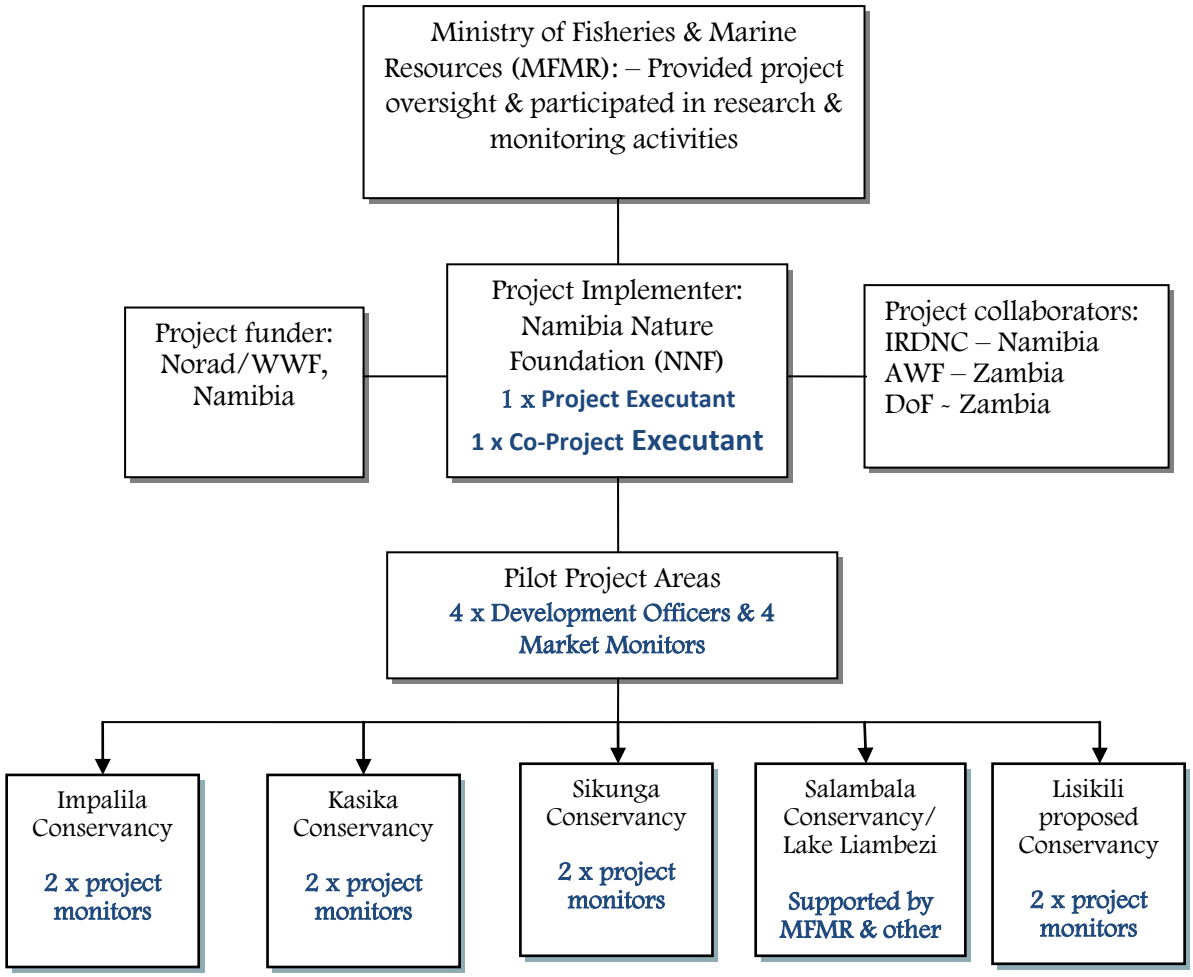


Figure 2: Institutional Framework for Implementation of the Integrated Co-management of the Zambezi and Chobe Fisheries Resources Project

3.3 Project context

3.3.1 Biodiversity importance of project area

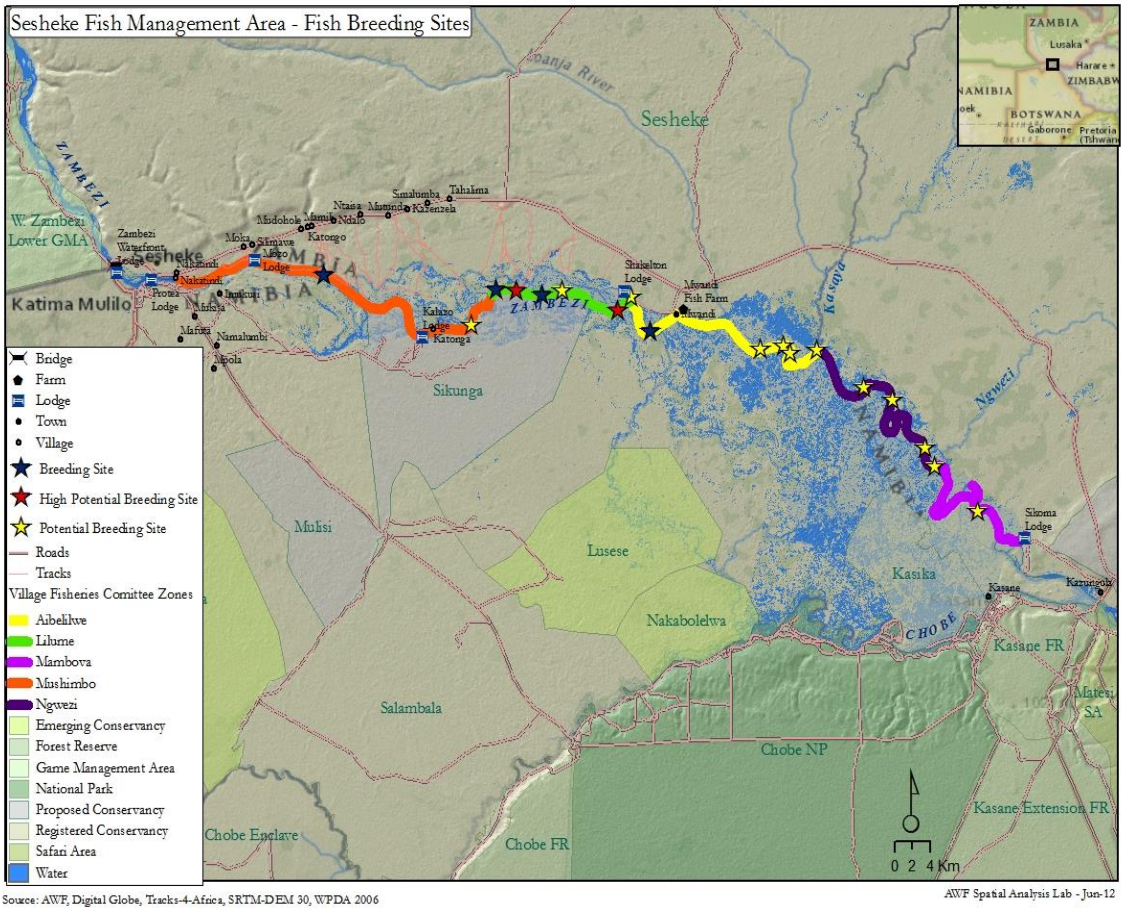
Section 3.2.2 above provides details on the biodiversity importance of the project area.

3.3.2 Policy and legal context

Each of the countries covered by this project (Botswana, Namibia & Zambia) has policy and legislative frameworks, aimed at regulating off-take of the fish resources on its respective components of the Zambezi and Chobe Rivers. In terms of relevance to this project, the Namibia Inland Fisheries Resources Act of 2003 and its complementary Regulations on 6th June 2003 provides for the establishment of fish sanctuaries to preserve the environment, protect the fish resource and habitats necessary for successful breeding, and to promote the regeneration of the fish stocks. During this

project's implementation, proposed amendment were made to the Namibian Inland Fisheries Act to allow for effective participation of local communities in the management through recognition of Conservancies as custodians of fisheries management, who should be enabled to develop their own byelaws.

In Zambia, the New Fisheries Act of 2011 is commensurate with the project's objectives, and provides sufficient enabling environment for devolving fisheries management to the local communities. Among the relevant highlights of this Act are its provision for decentralisation of fisheries management through community involvement; promotion of co-operation with neighbouring states in the management and development of shared fisheries; and protection of aquatic fauna and flora from environmental degradation through establishment of Fish Management Areas (FMAs). Guided by the New Fisheries Act of 2011, and influenced by the Namibian experience, Zambia mapped FMAs (Fig. 3a), and established twelve Fish Management Committees that are responsible for managing them.



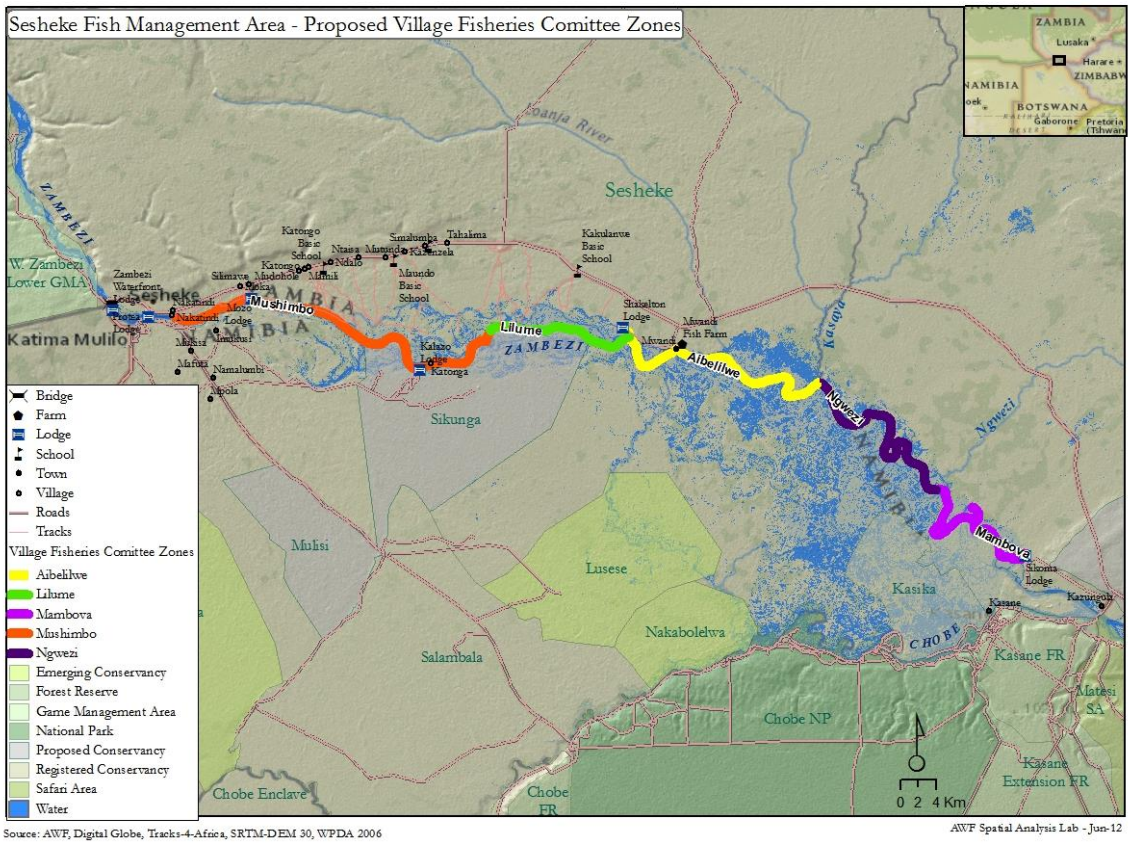


Figure 3a: Zoned Fish Management Areas, Zambia section of the Zambezi River

Issues that were identified by the project as requiring harmonisation between Namibia and Zambia included: standardisation of gillnet mess size, closed fishing season, and abolishment of monofilament and drag nets.

For Botswana, which has limited access to the fishery areas because most of the Chobe River frontage falls within protected areas, the project's focus was mostly on promoting close cooperation with its neighbours (Namibia & Zambia) in overcoming conflicts over the use of the fish resources.

Though not explicit in the design of this project (see Tweddle & Hay 2010), it contributed to the fulfilment of some international and regional protocols and frameworks, such as the SADC protocol, and NEPAD guidelines. Of particular importance in this regard is the SADC Protocol on Inland Fisheries which enshrines a regional approach for development and integration of the SADC fishery sector, as well as providing a regionally contextualised translation of the United Nations Code of Conduct for Responsible Fisheries (CCRF). The SADC Protocol on Fisheries includes articles on management of shared fisheries resources; trade and investment; law enforcement; and harmonisation of fisheries legislation. The New Partnership for Africa's Development/NEPAD's Comprehensive Africa Agricultural Development Plan (CAADP) also provides an

appropriate framework within which to situate the Zambezi and Chobe Co-management Fisheries Project. The CAADP framework contextualises the approach for sustaining fish production through integrated water resource management; supporting transboundary management; development of governance systems that protect the interests of the poor; improving market access; promoting enterprise development through support for appropriate institutions and policies; and integrating consideration of fish into food security policies.

3.3.3 Major stakeholders

This project had a wide range of stakeholders, whose roles, interests and concerns are well articulated in the project design (see Tweddle & Hay 2010). Of relevance in this evaluation report are the relationships and roles that evolved during the project implementation and how these will contribute to the long-term sustainability of this important project. Considered in this context, the following stakeholders were pivotal both in terms of what has been achieved and in sustenance of this project into the future:

a) **Local communities:** The local governance institutions, such as Conservancy Committees (Namibia); Fish Management Committees (Zambia) and the Transboundary Natural Resources Forum – which draws membership from Botswana, Namibia and Zambia have internalized the project's goal and are contributing to its long-term sustainability by restricting unsustainable off-take of fish resources. Highlights of this effort include:

   - voluntary handing over of some destructive fishing gear such as monofilament and dragnets in Zambia;
   - establishment of FPAs in Namibia and Zambia, and voluntary law enforcement being undertaken by the community members in Sikunga and Impalila Conservancies in Namibia;
   - internalization of the project's activities as demonstrated during a Transboundary NRM Forum meeting held on 3rd December 2012 at Sekoma Lodge, Zambia, in which the Final Project Evaluator attended. During this meeting, strategies for sustaining communities' fisheries management effort were discussed. Among these, the Forum recommended that the Fish Management Committees (FMCs) should generate own income, e.g., by convincing governments to allow Conservancies/FMCs to use revenues earned from permits for commercial and recreation fishing for managing the shared fisheries resources. This recommendation is plausible, and should be pursued by the Forum, and NGOs that are supporting these communities, so that

they can generate own funds for ploughing back into local fisheries management activities.

b) NGOs, most especially, WWF, NNF, IRDNC and AWF:

- **WWF**, Namibia secured funding from NORAD, whose investment in this project has achieved vital milestones (see section 4.3), and has established an indispensable foundation for follow-up support to the project, including development of strategies for attaining sustainability of this project. WWF's commissioning of the project's reviews provided opportunity to assess the project's relevance, effectiveness, efficiency, impact and sustainability.
- **NNF**, as the implementer of this project played the critical roles of facilitating and implementing the project's activities, and collaborated with other key stakeholders in implementing the project. Its roles were highly appreciated by the local community members who were interviewed in Namibia and Zambia during the final evaluation of the project.
- **IRDNC**, Namibia, has for more than 15 years been supporting the Namibian conservancies in various aspects, including setting up of governance structures and revenue sharing mechanisms, capacity building, supporting monitoring activities, supporting human-wildlife mitigation measures, etc. IRDNC therefore is a key partner in facilitating integration of Fish Management Committees into the existing Conservancy committees. In addition, IRDNC has been instrumental in facilitating meetings of the Community Transboundary Natural Resources Forum, which besides sharing knowledge, experiences and strategies for conserving and management of terrestrial biodiversity has now become the lynchpin in facilitating transboundary management of the shared fisheries resources of Botswana, Namibia and Zambia.
- **AWF,** Zambia through its African Heartlands Programme, has since 2000 been supporting conservation-based livelihoods' programmes, including facilitating establishment of wildlife dispersal corridors; tourism enterprise development; education easement; aquaculture development to offset fishing pressure on the Zambezi River; and is supporting processes of establishing the Fish Management Areas, including Fish Management Committees, and disseminating awareness about sustainable approaches to fisheries management. In this regard, AWF has been one of the strategic partners in Zambia in rolling out some of this project's outputs, such as establishment of FPAs, and sharing of knowledge on transboundary fisheries management.

c) Private Sector, especially lodge owners who market sport fishing, including organizing annual competitions, drawing anglers from all over the world, generate substantial revenues from angling, amounting to about N$1.80 million per lodge per annum, out of which N$1.06 million is paid directly to members of the local community in form of wages in the Namibian component of the project area (Sweeney, *et. al* 2010). These lodge owners are very keen to see a reduction in the artisanal and commercial fishing pressure. In this regard, during the project implementation phase, they provided some support (donated N$13,000) and some equipment/boat and fuel for surveillance of illegal fishing incursions into the FPAs that have been established in Impalila and Sikunga Conservancies. Their support leveraged on the communities voluntary patrols that have within a year led to improved fish stocks in the FPAs.

Prior to this project, conflicts between lodge owners and fishermen, who regularly chocked the waterways with fishing nets were rife, as these nets severely constrained sport-fishing activities which rely on boating through the water channels, where fishing nets are also set.

During the final evaluation of this project, two lodge owners who were interviewed expressed satisfaction with communities' effort in regulating uncoordinated fishing, and pledged continued support to communities' surveillance of the FPAs. Currently, this support is on *ad-hoc* basis, requiring proper structuring, in which the lodge owners and the Conservancy committees should formally agree on a percentage of income accruing from sport-fishing competitions to be invested in local fisheries management activities. To garner transparency in this undertaking, IRDNC could oversee and monitor such transactions. Additionally, to avoid overburdening lodge owners, and draining their profits, the current system of lodge owners paying resource use fees to the chiefs, a system reminiscence of the medieval era rental payment system should be abolished. Lodge owners whose properties are in the Conservancies, should pay fees, inclusive of all uses (game viewing, and sport fishing) to the Conservancy governance structures. The Sikunga Conservancy committee members expressed this need during the final evaluation of this project. Therefore, NGOs that are supporting conservation work in the Caprivi Region, such as IRDNC and NNF should lobby the Namibian government to implement this recommendation.

d) Governments – through the ministries responsible for fisheries management, provided the policy and legal environment under which this project was implemented. Additionally, the Ministry of Fisheries and Marine Resources (MFMR) through the Directorate of Aquaculture provided oversight on the

project's implementation, and seconded staff members who participated in biological research of fish sampled from Lake Liambezi.

e) **UNAM and SAIAB –** were vital in undertaking research and monitoring which guided, and will continue to guide management of the aquatic resources. In addition, these institutions have been instrumental in leveraging funds for research and monitoring which are integral to the success and sustainability of the project.

3.3.4 Other related conservation initiatives in the project area

Besides the long-term conservation initiatives being supported by NGOs that collaborated with NNF in implementing the Integrated Co-management of the Zambezi and Chobe River Fisheries Resources Project, the conservation programme of notable magnitude is the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) - a five countries (Angola, Botswana, Namibia, Zambia & Zimbabwe) conservation and tourism development programme which will use some of this project's outputs, such as establishment of Fish Protected Areas as a tool for promoting sustainable fisheries conservation and management in the KAZA region.

During this project's implementation phase, the Project Executant briefed the KAZA TFCA Secretariat about the project's activities and main outputs, which led to the adoption of this project by the KAZA Committee of Ministers at their November 2012 meeting in Livingstone, Zambia. This implies that this project has a high level political acceptance and that KAZA TFCA can be considered as a strategic partner in sustaining this project beyond its current phase, and that lessons learnt in its implementation could be shared and adopted at the KAZA-wide landscape.

4. PROJECT GOAL, PURPOSE AND EXPECTED OUTPUTS

4.1 Project Goal

The goal of this project states that "The shared Zambezi/Chobe River fisheries resources sustainably managed by promoting transboundary coordination and collaboration on the introduction of fully integrated fishery management systems".

4.2 Project Purpose

By end 2012, a fully integrated management system for livelihood and sport fisheries, that provides optimal benefits to all stakeholders reliant on this valuable resource, is in place in targeted pilot communities.

4.3 Project Outputs

This project had six expected outputs. Each one of these was assessed to determine the level of achievement by the end of the project. The section below summarises the key achievements under each output, as follows:

***Output 1*: Cross-border collaboration achieved in management of the fisheries resources.**

Although in the project design there is lack of clarity on how this could be achieved, besides highlighting various meetings that should have been convened, some essential prerequisites for cross-border collaboration in management of fisheries resources were achieved during the project implementation phase. These included:

Output 1.1: Setting up of the institutional frameworks for transboundary collaboration

The social and environmental sustainability of the shared Zambezi and Chobe fisheries, and the realization of full ecological and socioeconomic values, can be achieved through effective and equitable governance arrangements. Of particular concern in the governments' approach to managing the fisheries resources is the general under-representation of fishing communities in the decision-making process in both local and national political arenas. In order to address this requirement, this project focused on establishment and strengthening the governance mechanisms and processes at three levels:

a) **Local level:** Fish Management Committees have been established. In Namibia these have been integrated into the existing Conservancy Committees (Impalila & Sikunga). In Zambia twelve of these have been established in alignment with the Fish Management Areas (FMAs), which have been zoned for gazetting. These committees' roles include, but not limited to:

   - consolidating communities' rights to the aquatic resources, and enforcing rules and regulations for utilization of the shared fisheries resources;
   - negotiating partnership arrangements with the governments and lodge owners in promoting sustainable management and use of the aquatic resources;
   - promoting collectiveness in harnessing equitable sharing of benefits from aquatic resources; and
   - development of strategies to sustain local fisheries management activities.

   These local governance institutions however need further capacity building to undertake surveillance of their Fish Management Areas/FPAs, and in the

development of mechanisms to sustain their fish management effort into the distant future.

b) **Transboundary community level:** the project co-opted the already existing Community Transboundary Natural Resources Forum, which meets bi-monthly and has been instrumental in exploring strategies that would sustain transboundary fisheries management effort. The Forum is also promoting standardised approaches to fisheries management, such as advocating for uniform fish closed season by Namibia and Zambia; joint surveillance of the shared aquatic resources, and creation of awareness about unsustainable methods of fishing (e.g., use of monofilament and drag nets) which they are encouraging local fishers to voluntary handover to local Fish Management Committees, with encouraging positive results, as fishermen have started to surrender these destructive nets, especially in Zambia.

a) **Inter-state level:** the project facilitated the first meeting of the fisheries sub-committee of the Namibia-Zambia Transboundary Joint Commission by hosting a workshop in Katima Mulilo (Tweddle & Nchindo 2011), in the hope that this would kick-start the planned series of biannual meeting. Although follow-up meetings were not held, this was not considered as a problem, because this project's main aim was to devolve fisheries management responsibilities to local communities, who have established their governance institutions, which are functioning.

Output 1.2: Harmonisation of essential elements of the fisheries legislation

Cross-border collaboration in management of natural resources is often constrained by disparities in the policies and legislation governing management of the shared biodiversity assets. To overcome this hurdle, during the project implementation phase, a process of harmonising "essential elements" of fisheries legislation of Namibia and Zambia was initiated - seeking to effect an approximation or co-ordination of different legal provisions by eliminating major differences and standardization of approaches to management and utilisation of the shared fisheries resources. The primary focus was to have regulations that are relevant to local conditions on the river and the floodplains so that communities can effectively harvest the diverse resources.

Elements of the regulations that were identified for harmonization included:

i) Prohibition of use of the most damaging gears (particularly dragnets and drift gillnets).

ii) Increasing mesh sizes for the cichlid species that form the main economic component of the fisheries, while allowing small mesh nets where appropriate, to exploit the smaller abundant species on the floodplains.

iii) Adoption of fishing closed season during the same period. Currently, Zambia has an annual closed fishing season along the Upper Zambezi River for three months (December – February), while Namibia doesn't have one; hence triggering an invasion of fishermen from Zambia into Namibian waters, which overwhelms the fisheries resources; and

iv) Establishment of FPAs.

Whilst the process of harmonizing these essential elements of the Fisheries Regulations has not been finalised, good progress was made, especially in establishment of FPAs/FMAs and undertaking regular transboundary joint surveillance of the shared aquatic resources. Incomplete harmonisation of essential elements of the fish legislation was primarily due to the ongoing revision of the Namibian Inland Fisheries Resources Act by the MFMR, which is proving to be a rather slow process that was beyond the scope of the project to speed up. Harmonisation of the closed season and agreements on fishing gear regulations will continue to be promoted through the forthcoming EU project and through the fisheries sub-committee of the Namibia/Zambia governmental Joint Commission.

***Output 2*: Management plan for the fisheries developed during Project Phase 1 successfully implemented (in collaboration with neighbouring countries) for the benefit of the communities**.

The main success in implementing the Fisheries Management Plan was the establishment of FPAs and local fisheries management institutions (fishers committees) in both Namibia and Zambia (the latter implemented by AWF). In the FPAs there is improved surveillance against illegal fishing by the communities themselves, and this drew additional support from the private sector, mainly the lodge owners and, in the case of Sikunga Conservancy, the Nwanyi Angling Club. Funding was also secured through the Millennium Challenge Account for both Impalila and Sikunga Conservancies to establish their management plans for the FPAs and to be fully equipped with patrol boats, engines, communication equipment, etc.

As the first step in setting up the cross border committee, the project facilitated the inaugural meeting of the fisheries sub-committee of the Namibia/Zambia Joint Commission from 18-19 January 2011 in Katima Mulilo, Namibia that was combined with a workshop on the project and departments' activities. The governments failed to follow-up with agreed joint activities. Despite this, however, successful cross-border collaboration is developing, with links established between the fisheries departments, Barotse Royal Establishment, NNF, AWF and KAZA TFCA. In addition there are transboundary meetings every two months between the eastern Caprivi conservancies, Sekute Trust in Zambia, and the tourist lodges in the area, where fisheries management is always discussed.

The project continued to monitor opportunities for further activities outside the immediate project area, and this resulted in the new EU proposal to extend lessons learned to other areas, not only locally but also regionally.

***Output 3*: Fish Protection Areas established and fully functional in targeted pilot communities**

Two FPAs have been zoned and provisionally established, one each in Sikunga and Impalila Conservancies, Namibia (Fig. 3b). These FPAs have been established in accordance with Section 22 of the Inland Fisheries Resources Act of 2003. To ensure that communities are fully empowered to manage these FPAs, some amendments have been proposed to the Inland Fisheries Resources Act, and accepted by the government, focussed on:

a) Recognition of Conservancies as custodians of fisheries as natural resources; and

b) Empowering the communities, in particular Conservancies, to allow, in collaboration with the MFMR, for the development and introduction of local byelaws.

These amendments are likely to be formalised in 2013.

Figure 3b: The Sikunga and Impalila Fish Protection Areas

The process of gazetting[1] the two FPAs was also initiated during the project implementation phase. These FPAs are functioning, with guards deployed by the Conservancies to undertake law enforcement. During the Final Evaluation of this project, confirmation was made of abundant fish (which could be seen from the banks of the river), and there were no illegal nets in one of the FPAs visited in Sikunga Conservancy. The recovery of fish within a year of establishing these FPAs is remarkable.

The exceptional experiences/lessons in the establishment of FPAs include:

- Development of the fisheries management plan, which guides management of these FPAs;
- Garnering community buy-in and establishment of local governance institutions to take leadership in the management of the FPAs;
- Winning stakeholders' support (state, NGOs and private sector partners) in the management of the FPAs; and
- The rapid rate at which depleted fisheries seem to recover from fishing stress, as witnessed in Sikunga Conservancy.

Due to the Namibian success in establishing FPAs, Zambia, through AWF's support, has zoned expansive areas of the Zambezi River channels as Fish Management Areas (FMAs) (Fig. 3a), in accordance with the New Fisheries Act of 2011. Within these FMAs, some sections will be set aside as restricted protected areas, and management plans will be developed in 2013 for these areas to guide their effective management. To ensure governance of these FMAs, 12 Fish management Committees have been established, whose roles are as stated under Output 1.1(a) above. These committees have been effective in disseminating awareness about the damage monofilament and drag nets do

[1] Since this evaluation report was drafted, the FPAs have been accepted by the MFMR and are now in the process of being gazetted.

to the aquatic environment and have achieved some success in encouraging local fishers to voluntarily hand in destructive fishing gear.

Overall, establishment of FPAs/FMAs, though none has been gazetted so far, has been one of the important milestones of this project's success. These aquatic protected areas enable fish to live, grow, and breed without interference, and are vital in restocking surrounding areas with abundant fish stocks to supply a healthy fishery (Tweddle & Hay 2011).

Output 4: Tourist angling lodges operating in agreement with local fishing/conservancy committees

No formal agreements have been entered into between lodge owners and local Fish Management Committees/Conservancies. However as stated in Section 3.3.3(a), on *ad-hoc* basis, lodge owners have started providing some support in monetary form and have donated equipment/boats and fuel for surveillance of illegal fishing incursions into the FPAs in Impalila and Sikunga Conservancies. Their support leverages on the communities' voluntary patrols that have within a year led to improved fish stocks in the FPAs and a noteworthy reduction in fishing nets which used to trigger conflicts between lodge owners and fishermen. No data however were available during the final evaluation to demonstrate if there has been an improvement in the fish size being caught by anglers, but the prospects are encouraging, particularly in the reduction of nets in river channels where anglers also fish.

To consolidate and nurture the budding cordial relationship between lodge owners and Fish Management Committees/Conservancies, there is need for:

a) Signed formal Agreement between the lodge owners and Fish Management Committees/Conservancies, stating exactly the responsibilities of either party in the management of the FPAs and the fisheries resources.

b) Lodge owners whose properties are in the Conservancies, should pay fees, inclusive of all uses (game viewing, and sport fishing) to the Conservancy governance structures, and the fees should be ploughed back into fisheries and wildlife management effort. The system of lodge owners paying natural resources use fees to chiefs, who also get regular allowances from the Conservancies, should be abolished.

Output 5: Capacity built in research and monitoring of fish resource

Research and monitoring are integral to the process of ensuring sustainable management and utilisation of the inland fisheries. Research should provide essential

knowledge/understanding of the biology, ecology, including life histories, and guide off-take levels of the economically important fish species. Additionally, there is need to fully understand the socioeconomics dynamics that are linked to utilisation of these shared fish resources. During this project's implementation phase, the following research and monitoring were undertaken:

a) Analysis of Katima Mulilo fish market data, focusing on species specific sizes of fish being marketed
b) Comparative growth rates of important commercial fishes in different waters
c) Catch monitoring which has for the first time, estimated the annual harvest from the Lake Liambezi fishery.

Capacity building was done at three levels:

(i) **MFMR level**, where one staff member was supported in pursuing his MSc. In addition, MFMR researchers were trained on how to prepare fish otoliths for ageing analysis; joint evaluation of catch monitoring data to determine the annual yield from the Namibian section of the Caprivi floodplains

(ii) **Local level**, where two development officers and twelve fish monitors were recruited and trained in capturing fish data at Conservancy and fish market levels, including entering fish market data into excel; and

(iii) **Inter-institutional level**: development of research proposals in collaboration with national and international research institutions. These included: the University of Namibia (UNAM) on a NORAD funded fisheries capacity development project; UNAM and SAIAB in the implementation of the ICEIMA project, Nedbank funded Go-Green project and the Namibia/South Africa partnership project on Lake Liambezi Research funded by the National Research Foundation of South Africa and the Ministry of Education in Namibia and the MFMR.

***Output 6*: Collaboration in next phase of NNF fish ranching project**

The Lead Fish Ranching project was established in 2007 to assist local communities in stocking natural, isolated water bodies with cichlid fingerlings. The programme aims to provide an alternative livelihood for local communities, increasing food security and creating a source of income. The project intends to use three indigenous cichlid species, *Oreochromis andersonii*, *Oreochromis macrochir* and *Tilapia rendalli*. In the follow-up project funded by EU, support will be given to this project and KAZA TFCA may also leverage support, especially if it can have a transboundary linkage to the aquaculture development project being supported by AWF in Mwandi, Zambia.

5. RELEVANCE AND QUALITY OF PROJECT DESIGN

5.1 Relevance of the project goal and purpose

The Integrated Co-Management of the Zambezi / Chobe River Fisheries Resources Project was designed to abate the problem of overexploitation of the fish resources, which is being aggravated by open access to the fishery, increased numbers of fishers, and an upsurge in the use of destructive fishing gear, with potential to diminish the production of fish, limit the economic productivity of the fishery, reduce the subsistence and recreational uses, and reduce the genetic diversity and ecological resilience of the Zambezi and Chobe ecosystems. The goal of this project: "***The shared Zambezi/Chobe River fisheries resources sustainably managed by promoting transboundary coordination and collaboration on the introduction of fully integrated fishery management systems***", and its purpose of: "***Attaining a fully integrated management system for livelihood and sport fisheries, that provides optimal benefits to all stakeholders reliant on this valuable resource, being in place in targeted pilot communities by 2012***", were relevant. Accordingly, an impressive number of milestones were delivered during the three years of its implementation (see Section 4.3 of this report; and Weyl's mid-term review report of 2011 for details).

However, it should be noted that the project's purpose and goal could not be fully achieved within a short-term of 3 years. Co-management and transboundary collaboration in management of fisheries, which were the underlying strategies for achieving the project's goal and purpose, are long-term undertakings – requiring sufficient time to build governance institutions at local, national and transboundary levels; and for innovation (Kofinas *et al*., 2007); conflict resolution (McCay, 2002); knowledge generation and social learning (Berkes 2009). The project implementers fully recognised this shortfall and designed a fall-up project, which is being funded by EU; thus providing opportunity to fully deliver on additional milestones that will contribute towards attainment of the project's goal and purpose.

5.2 Relevance of Project Outputs and Activities to the Project's Purpose

The outputs were commensurate with the project's purpose; however the activities and milestones that contribute to the attainment of the project's outputs, purpose and ultimately, its goal were inadequately articulated in some cases, and this constrained objective rating of delivery on the project's purpose and outputs. Example of outputs, which needed refined activities include:

Output 1: ***Cross-border collaboration achieved in management of the fisheries resources.***

The following activities should have been included in the logframe:

- Setting up of local/national and transboundary fisheries management/governance institutions.
- Facilitation of agreement signing among various stakeholders (state, local communities, lodge owners and NGOs) which would define roles of each stakeholder.
- Harmonisation of "essential elements" of the fisheries policies and legislation to facilitate effective and efficient transboundary management of the shared fisheries resources

Although by default some of these were done, they were not included in the project's logframe, hence creating misperception in rating the project's performance.

Output 4: Tourist angling lodges operating in agreements with local fishing committees/conservancies

The following activity should have been included:

- Brokering formal Agreement between the lodge owners and Fish Management Committees/Conservancies. This agreement could define the responsibilities of either party in the management of the FPAs and the fisheries resources, including mechanisms for revenue sharing from annual recreational fishing competitions, conflict resolution, etc.

Output 5: Capacity Building in research and monitoring of fish resources

Although good progress was made in capacity building for research and monitoring (see Section 4.3, Output 5). The only exception was on monitoring changes in the socioeconomic status of fishers and other community members who rely on fish and fishing. The baseline socioeconomic data exists, but a follow-up study should have been done, particularly in the last year of this project so that changes in socioeconomic status of the community members whose livelihoods depend on the fishery could have been discerned. The project implementers recognized this and developed plans for follow up on socioeconomic studies in both the EU and SASSCAL projects.

5.3 Project Logical Framework Analysis (LFA)

Annex 6 of this report provides the ratings of this project's delivery on its goal, purpose and expected outputs. Its achievement on output delivery ranged from good to very good and its contribution towards achieving the goal and purpose was good.

5.4 Value and Relevance of Project in relation to other Programmes

5.4.1 WWF's Global Programme Framework

Situated in the Miombo Region, one of the WWF priority places, and by empowering communities to manage their fisheries resources, the project contributes not only to the conservation of fish diversity but also to providing sustainability in the natural resource base upon which the riparian communities depend, the project contributes towards the WWF 2020 Biodiversity Goals ("*Places - Biodiversity will be protected and well managed in the world's most outstanding natural places*"). This is because the development of local fisheries management institutions guided by fisheries management plans based on appropriate research results contributes to sustainable resource utilisation. In addition, the Fish Protected Areas, designated during this project will not only provide refuge for commercially important fishes, but also protect representative portions of the aquatic ecosystem by providing refugia from the disturbance caused by fishing (Weyl 2011).

5.4.2 Other global, regional and National Conservation Priorities

The Zambezi Basin and its associated tributaries form part of the Freshwater Ecoregions of Africa and Madagascar, where the importance of sustaining the integrity of the aquatic ecosystems for the benefit of biodiversity and livelihoods of the riparian people is fully recognized in the global, regional and national policy discourses. For details on global, continental and regional protocols and frameworks that this project contributed to, see Section 3.3.2 of this report.

In terms of regional conservation projects, the KAZA TFCA programme, which includes Angola, Botswana, Namibia, Zambia and Zimbabwe had, and will continue to have important linkages to the Integrated Co-management of the Zambezi/Chobe Fisheries Resources. The KAZA TFCA programme, seeks, amongst others, to promote transboundary collaboration in the conservation and management of internationally shared ecosystems, such as watersheds/water-basins and their attendant biodiversity assets; increase economic opportunities though sustainable use of the shared biodiversity resources, and form alliances among different stakeholders to maximize skills and resources in promoting sustainable land use, biodiversity conservation and poverty alleviation. The KAZA TFCA programme has:

a) Adopted the FPAs' concept, a product of the Integrated Co-management of the Zambezi/Chobe Fisheries Resources Project, as a tool for promoting conservation of fish, which continues to be over exploited in the KAZA region. KAZA intends to introduce this concept to other partner countries, such as Angola and Zimbabwe.

b) Additionally, to facilitate wildlife crossing of the main rivers, KAZA TFCA has adopted the FPAs concept as a tool for preventing disturbance to wild animals that seasonally traverse the KAZA landscape considered to be critical for accessing resources that are scarce in time and space. During a workshop held at

Protea Hotel, Katima Mulilo, Namibia on 18th October 2012, attended by twenty-nine participants drawn from Namibian Conservancies, government departments, NGOs, researchers and KAZA Secretariat, it was unanimously agreed that FPAs should be established at all major wildlife crossing points, and this will be endorsed at high KAZA political level as one of the policies for facilitating transboundary movement of wildlife.

c) KAZA TFCA Secretariat has endorsed the EU project, which has been designed to further deliver on the outputs, purpose and goal of the Integrated Co-management of Zambezi/Chobe Fisheries Resources project.

Besides KAZA TFCA, the Zambezi Watercourse Commission (ZAMCOM) is relevant in complementing on this project. The objectives of ZAMCOM are to "***promote the equitable and reasonable utilization of the water resources of the Zambezi Watercourse as well as the efficient management and sustainable development thereof***". The Project Executants has initiated talks with ZAMCOM, and will further pursue collaborate with ZAMCOM during implementation of the follow-up EU project, and share useful lessons in promoting sustainable management and utilization of the shared fisheries resources of the Zambezi River Basin.

At national level, the Namibian Conservancy Programme was the lynchpin in implementing the Integrated Co-management of the Zambezi/Chobe Fisheries Resources Project, as issues of local and transboundary fisheries management, including establishment of FPAs were achieved through the Conservancy governance structures. This relationship was, and will continue to be, essential in sustaining the project beyond its donor-funded support. In Zambia, projects being supported by AWF, namely the aquaculture development and establishment of FMAs played a critical role in achieving cross-border learning and adoption of standard approaches to fisheries management, such as, establishment of FPAs, including the grass-root governance institutions for management of the fishery resources.

5.4.2.1 National policies and strategies

The national and regional policy and strategies under which this project was designed and implemented are outlined in Sections 3.3.2 and 5.4.2

5.5 Assumption and Risks

In designing this project in 2009, nine assumptions were fundamental to the project's successful implementation. Weyl (2011) reported on the status of each assumption's fulfilment. In the final evaluation, these assumptions and risks were reassessed to see if there had been any changes. Table 1 below summarises the overall status of the assumptions and risks at the end of the project. Both comments provided during the

midterm and final reviews have been included in this table to allow for easy understanding of what actually happened.

Table 1: Assumptions and Risks

Assumption 1	The Fisheries Departments (Namibia and Zambia) are committed and make available the necessary resources (staff, funds, office space in new MFMR office at Katima Mulilo and equipment) for the Project.	**Mid-term review comments:** This assumption is only partly met. In Namibia, the project has increasing support at the managerial level of the MFMR and many of the research activities have been carried out collaboratively with MFMR staff at no cost to the project. There is also commitment towards the provision of office space once the new Katima Mulilo offices are completed. Zambian involvement in the project was limited. This was a recognized risk in the project proposal (Risk 1). Continued efforts to engage with the Zambian Department of Fisheries and NGOs active in the region are being made by the project and need to be continued through the remainder of the project. With the establishment of the Kavango Zambezi Trans Frontier Conservation Area (KAZA) with its new office in Kasane and its highly motivated staff, the establishment of strong links with that organisation should be explored. The project should develop the links it has already established with the KAZA office, and play a leading role in establishing fisheries management and research programmes in the KAZA area. It should be recognised that Zambian support for the FPAs in Namibia is not a necessity for their successful establishment. As a result the project should take care not to over-invest time and resources in trying to secure Zambian commitment at the implementation level but should rather focus on getting the Namibian committees and conservancies fully operational. **Final Evaluation Comment:** This commitment has not been met to-date despite the spacious new under-utilised MFMR offices being available at Katima Mulilo. In view of the importance of the imminent EU project to the governments, this assumption must be resolved. Cross-border collaboration with Zambia has been greatly improved in the final year of the project. AWF, KAZA, DoF, BRE, Community Trusts, local fisheries committees and the Impalila/Kasika/Sekute transboundary committee are committed to cooperation on developing cross-border management plans, and with the establishment of the new, follow-up EU project, these relationships will be greatly strengthened.

Assumption 2	Staff members from the MFMR Katima Mulilo office are fully involved in implementation of the project's activities	**Mid-term review comments:** During the mid-term review, the Project Executant (PE) informed Dr Weyl that despite attempts to work closely with the two MFMR Directorates, i.e. Aquaculture/Inland Fisheries and the Inspectorate in the Directorate of Operations, their participation was sporadic. The imminent completion of the new MFMR offices in Katima Mulilo will allow the project office to move into MFMR and this will greatly aid direct involvement of the MFMR in the project on a day-to-day basis. In the mid-term review interview, staff in the Katima Mulio MFMR office were very positive about the project. They said that while the MFMR had not involved itself adequately in the fisheries committee formation and organisation in conservancies, they were impressed with progress made, particularly in the Kalimbeza channel. As a result, the lack of involvement by the MFMR at a local level stems mainly from local issues rather than from the overall commitment of the MFMR (see Assumption 1). Main problems are linked primarily to the limited support received by the project from the Directorate of Operations and the lack of action regarding the licensing system and legislating to empower the communities and particularly the conservancies to take on management responsibilities. With a change in the enforcement staff in 2010 and again in 2011, there does however appear to be an increase in the level of commitment by the MFMR at the local level. As a result, MFMR involvement in the project gained momentum, but more MFMR participation, particularly in community engagement and in supporting the conservancies in their aims to reduce illegal fishing is desirable. **Final Evaluation Comment:** support of Operations has greatly improved, and there is a genuine appreciation of the project's achievement. This was also evident from the MFMR staff member, who was involved in the research work, spoke enthusiastically about his role in the research and pursuance of an MSc degree during his tenure with the project. The inappropriateness of the Regional Council's issuing licenses for gillnets and recreation fishing instead of the Conservancies was recognised by Operations Department, whose director complained about shortage of license books at Regional

		Council Office, hence causing problems in issuing licenses. MFMR staff members would like to see NNF donate equipment to MFMR after the project expires.
Assumption 3	A Fisheries Biologist is appointed at the Katima Mulilo office.	Mid-**term review comments:** A Senior Fisheries Biologist (Damien Nchindo) has been appointed in the Katima Mulilo office and staff are participating in various monitoring components of the project, particularly in catch surveys. The research is also supported by staff from KIFI staff that undertakes quarterly monitoring trips to project area as well as through strong collaborations with the UNAM and SAIAB. The evaluation considers that the project has been particularly successful in forming strategic alliances with national and regional research institutions to obtain the research results necessary for its implementation (e.g. to make recommendations for minimum mesh size). It is also recommended that continued attempts be made to involve the appointed Senior Fisheries Biologist in project driven research. **Final Evaluation Comment:** Mr Christopher Munwela was also appointed at Katima Mulilo as Chief Fisheries Biologist. This should strengthen the capacity. Development of protocols for participation of MFMR staff in the new EU project is considered essential.
Assumption 4	Qualified and experienced executants can be recruited to run the Project, thereby providing dedicated inputs towards implementing, planning and reporting for the Project	**Mid-term review comments:** The project has recruited two Project Executants (PEs), Mr Denis Tweddle and Dr Clinton Hay. Due to other commitments that do not allow the PEs to take on full time project posts, Mr Tweddle and Dr Hay alternate their inputs in the project. This has worked well as both have considerable and complementary experience in fisheries research and the development and implementation of fisheries research, monitoring and management programmes in southern, central and eastern Africa. Dr Hay's 20-year direct association with the MFMR in Namibia, and Mr Tweddle's broad knowledge of floodplain fisheries elsewhere in the Zambezi system, have been invaluable. In addition, the executants have made use of their extensive contacts in Africa and abroad to source external expertise when required. This has resulted in a well-run project that enjoys considerable buy-in from all stakeholders and has an excellent reporting track record.

		Final Evaluation Comment: the status quo should be maintained; both Denis and Clinton are instrumental in developing this project through follow-up initiatives and have established useful partnerships with universities, donors, NGOs, governments, and KAZA TFCA Secretariat, which are useful in sustaining the project into the future.
Assumption 5	The Regional Government, Traditional Authorities (both Namibia and Zambia) and other interested parties co-operate in the studies and discussions at regional level	**Mid-term review comments:** There is sufficient evidence showing that there is continued discourse between stakeholders at all implementation levels. For example, the management plan for the Sikunga conservancy was developed at a stakeholder workshop that included committee members, lodge managers, members of the local angling club, traditional authorities and local government. The project has also facilitated various meetings with Zambian and Namibian authorities. During the course of the mid-term review, a meeting involving all stakeholders from both Zambia and Namibia was being planned by community members to coincide with the Zambian fishing ban. In Namibia, it was evident from interviews that there was considerable co-operation between communities, traditional authorities, angling lodges, angling clubs and the ministry in discussions. The only potential stakeholders that were not sufficiently involved were the local politicians and the evaluation recommends that the project actively lobby with local politicians for their support. **Final Evaluation Comment:** the project had sufficient stakeholder support; hence local politicians would have added little, if anything to the project success. The support from local communities, and their traditional leaders, private sector/lodges and NGOs was most important in the implementation of this project. However, the system of chiefs in Namibia getting user fees from lodges should be abolished. Instead such fees should be restructured, allowing lodge owners to pay fees, inclusive of sustainable use of all natural resources to the Conservancies, and such fees should contribute to management of NRM (terrestrial & aquatic).
Assumption 6	The Department of Fisheries in Zambia delegate personnel to take part in the Project, as part of their employment duties, which will ensure the flow of information to the stakeholders in	**Mid-term review comments:** This assumption is not met. However, as a result of continued lobbying by the PE with the Zambian authorities, agreement was reached for the project to engage in collaboration with all relevant stakeholders in Zambia and WWF in Zambia is now assisting DoF in the area to develop management plans including protected areas. This has resulted in the Department of Fisheries office in

	Zambia.	Sesheke now holding regular meetings with MFMR counterparts in Katima Mulilo and Joint patrols were carried out (Namibia & Zambia) on the Zambezi and (Namibia & Botswana) on the Chobe Rivers. Further, the project facilitated the first meeting of the fisheries sub-committee of the Namibia/Zambia Joint Commission in 2011 and used the opportunity to hold a workshop to create awareness of the project's goals and activities and to strengthen links between organisations active in the area. **Final Evaluation Comment:** Links have been improved with all Zambian stakeholders and will be greatly strengthened through the new EU project.
Assumption 7	Recruitment of suitable staff from the local communities (Namibia and Zambia) to ensure involvement of stakeholders for the Project	**Mid-term review comments:** In Namibia, the project has made considerable contributions to the employment of staff from local communities by employing at least 16 people from the local community, four market monitors, two development officers and ten fish monitors. The fish monitors were selected from and by the relevant fisheries communities to be employed by the project. In addition to their monitoring programmes, those in Impalila Conservancy carry out other duties under the direction of the conservancy office. This employment has resulted in further employment opportunities and one of the development officers trained by the project is now permanently employed by the MFMR. The project is currently in discussions (informal at this stage) with MFMR and the conservancies on how to continue their employment beyond the project time frame. An initial data and information sharing workshop held by the project was well-received and is to be followed up by developing a long-term monitoring programme for MFMR. Direct employment of monitors/guards by the conservancies themselves is also under discussion. **Final Evaluation Comment:** Mid-term review comments remain relevant. Results of data collected by the market and fish monitors show a high degree of integrity, honesty, and great importance to fisheries management.
Assumption 8	There is a continued willingness of local communities to take part in the Project and to test and evaluate proposed new management systems.	**Mid-term review comments:** The willingness of the local communities to take part in the process was demonstrated at the two Committee meetings attended, from interviews with lodge owners operating in the conservancies and from the angling clubs. In addition several conservancies have approached the project to assist with

		fisheries management. **Comment of this evaluation:** the evaluation endorses the findings of the mid-term review.
Assumption 9	The MFMR remains willing to devolve fishery management responsibilities and benefits to local community institutions, including conservancies (as stipulated in the White Paper on inland fisheries).	**Mid-term review comments:** While there appears to be high level MFMR commitment to devolve power to fishing communities there is resistance in some sections of the MFMR. The reason for this is unclear. However, the document for FPAs is now with the minister and all indications are that the MFMR is officially supporting the formation of fisheries committees in conservancies and the formation of FPAs. Agreements and ratifications at Ministerial level should allow for the devolution of power to fishing communities and internal resistance and agendas will become irrelevant. At the time of writing, the project's recommendations are with the MFMR HQ and it is understood that further discussions on the process will take place in January, after the Project Executants held discussions in Windhoek with senior MFMR staff after submission of the draft of this review. **Final Evaluation Comment:** Obtaining the commitment of the MFMR has proved to be a slow process but indications from interviews are that the process will ultimately be successful.

5.6 Alignment with Stakeholder Expectations

This project was well-aligned with the primary stakeholders' expectations, more especially the Namibia's MFMR, and the Zambia's DoF, to which the project contributed by operationalizing some of the innovative elements of their fisheries legislation, e.g., establishment of FMAs, including generating useful lessons in engaging at both local level, through devolution of fisheries management to the Fish Management Committees, and at transboundary level, through joint state (Botswana, Namibia & Zambia) surveillance, and deterrence of illegal fishing practices.

The other stakeholders, whose expectations were met, included local communities, lodge owners, and NGOs (see Section 3.3.3 of this report for details).

5.7 Alignment and Cooperation with other Donors, Projects and Programmes

Besides alignment with other regional programmes (see Section 5.4.2), the project supported research intended to provide information that was relevant for the management of the fishery. This was done both by project initiatives as well as through building strong collaborations with other research institutions including the Kamutjonga Fisheries Research Institute (KIFI), University of Namibia (UNAM) and South African Institute for Aquatic Biodiversity (SAIAB). One of the major project initiatives was the implementation of a catch assessment system to provide baseline data for fisheries management. These data were used to estimate the total fish yield from the Namibian section of the Caprivi floodplains estimated at about 3000 tons, with a market value of about N$100 million.

At national and international levels, the project has played a major role in partnering with various research institutions in developing proposals and obtaining research grants. These included collaborations with the University of Namibia (UNAM) on a NORAD funded fisheries capacity development project, the collaborations with UNAM and SAIAB in the implementation of the ICEIMA project, Nedbank funded Go-Green project and the Namibia/South Africa partnership project on Lake Liambezi Research funded by the National Research Foundation of South Africa, the Ministry of Education in Namibia and the MFMR. Results from these research projects have been instrumental in proposing amendments to the existing inland fisheries legislation. In addition, by engaging with national and regional higher learning institutions the project has contributed towards the building of national research capacity which, in the long term, will ensure that Namibia can continue to develop proactive approaches for the management of its fisheries resources.

6. EFFECTIVENESS (ACHIEVEMENT OF PURPOSE)

In this project's design, a technical advisory committee consisting of representatives from the MFMR, Zambian authorities, IRDNC, NNF and WWF was supposed to be established whose role was to undertake monitoring and evaluation of the project. This important committee was not established, hence precluding an opportunity for systematically and continuously assessing progress and changes caused by implementation of the Integrated Co-management of the Zambezi/Chobe Fisheries Resources Project, based on the predetermined indicators in the project's logframe. This omission was, however, accommodated by the midterm and final reviews of the project, which were commissioned by WWF, Namibia to examine among other aspects, the project's effectiveness.

Effectiveness of project implementation can be considered at various levels: human capacity, budgetary, and technical variables.

6.1 Human capacity

With exception of a project assistant, who could have assisted with various logistics, the project had sufficient human capital (Fig. 2). Of particular importance was the employment of local community members who were trained and participated in capturing fish monitoring data. Similarly, the project's capacity was boosted by close collaboration with fisheries ministries, and departments in Namibia and Zambia, and NGOs, such as IRDNC and AWF.

6.2 Budgetary

The project was implemented within the scope of the budget, and project's timeframe.

6.3 Technical variables

6.3.1 Outputs and purpose:

Section 4.3 and Annex 5 (LFA) of this report provide details on achievement of the outputs and purpose of this project. Qualitatively, the project's delivery on its outputs ranged from good to very good, while its delivery on the goal and purpose could be considered as fairly good due to the long-term nature of projects of this magnitude (see Section 5.1 & 5.4).

6.3.2 Recording, storage and dissemination of biological monitoring data

The project had a well organised and systematic way of compiling and disseminating information generated through the project. These are in a form of field documents and technical reports, which can be accessed in digital and hard copy format. In addition to these, two posters were produced but printing will only take place next year in the EU

project. One, on "Protecting Caprivi Fish stocks for Future Generations" was held up by the MFMR's delay in gazetting the FPAs, while the other, illustrating the fishes of the region, was delayed to allow for the collection of greatly improved photos of the fishes as a result of improvement in camera technology.

6.3.3 Stakeholders' views on project's achievements

The most overt views on the project's achievements were expressed by the local communities, who have started to feel empowered and recognised in the processes of managing the fishery resources. Highlights of their enthusiasm included their success in establishing FPAs (Namibia) and FMAs (Zambia). Community voluntary surveillance of FPAs in Namibia and voluntary handing over of some destructive fishing gear in Zambia are genuine gestures of their commitment to participate in fisheries management. This commitment needs further nurturing and capacity building in order not to lose the momentum. The process of amending the Inland Namibia Fisheries Act should be completed so that communities are able to develop and implement their local byelaws.

Furthermore, there is need for formal/signed agreements between the lodge owners and Conservancies, which should clearly specify roles of either party in the management of FPAs and fisheries in general. Similarly, negotiation for the Regional Council in Namibia to devolve responsibility of licensing gillnets and recreational fishing to the Conservancies should persistently be pursued so that revenues from such licenses could be used in supporting fish management activities.

Lodge owners: also expressed satisfaction with progress made, more especially with establishment of FPAs and reduction of nets in the river channels where sport fishing is undertaken. Their support to law enforcement through provision of equipment, money and fuel confirms their commitment to supporting fisheries management activities. However this commitment should be consolidated by signing agreements as stated in the paragraph above.

MFMR – the three members of staff interviewed at Katima Mulilo during the final evaluation of this project (i.e., director of Operations, Mr. Kapelwa, Mr. Saisai, Senior Fisheries Research Technician, and a Research Officer who closely worked with the project team in undertaking biological research of the fish sampled from Lake Liambezi, expressed satisfaction with the project's achievement and fully understood the urgency to amend the Inland Fisheries Act to allow Conservancies to develop their own byelaws that would facilitate and consolidate communities' effort in managing the fishery resources. The MFMR staff would however like to see all project equipment (boats & vehicles) donated to MFMR after the project has come to an end. They believe this would enhance their operational capacity in terms of research and law enforcement.

Section 5.6 of this report also presents commentary on stakeholders' expectations and views about the project's achievements.

6.3.4 Project failure if any

The Integrated Co-management of Zambezi/Chobe River Fisheries Resources project should be considered as a long term undertaking, whose purpose and goal, could not be fully achieved within three years of its implementation. The multiple outputs that have been delivered over the past three years (Section 4.3) should be considered as important milestones that will ultimately lead to the attainment of the purpose and goal of this project in future, probably in the next 5-10 years.

More time is required to:

a) Further facilitate the process of decentralisation and delegation of fisheries management authority to the communities, through Conservancies. This process has not been finalised in Namibia, where MFMR has not yet amended the Inland Fisheries Act to allow for full decentralisation and delegation of fisheries management to Conservancies.

b) Further build the capacity of fisheries governance institutions at local/national and transboundary levels. To ensure efficiency and effectiveness, capacity building should be guided by capacity needs assessment.

c) Brokering formal Agreements on management responsibilities among the primary stakeholders (Fish Management Committees, Fisheries Departments & lodge owners).

d) Formalise/harmonise the transboundary approaches to fisheries management and utilisation.

e) Develop mechanisms for community self-reliance in undertaking and sustaining fisheries management, conflict resolution, knowledge sharing and social learning.

f) Undertake socioeconomic surveys to determine the impact of the project on the livelihoods of the communities that rely of fish and fishing.

g) Adopt an adaptive co-management approach of the shared fisheries resources as an overarching strategy to allow for flexibility through learning-by-doing in dealing with uncertainty, complexity (social & ecological), collaboration and power sharing (*cf*: Folke *et al*. 2005).

7. EFFICIENCY OF PLANNING AND IMPLEMENTATION

This project's implementation was guided by a "project management plan", which was used as a communications tool, with clearly set expectations and indicators for evaluating delivery on the planned tasks (see Annex 5). The project's logframe provided a useful platform for assessing the project's overall performance.

7.1 Financial

The project efficiently and effectively utilised the funds, with no over-expenditure, or extension of the project beyond the agreed time frame of three years (January 2010 to December 2012)

7.2 Project delivery

For details on project delivery see Sections 4.3 and 6.3.1. The project's outputs were delivered through an adaptive process, incorporating flexibility to accommodate and adapt to the lessons learnt in the process of the project's implementation. A good example of the adaptive approach to implementation of the project is the integration of various recommendations that were provided during the midterm review of this project, many of which were implemented during the last phase of the project (Annex 4). Additionally, the project Executants fully recognised the long-term nature of this project. Accordingly they designed complementary projects, such as the "***Community-based management of river and floodplain fisheries in Namibia, Zambia, and Botswana***", funded by EU, which will assist in delivering on outstanding milestones of the "Integrated Co-management of the Zambezi/Chobe River Fisheries Resources Project.

Furthermore, the Project Executants facilitated partnership with various research institutions, such as the University of Namibia, SAIAB, the National Research Foundation of South Africa, the Ministry of Education in Namibia, and MFMR in securing research grants for fisheries capacity development, and providing vital information that will enhance the future outlook of the Co-management of the Zambezi and Chobe Fisheries Resources programme, in terms of effectiveness and efficiency in delivering on its purpose and goal.

7.3 Other management factors

Staff performance: the project had a lean staff structure (Fig. 2), among whom 88% were locally recruited from the local communities in the project area. This was essential for local capacity building. In terms of operation, the lean staff structure was efficient, as the project could draw upon external service providers to deal with issues of short-

term in nature. The project's research and monitoring capacity, especially on understanding the biology of fish was above board and this was further enhanced by co-opting other partners, such as MSc. Students, MFMR, UNAM, and SAIAB. The most conspicuous capacity deficiency in the process of the project implementation was dealing with socioeconomic issues. Despite having baseline information on the socioeconomic status of those dependent of fish and fishing, no follow-up assessment was undertaken to see if the project had any impact on the livelihoods of these people. The project recognised this and invited Dr James Abbott from Nippissing University, Canada, to assist in resolving this deficiency. The new SASSCAL Project being implemented in the same project catchment area will addresses this need.

Working relationship within the team and with partners: the project team worked very closely with a broad range of stakeholders (government departments, NGOs), and exceptionally well with local communities (See Section 3.3.3). All Conservancy committee members (Sikunga & Impalila) that were interviewed during the final evaluation of this project expressed satisfaction with the project's team, more especially the Project Executants (Mr. Denis Tweddle and Dr. Clinton Hay), who the community referred to as being fully committed to assisting them in integrating fish management issues into their Conservancy structures, as well as brokering partnership between the Conservancies and lodge owners, who are now supporting management of the FPAs.

The Project Executant also worked very well with the Community Transboundary Natural Resources Forum, through which lessons learnt in Namibia on the establishment of FPAs, and the impact of destructive fishing gears on the aquatic ecosystems have been shared, and assisted Zambia to adopt the concept of FPAs. This knowledge has also enabled the Fish Management Committees in Zambia to embark on awareness campaigns against use of monofilament and draft nets, with some fishers voluntarily handing over these destructive fishing gears to the Fish Management Committees.

Internal and external communication: the project communicated its various experiences through a series of field documents and technical reports, which were shared with various stakeholders. Plans are also underway to finalise production of posters (see Section 6.3.2) and publish some of the project's key findings/results in international journals; thus sharing the knowledge generated internationally. In addition to publications, the project convened workshop during which stakeholders and Project Executants shared information and experiences in the management of shared fisheries resources.

7.4 Implementation constraints

Irrespective of a good delivery record, this project encountered a few constraints during its implementation. Notable among these being the:

a) Delayed recognition/gazetting of FPAs by MFMR

b) Delayed amendments to the Namibian Inland Fisheries Act to fully decentralise fisheries management responsibilities to the community at Conservancy level, who should be able to develop and apply their own byelaws

c) Separation of project office from MFMR office. The ministry failed to provide office space to the Project Executant as promised during the project inception.

8. IMPACT (EFFECTS OF THE PROJECT AND VALUE ADDED)

Three broad criteria were applied to judge the impact of the Integrated Co-management of the Zambezi/Chobe River Fisheries Resources Project: Biodiversity, including ecosystem health and services; sustainability; and governance, as elaborated below:

8.1 Impact on biodiversity

Fish exploitation in the Zambezi and Chobe River systems is disproportionately exerting pressure on the larger cichlids, such as *Oreochromis andersonii, Tilapia rendalli* and *Oreochromis macrochir,* which are the major target for the commercial fishery (Hay, *et. al* 2012), as they fetch a much higher price at the market (van der Waal, 2011) than other species, such as, catfishes. This selective demand may lead to the disappearance of these, highly valued species, which in the long term may lead to the economic collapse of the commercial fishery.

While the impact of selective fishing, which prefers larger cichlids was determined during the project implementation phase, other parameters, which are vulnerable to overfishing such as abundance, spawning potential and, possibly population parameters (growth, maturation, etc.), which may modify age and size structure, sex ratio, genetics and species composition (Dayton *et al*., 1995; Goñi, 1998; Kaiser *et al*., 2003; Gislason, 2003; Agardy, 2000) were not assessed. Similarly, the impact of targeting and reducing the high-value cichlids on the trophic chain and the flows of biomass across the ecosystem (*e.g*. Pauly 1979) was not assessed. Consequently, only inferences can be made on the possible impact of the project on biodiversity. In this regard, the FPAs that have been established are likely going to stabilise the fish populations and in the long-

term contribute to sustenance of the integrity of aquatic ecosystems, more especially in and around the FPAs.

In the follow-up projects, criteria for assessing the project's impact on aquatic biodiversity, species–specific relative abundance, etc., should be developed and implemented.

8.2 Ecosystem health and services

Ecosystem health can be assessed by the presence or absence of signs of ecosystem distress, by direct measures of ecosystem resilience or counteractive capacity, and by evaluation of risks or threats from human activity and natural forces which may decrease the supply of ecological services. During the project implementation phase, no baseline information was collected on the ecosystem's health. However, considering the increasing numbers of fishers using drag nets, the impact on the aquatic ecosystems caused by dragging these nets should be considerable. Consequently, the FPAs that have been established will contribute to preserving the aquatic ecosystems' health.

In terms of ecosystem services, inland fisheries are a vital component in the livelihoods and food security of people throughout the project area (van der Waal, *et. al*, 2011), as well as contributing huge recreational and economic benefits (Sweeney, *et. al* 2010). The FPAs which have been established during this project's implementation have already shown some improvement in ecosystem services, in a form of improved fish populations and size (van Niekerk, *pers.com*), with potential for the fish to move into the surrounding waters, where the fish off-take by the local fishers will improve; thus contributing positively to food security and household income.

8.2 Socioeconomic

The baseline socioeconomic information shows that in the the eastern floodplains of the Caprivi, Namibia, a third of the households depend primarily on the fishery for subsistence and income, with fish vendors most of whom being women earning about N$ 868 (US$140) per month from fish sales (van der Waal, *et. al*, 2011). The income generated by fisheries covers the basic needs of the people such as food, clothing and school fees. Fish are important in the diet, especially in years of drought and stress. In Zambia, fish is equally important, with approximately 55% of all animal protein coming from fish, and more than 300 000 households are directly or indirectly employed by this sector (van der Waal, *et. al*, 2011). Although no follow-up socioeconomic survey was carried out, the importance of fish in community livelihoods is likely going to improve, more especially once the local regulatory frameworks have been fully implemented and

the local governance structures has acquired sufficient capacity (financial, human & equipment) to sustainably manage the shared fisheries resources.

8.3 Governance and management of natural resources

One of the hallmarks of this project has been the strengthening of grassroots' fisheries governance institutions, and transforming the "open access" that characterize the Zambezi and Chobe fishery to a "common property resource" governed under locally and collectively constituted byelaws. Through the community Transboundary NRM Forum, communities have identified elements of the Fisheries Regulations (*e.g.*, on fishing closed season, mess size of gillnets & abolition of monofilament and drag nets) that should be harmonized to promote standardized approaches to the management of the shared fisheries resources.

Devolution of natural resources management responsibilities from the state to local communities is a common phenomenon in the wildlife sector, but a fairly rare undertaking in the fisheries sector (*e.g.*, Lake Chiuta, Malawi); hence this project will provide unique lessons in the SADC Region on fisheries co-management at transboundary scale.

8.4 Policy and strategy

The most important impact of this project in terms of contributing to the policy and legislative discourse has been its influence on the KAZA TFCA, where elements of natural resources policies and legislation of the five partner countries (Angola, Botswana, Namibia, Zambia & Zimbabwe) are in the process of being harmonised. For the aquatic resources, KAZA has adopted the following for standardisation:

a) Adoption of FPAs on both sides of the shared river basins, as tool for safeguarding fish breeding sanctuaries and improving fish production, and that these FPAs should be managed by local communities, through their locally constituted governance structures; and

b) Regulations on netting (mesh size and licensing) should be harmonized.

In the process of standardizing these important elements of the Fish Regulations, KAZA TFCA, through its Secretariat, will contribute to disseminating important lessons learnt in the implementation of the Integrated Co-management of the Zambezi and Chobe River Fisheries Resources project to KAZA partner countries; thus replicating the value of this project at a much larger scale.

8.5 Civil society participation

The most conspicuous impact of this project on civil society is the adoption of the project's output, especially establishment of FPAs and local fisheries governance institutions by AWF, which facilitated the process of establishing them on Zambian section of the Zambezi River. Local communities and their traditional leaders have enthusiastically adopted this initiative, which has started to yield positive results, in terms of:

a) Zoning of FMAs;

b) Establishment of 12 Fish Management Committees (FMCs);

c) Dissemination of awareness against use of monofilament and drag nets, which has led to some fishers handing over these nets to the FMCs; and

d) Process to develop management plans for the FMAs has been initiated.

Transferring of knowledge and experience has, therefore, been one of the main achievements of this project.

9. SUSTAINABILITY, REPLICABILITY AND MAGNIFICATION POTENTIAL

Sustainability of this project can be considered in terms of the exit strategy, which could either be based on (i) securing additional external funding to continue with its implementation; or (ii) development of strategies that will assist the communities to generate own resources for sustaining their capacity, and social capital, *i.e.*, the institutions, norms and social cohesion that are critical for co-management of the shared fisheries resources beyond external funding support. The available exit strategy is based on securing additional donor funding from EU and other donors (Norad, Nedbank, National Research Foundation of South Africa, & SASSCAL), which only provides limited financial relief on a programme that is obviously a long-term undertaking. In the follow-up EU funded support, strategies for sustaining this project beyond donor funding should be developed.

9.1 Social capital

Social sustainability is the core element of sustainability. The project has made a notable achievement in establishing grassroots' fisheries governance institutions, which require further capacity building in terms of finance, human, and equipment necessary to undertake FPAs surveillance and other fisheries management activities, such as negotiating fare share from recreational fishing, conflict resolution, etc.

The key constraints to attaining the project's sustainability included reluctance of governments to devolve licensing of gillnets and recreational fishing to community fisheries governance structures/Conservancies, which could generate sufficient funds for communities to plough back into fisheries management. WWF should therefore assist in negotiating with the governments (Namibia & Zambia) for the transference of licensing responsibility to local fisheries governance structures.

9.2 Replicability and magnification potential

As noted in Section 8.4 and 8.5, this project has already been replicated, e.g., in Zambia and has been proposed for replication at KAZA TFCA level. Therefore concerted effort is required in developing its sustainability strategy; so that communities themselves can be able to implement it, with support being provided by the states on policy guidance and NGOs (such as WWF, NF, IRDNC, AWF) on capacity building, and monitoring stakeholder compliance with various fisheries co-management agreements.

10. LESSONS LEARNED

10.1 Exceptional experiences

a) Transforming the "open access" that characterises the Zambezi and Chobe fishery to a "common property resource" governed under locally and collectively constituted byelaws. This has been achieved by communities, who have taken leadership in the management of the fisheries resources, through their local governance institutions, which have been established through democratic and participatory processes.

b) Innovation in the establishment of FPAs. This is a unique approach in southern Africa, and a useful tool for promoting sustainable fisheries – whose success depends on among others:

- development of the fisheries management plan, which guides management of the FPAs;
- garnering community buy-in and establishment of local governance institutions to take leadership in the management of the FPAs;
- winning stakeholders' support (state, NGOs and private sector partners) in the management of the FPAs; and
- development of byelaws to regulate the fishing activities.

c) The FPAs initiative has potential for adoption as a tool for aquatic biodiversity conservation in the five Kavango Zambezi Transfrontier Conservation Area's partner countries (Angola, Botswana, Namibia, Zambia & Zimbabwe), as its success is easier to demonstrate as exemplified by a relatively rapid recovery of

the fishery in Sikunga Conservancy. Zambia has already adapted the FPAs initiative, in a form of FMAs – with expansive areas of the Zambezi channel zoned as fish protected areas with AWF assistance. Additionally, the Community Transboundary NRM Forum has internalized the FPA concept as a tool for promoting sustainable fisheries management in the Zambezi ecosystem.

d) Reduction of conflicts between lodge owners who market recreational fishing and fishers, due to reduction of nets in the River channels where anglings takes place.

10.2 Best practice lessons

10.2.1 Project design and management

The following characteristics were fundamental in this project's design and management:

a) Promotion of co-management of fisheries resources at transboundary scale

b) Nesting the project's ownership at grassroots level, and the development of the requisite social capital for governing and management of the shared fish resources.

c) Leanness of the project's implementation structure, which saved on the project's resources and co-option of a local community members as fish monitors was essential in building local capacity for fisheries monitoring;

d) Broad-based partnership (Universities, government & NGOs) augmented the project's capacity to simultaneously deliver in multiple areas.

10.2.2 Biodiversity conservation

The most prominent lesson for biodiversity conservation is the establishment of FPAs, which have started to show positive results in terms of fish populations and size.

10.2.3 Dissemination of lessons learned

The lessons learnt are being disseminated through:

a) More than thirty field documents and technical reports have been produced and shared with key stakeholders, with others being prepared for publication in international journals;

b) Production of posters; and

c) Workshops and meetings.

11. CONCLUSIONS AND OVERALL ASSESSMENT

11.1Project performance

11.1.1 Relevance,

This project was designed to abate the problem of overexploitation of the fish resources, which is being aggravated by open access to the fishery, increased numbers of fishers, and an upsurge in the use of destructive fishing gear, with potential to diminish the production of fish, limit the economic productivity of the fishery, reduce the subsistence and recreational uses, and reduce the genetic diversity and ecological resilience of the Zambezi and Chobe ecosystems. At global and regional levels, this project contributed to the attainment of various conservation initiatives, protocols and frameworks, including:

g) The WWF 2020 Biodiversity Goals ("*Places - Biodiversity will be protected and well managed in the world's most outstanding natural places*");

h) The United Nations Code of Conduct for Responsible Fisheries (CCRF);

i) The NEPAD's Comprehensive Africa Agricultural Development Plan (CAADP) framework for sustaining fish production through integrated water resource management, supporting transboundary management, development of governance systems that protect the interests of the poor;

j) SADC Protocol on Fisheries which provides a framework for managing shared fisheries resources, trade and investment, law enforcement, and harmonisation of fisheries legislation;

k) The KAZA TFCA has adopted FPAs' concept, a product of this project as a tool for promoting aquatic resources conservation and fish production in its partner countries of Angola, Botswana, Namibian, Zambia and Zimbabwe; and

l) The Zambezi Watercourse Commission (ZAMCOM) objective, which is "*promote the equitable and reasonable utilization of the water resources of the Zambezi Watercourse as well as the efficient management and sustainable development thereof".*

11.1.2 Effectiveness

This project's effectiveness was achieved at various levels, including:

e) Having a lean project implementation structure, incorporating local community members who were trained and participated in capturing fish monitoring data, at field and market levels. The project's capacity also benefited from close collaboration with fisheries ministries, and departments in Namibia and Zambia, and NGOs, such as IRDNC and AWF;

f) Implementing the project within budget, and timeframe;

g) Having a well organised and systematic way of compiling and disseminating information generated through the project; and

h) Successfully establishing FPAs (Namibia) and FMAs (Zambia), with communities undertaking voluntary surveillance of FPAs in Namibia and voluntary handing over of some destructive fishing gear in Zambia.

11.1.3 Efficiency

This project's implementation was guided by a "project management plan", which was used as a communications tool, with clear set expectations and indicators for evaluating delivery on the planned tasks. The project's logframe provided useful platform for assessing the project's overall performance. In addition, project funds were efficiently and effectively utilised, with no over-expenditure, or extension of the project beyond the agreed time frame of three years.

11.1.4 Sustainability, Replicability, Magnification opportunities

The project had an exit strategy, based on securing additional donor funding from EU and other donors (Norad, SASSCAL, SAREP, MCA, Nedbank & National Research Foundation of South Africa), which provides limited financial relief on a programme that is obviously a long-term undertaking. In the follow-up EU funded support, strategies for sustaining this project beyond donor funding should be developed.

11.1.5 Overall assessment of project

Achievement of the project goal and purpose

The project's goal and purpose could not be achieved within a short-term of 3 years. Co-management and transboundary collaboration in management of fisheries, which were the underlying strategies for achieving the project's goal and purpose, are long-term undertakings – requiring sufficient time to build governance institutions at local, national and transboundary levels; and for innovation; conflict resolution; knowledge generation and social learning. This requirement was recognized by the project implementers who designed a fall-up project to be funded by EU; thus providing opportunity to fully deliver on additional milestones that will contribute towards the attainment of the project's goal and purpose.

Contributions to socio-economic situation in the project area

See Section 8.2 for details.

Contributions to natural resource governance and management

This project strengthened grassroots' fisheries governance institutions, and transformed the "open access" that characterizes the Zambezi and Chobe fishery to a "common property resource" governed under locally and collectively constituted byelaws. Through the community Transboundary NRM Forum, communities have identified elements of the Fisheries Legislation (*e.g.*, Regulations on fishing closed season, mess size of gillnets & abolition of monofilament and drag nets) that should be harmonized to promote standardized approaches to the management of the shared fisheries resources. This project exemplified a rare phenomenon of devolving the responsibilities of fisheries management from the state to local communities, providing a unique opportunity to provide lessons at SADC Region level on fisheries co-management at transboundary scale.

11.1.6 Reasons for project failure to perform (if relevant)

The Integrated Co-management of Zambezi/Chobe River Fisheries Resources Project should be considered as is a long-term undertaking, which could not achieve its purpose and goal within 3 years of its implementation. Irrespective of this, the project's achievement on output delivery ranged from good to very good, and it's contribution towards achieving the goal and purpose was good (Annex 6). It is expected that more contributions towards its attainment of purpose and goal will be made during the follow-up EU project, titled "***Community-based management of river and floodplain fisheries in Namibia, Zambia, and Botswana***", which essentially builds on the foundation of this project.

12. RECOMMENDATIONS FOR THE WAY FORWARD

12. 1 Project sustainability

f) NNF should further pursue amended of the Namibian Inland Fisheries Act to allow for full decentralisation and delegation of fisheries management to Conservancies, and the gazettment of FPAs. Similarly, AWF should facilitate the process of Gazetting FMAs in Zambia.

g) NNF should facilitate the process of developing mechanisms for community self-reliance in undertaking and sustaining fisheries management, conflict resolution, knowledge sharing and social learning. This process should be supported by:

- WWF negotiating with the governments (Namibia & Zambia) for the transference of licensing responsibility to local fisheries governance structures, so that revenues generated through these can be ploughed back in fisheries management.

- WWF and other NGOs lobbying for the abolishment of the current system of lodge owners paying natural resource use rights rentals to the chiefs in Namibia. Instead, payment of such fees, inclusive of all uses (game viewing, and sport fishing) should be paid to Conservancies, through their governance structures.

h) NNF should broker formal signing of Agreements between the lodge owners and Fish Management Committees/Conservancies, stating exactly the responsibilities of either party in the management of the FPAs and the fisheries resources. Similar Agreements should be signed among all primary stakeholders.

i) NNF, and other NGOs should further build the capacity of local governance institutions so that they can undertake, and sustain surveillance and management of their FPAs into the distant future

j) WWF/NNF should adopt an adaptive co-management approach to facilitating co-management of the transboundary shared fisheries resources as an overarching strategy to allow for learning-by-doing and flexibility in dealing with uncertainty and complexities of projects of this nature, which take a long time to fully deliver on their goal.

12.2 Transboundary co-management of the fishery

b) NNF, supported by KAZA TFCA Secretariat should facilitate formal harmonisation of the transboundary approaches to fisheries management and utilisation

12.3 Biodiversity, ecosystem health and services

b) NNF/WWF should develop criteria for assessing the project's impact on aquatic biodiversity, including ecosystem's health and services, and implement these during the EU follow-p project implementation.

12.4 Socioeconomics

b) NNF should broadly share information on the follow-up socioeconomic survey, as this information will demonstrate impact of the Integrated Co-management of the Zambezi/Chobe River Fisheries Resources Project on the people who rely on fish and fishing.

ANNEX 1: EVALUATION TORS

Zambezi/Chobe River Fisheries Resources Project on the people that rely on fish and fishing in the project catchment area.

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Final Evaluation of WWF-Norway Funded Project

Project No.: WWF –9F0792

WWF-Norway –Norad – 5012 - GLO-08/449-29

Project Name: Integrated Co-management of the Zambezi/Chobe River System Fishery Resource Project

TERMS OF REFERENCE

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1. Introduction and purpose of the project evaluation

This Project Evaluation is commissioned by *WWF In Namibia* and forms part of the requirements of the funding agency, Norad/Norwegian Ministry of Foreign Affairs, through WWF-Norway. The main purpose of the Evaluation is to assess and review the relevance, effectiveness, efficiency, impact and sustainability of the project in order to conclude if the project has delivered its intended benefits and ultimately provided value for money. The evaluation will serve to guide the design of similar projects in the future and generally contribute to organizational learning. It also forms part of WWF's desire for transparency. For details on the scope of the evaluation and evaluation criteria see Section 4 below and Annex 5 – Evaluation Report format.

The Evaluation Report, when finalized will be posted on the WWF Connect website. A summary of the report will be posted on the Norad website and the WWF-Norway website.

2. Project Background and Context

2.1 Summary of project Information

Project Name	**INTEGRATED CO-MANAGEMENT OF THE ZAMBEZI/CHOBE FISHERIES RESOURCE PROJECT**		
Project Location	Caprivi Region, Namibia Western and Southern Provinces, Zambia		
Project reference numbers: WWF WWF-Norway NORAD	 9F0792 5012 GLO-05/312-11		
Project budget	FY10 – NOK ??? FY11 – NOK ???		
Donor(s)/ funding sources	*WWF-Norway via NORAD/Ministry of Foreign Affairs* Match Funds (Ministry of Fisheries and Marine Resources)		
implementing agency and partners	Namibia Nature Foundation/Ministry of Fisheries and Marine Resources through WWF In Namibia		
Contact person	Chris Weaver, Director: WWF In Namibia		
Start Date:	*2010-01*	**Expected End Date:**	*2012-12*
Network Initiative / Ecoregion Programme / Priority Place(s)[2]			
Zambezian Flooded Savannas – Ecoregion 98 Central and Eastern Miombo Woodlands – Ecoregion 88 (Slight influence)			

2.2 Geographical location

The Caprivi Region in Namibia borders on Botswana in the south, Angola and Zambia in the north and Zimbabwe to the east. The Chobe River and the Kwando/Linyanti River System border on Botswana and the Zambezi River on Zambia. The Chobe National Park in Botswana borders a large section of the Chobe River (both sides of Kabula-Bula), where no fishing is allowed on the Botswana side, but with a fishery operating on the Namibian side. The Zambezi River borders

.

Namibia and Zambia for approximately 120 km between Katima Mulilo and Impalila Island, where it connects with the Chobe River. The water level of the Chobe River is influenced by the Zambezi River and changes direction depending on the flood level of the Zambezi. Both the Zambezi and Chobe Rivers are slow flowing with large floodplains and small, vegetated islands, with the only rapids being at Katima Mulilo and Impalila Island. The largest sections of the floodplains fall within Namibia with smaller sections in Zambia. Both the Chobe and the more westerly Kwando/Linyanti Rivers flow into Lake Liambezi, depending on the magnitude and duration of the annual flood. This lake has sustained a large valuable fishery since it refilled in 2009. Three major tributaries enter the Zambezi River on the Zambian side with several lagoons present between Sesheke and Mambova.

Figure 1: Map of project area

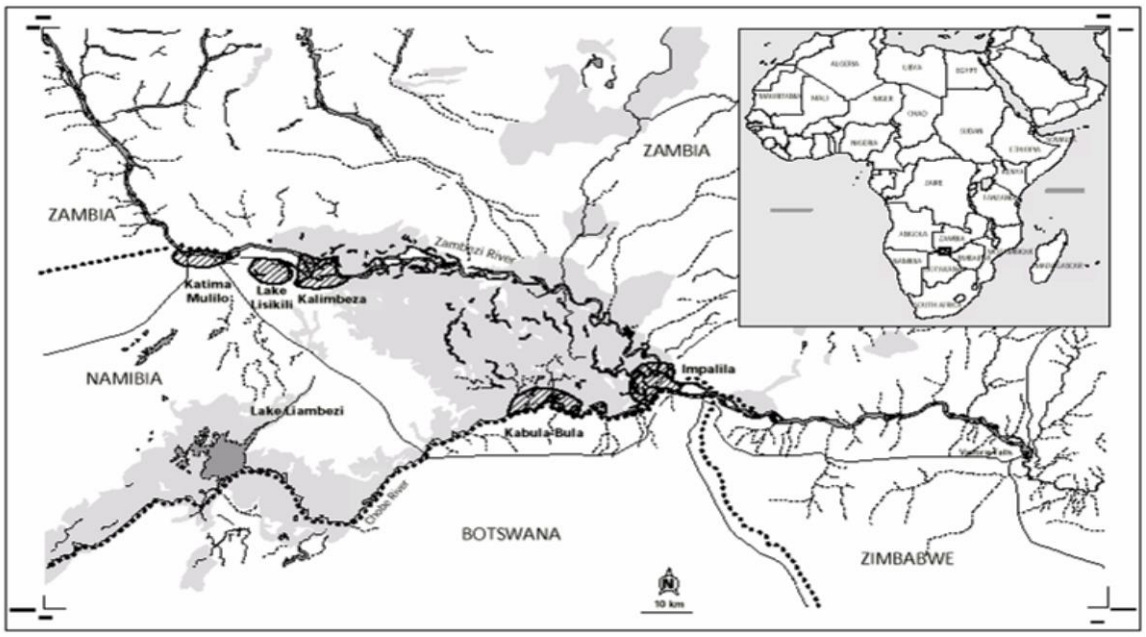


Figure1. Map of the study area with the stations surveyed during the annual monitoring programs of the Ministry of Fisheries and Marine Resources, Namibia (Hay et al., 2002)

At 600-700 mm, East Caprivi has the highest rainfall in Namibia -- although it is considered low globally. The rainfall in the catchment area of the Zambezi River in Angola and Zambia is, however, much higher and is the main factor determining the flood level, timing and duration in the Caprivi. In comparison, the local rain in the Caprivi has very little impact on the flood cycle of the Caprivi floodplains. The floodplains cover large areas (> 300,000 hectares) of the eastern Caprivi and in times of a major flood, the Kwando/Linyanti System connects with the Chobe River. More than 30 per cent of the eastern Caprivi can then be flooded. Fishery and overgrazing of the floodplains in the eastern Caprivi are possibly the activities with the highest impact on the environment and the fish community. The absence of large-scale industries and cities in the region ensure very little pollution on the floodplains. The physical characteristics and water quality of each river system does not change drastically between the different regions. No dams

or weirs are present or planned for the proposed project area, as the floodplains' flat topography is not conducive to such structures.

Figure 1 (above) highlights the study area and the stations that are monitored each year during the biological survey (by MFMR, Namibia) and also the stations surveyed during the previous project (Kalimbeza, Impalila and Kabula-Bula/Ihaha areas).

2.3 Biodiversity importance of project area

The project area is largely comprised of a rich system of floodplains and permanent backwaters to the Zambezi River. These floodplains are part of a wider ecosystem that has historically been part of a seasonal migration complex for a mix of charismatic large African megafauna (i.e., elephant, buffalo, plains zebra, waterbuck, etc.) that also includes the Kalahari Woodlands found on the southern side of the Chobe River. Until the late 1960s, the floodplains were occupied by large numbers of wildlife such as red lechwe, puku, and hippopotamus. However, the occupation of the area by the South African Defence Force, and attendant proliferation of firearms in the area, resulted with extensive over-use of the floodplains' valuable wildlife stocks for the next three decades.

Since passage of the Namibia Conservancy legislation in 1996, a number of conservancies have begun to form and remnant populations of these animals have begun to recover. Presently, the area is of significant biodiversity value to Namibia and the region, and is under consideration as a potential Ramsar Wetland Site of International Importance. Additionally, the area provides critical habitat to a number of endangered and/or rare species on the CITES appendixes (Nile crocodile, African elephant, etc.) or IUCN Red Data book.

A threatened fish species, the Caprivi Killifish (*Nothobranchius* sp.) (still undescribed), is found in rain pools in the Caprivi. Several sites have been found where this species occurs, mainly in Salambala Conservancy. It has a specialised life cycle where eggs are laid on the bottom and development is suspended when the pool dries out. During the next rainy season, these eggs hatch, the fish mature and breeds before the pool dries up again. Any development projects, such as roads, will further endanger this species.

The Zambezi and Chobe Rivers are rich in fish species diversity with at least 87 species identified from the Namibian section of the system, of which at least 11 are undescribed. The entire Zambezi River has close to 160 species. Several species have been identified as having specialised life cycles and habitat niches. There are species that are not commonly sampled due to habitat preferences, while others are naturally rare. The annual flood cycle is the main stimulant for fish production and any changes to the hydrology will seriously influence the fish stocks. Similarly, any artificial changes to the habitats may negatively impact on the fish population. It was found that species diversity and species composition differ between stations as well as during the different flood periods. This is linked to habitat differences, and breeding and migration behaviour of the different species. Another important aspect of the fish resource is that the Namibia Ministry of Fisheries and Marine Resources has initiated an index where fish can be used as indicators for aquatic ecosystem health. Fish are part of the top structure of the system and will show signs of any impacts at lower levels. Species diversity plays a very

important role in this index. The Ministry started a monitoring programme in 1997 (working on the important fish species in gillnet catches) to follow the trend in the fish population over years.

2.4 Policy and legal context

The Namibia Inland Fisheries Resources Act (Act No. 1 of 2003) and Regulations came into operation on 6th June 2003. The Act differs slightly between different river systems due to the nature of these systems and also due to the importance of the fishery to the communities. Seasonal systems such as the Cuvelai System (seasonal river system in north central Namibia flowing from Angola) should be managed differently from perennial systems such as the Zambezi River. Also, the Orange River (bordering South Africa in the south), where the fish resource play a minor role towards community welfare, will also differ in the management approach as say from the Okavango River, where the fishery resource is extremely important to resident households.

The subsistence nature of Caprivi's multi-species fishery, combined with the shared nature of the fishery resource, makes fishery management impossible through a quota system. Hence, the regulations are written in such a way as to restrict the input effort by the fishery. These restrictions are linked to the number of nets, mesh sizes, and net lengths. Furthermore, no dragging of nets is allowed in the Caprivi, but all traditional gear types are allowed. The rationale is that no restrictions will be put on the poor communities who can still use the traditional ways of fishing. The making of these gear types, in itself, is restricting the catch effort.

Illegal fishing has been reported by fishermen both from Zambia, as well as from Namibia, with Zambians often being the offenders, and poor enforcement is often cited as a reason. The shared nature of the transboundary fish resource is complex, having multiple users who are responsible to different authorities with different rules, having different capabilities and means of enforcement. Conflict also originates from different causes on both sides of the river, as during the Zambian closed fishing season many Zambian fishermen simply fish in the Namibia backwaters or side of the Zambezi River. In Namibia, conflict arises because of access and the method of fishing, whereas in Zambia it also includes the high number of nets.

The Act also makes provision for an Inland Fisheries Council that will advise the Minister in relation to any matter on which the Minister is required to consult the Council. This council will also include traditional leaders leading the way for inputs from the fishing communities. The council may also establish committees to investigate issues as determined by the council. This Council has not, however, been established to-date.

According to the Act, closed seasons and fish sanctuaries can be established with collaboration with the stakeholders with the aim to preserve the environment, protect the fish resource and habitats necessary for successful breeding, and to promote the regeneration of the fish stocks. Fishery Inspectors are employed by the Ministry, but the Minister can also appoint a person nominated by the traditional authority as an inspector.

A new Fisheries Act in Zambia was promulgated in 2011, with the following considerations:

- The need to regulate and mandate fish farming

- The need to decentralise fisheries management through community involvement
- The increasing need for co-operation with neighbouring states in the management and development of shared fisheries
- The need to increase protection of aquatic fauna and flora, biodiversity from environmental degradation.

Different policy and legislative frameworks exist between Namibia, Botswana and Zambia. In Namibia, subsistence fishery is favoured over the commercial fishery. The Namibia subsistence emphasis is based upon the collection of biological data from the Namibian rivers that shows the fish resource is limited and will not sustain commercial ventures. The new Zambian Fisheries Act, while differing in style to the Namibian Inland Fisheries Act, contains the same general fishing restrictions as the Namibian Act and can therefore be used in harmony to control undesirable fishing practices. Continued communication is needed to ensure a harmonised policy between stakeholder countries.

2.5 Social and economic context

A study conducted on the eastern floodplains of the Caprivi, Namibia states that a third of the households depend primarily on the fishery for subsistence and income purposes and that there is a clear reliance on the fishery for survival. The income generated by fisheries covers the basic needs of the people such as food, clothing and school fees. Fish are important in the diet, especially in years of drought and stress. These households on the floodplains usually have a subsistence livelihood, further emphasizing the importance of the fishery. The fishermen in the Caprivi are mainly males, using modern gill nets. In contrast, the vendors at the markets are mainly females (frequently the head of a household), who rely on fish sales as the main source of income for their families.

Although the area has a relatively high level of literacy, a high rate of unemployment is present, stressing the importance of the fishery. The study further revealed that the households in the area earned on average N$ 868 (US$140) per month and experience difficult times during November/December to April/May when incomes are low.

Fish are very important in Zambia with approximately 55% of all animal protein coming from fish. More than 300 000 households in Zambia are directly and indirectly employed by this sector.

2.6 Major stakeholders and their roles, interests and concerns.

Households dependent on subsistence use of the fishery resource

In the Kabbe constituency (the majority of the project area), Namibia about 30 per cent of the households depend mainly on fishing for subsistence and income purposes. A large percentage of these households indicated that fishing is critical to the family for survival. The income generated from fishing went to basic needs such as food, clothing and school fees. While the previous surveys indicated that no real commercial fishing was taking place on the Zambezi

River, this has changed rapidly with an influx of traders from outside the immediate area hiring fishermen to fish for them.

Vendors

The majority of the vendors are women, with many indicating they are the head of the households. For some, fishery is the most important income activity to sustain the family.

Potential local fishery management structures (i.e. fish associations, conservancies)

The fisheries management system is only one component of the broader resource management system, based on the tribal council at various levels. The access system for different stakeholders is only sporadically enforced and is being overwhelmed by outside forces. Regulations on who can fish where and when were generally followed, but they are difficult to enforce. A system of management is present on the Zambian side between the Government and the Traditional Authority, but enforcement is problematic.

Traditional Authority

The Traditional Authority is the facilitator in relation to the handling of conflicts or disputes. This is particularly meaningful in Caprivi and Zambia where government enforcement of fishery regulations is weak. This Traditional system is transparent and it allows everybody to have a say in the discussion. There is also the right of appeal and the discussion can be taken to the next level in the Traditional Authority. The Traditional Authority is seen as a key role player in future joint management of the fish resource when considering the transboundary aspects.

Sport fisherman and tourism industry

Tourism and recreational ventures are important activities, bringing new income opportunities and economic benefits to the rural communities. This is also the situation in the Caprivi where several lodges specialise in the recreational fishing industry. The Zambezi and the Chobe Rivers have several large excellent fish species for sport fishing, and tourists come from far to catch Tigerfish, Nembwe and Threespot Tilapia. A study done during a fishing competition (2008) held in the Caprivi indicated that the value generated for local business per fish caught was N$52.

Namibia Ministry of Fisheries and Marine Resources

The Namibia Ministry of Fisheries and Marine Resources is the responsible Ministry for the freshwater fish resources in the country. The line functions of the Ministry is further based on the Namibian Constitution (Article 95) that states "*The state shall actively promote and maintain the welfare of the people by adopting -- policies aimed at – maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future"*.

Department of Fisheries, Zambia

The Department of Fisheries in Zambia has their head office in Chilanga and falls under the Ministry of Agriculture, Food and Fisheries and has the responsibility to implement fisheries and aquaculture development programmes in the country.

WWF In Namibia

The WWF In Namibia has a mandate to assist with the development of capacity in Namibian partner organisations to develop and implement innovative community-based natural resource management (CBNRM) and monitoring systems. As part of this process, WWF staff and partner organizations assist the MFMR and relevant Caprivi stakeholders (i.e., conservancy committees, traditional authorities, private sector partners, etc.) to develop, implement, and test pilot fishery management and monitoring systems as part of a broader approach to integrated resource management in Caprivi that also involves wildlife, forestry, and tourism resources.

Lodge Operators and Guides In Botswana

Presently, the Zambezi/Chobe River system is routinely exploited by Botswana lodges and guides who ferry sport fishermen into the Namibian portions of the system to undertake sport fishing for tigerfish, bream, and barbel. This is a lucrative undertaking, which presently does not benefit the conservancies or fisherfolk of any country. The introduction of a fishery management plan for the Impalila and Kasika Conservancies will entail the establishment of a daily use fee for Botswana lodge operators and guides who bring sport fisherman into the Namibian waters.

2.7 Other related conservation initiatives in the project area

The Project is liaising closely with the Namibian NGO, Integrated Rural Development and Nature Conservation (IRDNC), who is supporting the formation of conservancies in Caprivi. In addition, and where applicable, the Project coordinates with the Namibia Ministry of Environment and Tourism, who is playing a key facilitator role in the establishment of the Kavango/Zambezi (KAZA) Transfrontier Conservation Area.

3. The Project Log frame

The full Logical Framework Analysis (LFA) is attached as Annex 1

3.1 Project Goal

To sustainably manage the shared Zambezi/Chobe River fisheries resources by promoting transboundary coordination and collaboration on the introduction of fully integrated fishery management systems

3.2 Project Purpose

By end 2012, a fully integrated management system for livelihood and sport fisheries, that provides optimal benefits to all stakeholders reliant on this valuable resource, is in place in targeted pilot communities.

3.3 Project Outputs

Output 1: Cross-border collaboration achieved in management of the fisheries resources.

Output 2: Management plan for the fisheries developed during Project Phase 1 successfully implemented (in collaboration with neighbouring countries) for the benefit of the communities.

Output 3: Fish Protection Areas established and fully functional in targeted pilot communities.

Output 4: Tourist angling lodges operating in agreement with local fishing/conservancy committees.

Output 5: Capacity built in research and monitoring of fish resource.

4. Scope of the Evaluation

The Project Final Evaluation is expected to address the following, at a minimum:

A. Relevance and Quality of Project Design

Assessment of the relevance and quality of the project design (i.e., is the project design adequately addressing problems and needs and is it consistent with beneficiaries' requirements and national priorities?).

a) Are the goal and purpose of the project still relevant, (i.e., to what extent has the project responded to priority conservation, socio-economic and other identified issues of concern? If not, what has changed from when the project was designed and why?

b) What is the value of the project intervention in relation to WWF's Global Conservation Programme and to regional and national conservation priorities, policies and strategies etc.?

c) Given the project goal and purpose, have the implementation strategies been appropriate (i.e., is the LFA logical and complete?)

d) Has the project monitoring system, including design of indicators, been appropriate?

e) Have the assumptions and estimation of risks been complete and realistic?

f) Has the project had buy-in and support from all stakeholder levels (i.e., has it met stakeholder expectations?)

g) Is the project aligned with other donor or government projects and programmes?

B. Effectiveness (Achievement of purpose)

Assessment of the major achievements of the project to date in relation to its stated purpose.

a) With reference to the LFA indicators, other criteria if appropriate, and project monitoring data, has the project achieved its purpose and outputs, and to what extent has the project contributed to the overall goal (Quantitative assessment)?

b) Are any conservation and socio-economic achievements likely to occur after the end of the project?

c) Has project biological monitoring data been appropriately recorded, stored and disseminated?

d) Has the project failed in any respect, and if so explain why?

e) What are the views of the various stakeholders on the achievements of the project (qualitative assessment)?

f) Has the project contributed to raising capacity in natural resource management or other areas?

C. Efficiency of Planning and Implementation (Sound Management)

Were funds, capacity, time and other resources efficiently utilised to achieve the project purpose and outputs (i.e., Did the project provide value for money and effort?).

Implementation

a) What % of activities in the workplan has been delivered?

b) Has monitoring data been collected as planned, stored and used to inform future plans?

c) Has project implementation been adaptive and pro-active, responding to changes and lessons learned?

d) What learning processes have been in place and who has benefitted (e.g., training, self-evaluation, exchanges with related projects, etc.)?

Management factors

e) Has the project experienced any capacity gaps?

f) Did project staff perform efficiently?

g) How has the working relationship within the team and with partners, stakeholders and donors been?

h) Has internal and external communication been effective and efficient?

D. Impact

Assessment of the impact of the project, whether positive, negative, primary or secondary long-term or short-term, and produced directly or indirectly as a result of project interventions.

a) What positive impacts has the project had on biodiversity conservation or is likely to have (If applicable, make reference to climate change, natural resource management governance, ecosystem services, ecosystem and species conservation)?

b) What positive impacts has the project had on people in the project area, or is likely to have (If applicable make reference to women, poverty, equality etc.)?

c) Have there been any unforeseen negative impacts on nature and people.

d) Has the project met stakeholder expectations?

E. Sustainability, replicability and magnification potential

Assessment of the key factors affecting sustainability and up-scaling of the project activities:

Sustainability

a) Has the project developed a clear exit strategy, including how to ensure continuity of project activities and conservation gains?

b) Is the social, legal and political environment conducive to sustainability and replicability?

c) What is the likelihood of continuation of initiated conservation activities and lasting benefits after the project is closed?

d) Which are the key constraints to sustainability of project activities and conservation gains?

Replicability

a) Is there evidence of organisations/partners/communities that have copied, upscaled or replicated project activities beyond the immediate project area, and is such replication or magnification likely?

b) Can the project be replicated without additional donor funding and technical assistance?

F. Lessons learned

What lessons and experiences have resulted from the project?

a) Has the project provided any exceptional experiences that should be highlighted e.g. case-studies, stories, best practice?

b) What are the lessons learned and best practices derived from this project?

c) How are lessons learned and best practices going to be shared/disseminated?

G. Conclusions and overall assessment

Linked to the findings under the above sections, overall conclusions should be drawn and listed in terms of importance.

Based on the conclusions, a preliminary assessment of the project in terms of general performance and achievements and contributions to national, regional and global (WWF) conservation goals and socio-economic contributions should be made, providing explanations and justifications for any deviations from the LFA and any shortcomings or failures to perform.

H. Recommendations

The evaluation is expected to make clear and detailed recommendations in terms of the way forward, and how to increase effectiveness of implementation in future projects or programmes.

a) What are the post project key **strategic options (**i.e., WWF exit strategy from the project area, scale down, replication, scale-up or continuation/extension)?

5. Approach & Methodology

The Final Evaluation should include a review of relevant literature. Special emphasis should be put on the LFA and project monitoring data.

The process of assessment will also include independent interviews and consultations with government at central, provincial and district levels and all other stakeholders (See Annex 4- Key informants for details).

Key areas will be visited including Fish Protection Areas, conservancies, fishing committees and fishing lodges. The subsistence fishery will be observed on the Zambezi River by boat and the fish market in Katima Mulilo will be visited.

At the end of the field assessments the preliminary findings and initial conclusions should be presented at a (or several) stakeholder meeting.

The Final Evaluation Report should follow the template provided (See Annex 5).

6. Time Frame

The total time allocated for the review is 13 days, divided as per Table 1 below, with 10 days expected to be spent in country, 3 days drafting the final report.

Table 1: Time allocation

Item	No. of Days – Fishery Specialist
1. Review of documentation	2
2. Field research and meetings	7
3. Preparation of the draft report, presentation of the initial findings and preliminary conclusions, incorporation of comments and finalisation of the report.	4
TOTAL No. Days	13

7. Profile of the Evaluator and the Evaluation Process

The Final Evaluation will be conducted by a natural resources specialist with a fish/fisheries background and experience with community natural resource management. The specialist will work closely with NNF and WWF In Namibia staff. The Specialist must have a proven track record in the study of inland fisheries and fish ecology in southern Africa, including the Upper Zambezi River System. This person should further have extensive experience in working with communities and transboundary issues and should be experienced in the facilitation process between different stakeholder groups.

8. Deliverables and Reporting Requirements

i. Presentation of preliminary findings and initial conclusions at in country stakeholder meeting (Powerpoint presentation). A digital copy of the presentation should be provided to the WWF In Namibia and to the WWF-Norway office.

ii. A digital copy in MS Word format of the **Draft Evaluation Report** (not > 30 pages, plus annexes), as per the report template in Annex 5, should be submitted to the WWF In Namibia with copies to WWF-Norway International Department *(*Melissa de Kock [mdekock@wwf.no]) and the project team (contact: *cweaver@wwf.na*) by (December 20 2012*)* who will review the draft report and provide feedback and comments on the document during the presentation of the draft report.

iii. A digital copy in MS Word format of the **Final Evaluation Report**, as per the template in Annex 5, should be submitted to the WWF In Namibia with copies to WWF-Norway International Department *(*Melissa de Kock [mdekock@wwf.no]) and the project team (contact: *cweaver@wwf.na*)

within **7 days** of receiving consolidated comments on the Draft Mid-Term Review Report or by January 15, 2013.

9. Cost and payment

Describe general allocations (not a detailed budget) of resources available for the evaluation (consultant fees, travel, subsistence allowance, etc.), and how payments will be made (procedure and time).The final payment should not be made until the review report has been approved by the office that commissioned it (and WWF-Norway).

Consultancy fees:

Natural Resources Specialist	(13 days @ N$3,500/day)	N$45,500

Per Diem:

Natural Resources Specialist	Caprivi & Windhoek: 10 days @ N$1000/day	N$10,000

Total budget **NOK 54,500**

10. Logistical Support.

1 Transport:

The NNF project's 4X4 Hilux pickup will be used to transport team to conservancies and fishery committees at Impalila and Kasika [via Kasane, Botswana], to Bukalo and Lisikili and Kalimbeza and Lake Liambezi, and locally in Katima Mulilo.

2 Documentation and office facilities:

Office space, email, fax, printing and photocopy facilities for the consultant will be made available at the NNF office in Katima Mulilo. Binding can be done at Caprivi Copiers in Katima Mulilo.

3 Interviews:

Interviews can be arranged by the executant before the visit.

4 Accommodation:

Accommodation in the field will be in the NNF/WWF house at the fish farm.

ANNEX 2: EVALUATION TIMETABLE

Date	Activity	No. of Days
3 Dec. 2012	Attended Community Transboundary NRM Forum and interviewed members of the Forum, AWF official Fisheries officer, Zambia	1
4 – 7th Dec.2012	Katima Mulilo, held various meetings and interviews with lodge owners, MFMR officials, Project Executants; field trip to Sikunga FPAs	4
8th Dec. 2012	Field trip to and L. Liambezi; in afternoon held meeting with Sikunga Conservancy committee members	1
9th Dec. 2012	Reviewed various project documents and Technical reports on the project	1
10th Dec. 2012	Interviewed Fish Monitors from Impalila Conservancy and MFMR Research Officer	1
11-16th Dec. 2012	Literature review and drafting of the report	5
Total no. of days		**13**

ANNEX 3: KEY INFORMANTS

Denis Tweddle	Project Executant
Dr. Clinton Hay	Project Co-Executant
Alex Chilala	Principal Fisheries Officer for Western Province, Mongu, Zambia
Nasson Tembo	AWF, Director of Kazungula Heartland
Kelly Ndana	Outgoing Chairman, Impalila Conservancy
Steven Muyangwa	Manager, Sikunga Conservancy
Fabian Libebe	Chairman, Sikunga Conservancy
Leonard Masangu	Retired Area Induna for Kalimbeza area, Sikunga Conservancy
Four members	Sikunga Conservancy committee
Riaan van Niekerk	Owner, Island View Lodge in Sikunga Conservancy
Strijs Coertzen	Chairman, Nwanyi Angling Club, Katima Mulilo
Bargrey Kapelwa	Chief Fisheries Inspector, MFMR, Katima Mulilo
Morgan SaiSai	Senior Fisheries Research Technician, MFMR, Katima Mulilo
Kenneth Sefulo	Fisheries Development Officer, Project
Joubert Maezi	Fisheries Development Officer, Project
34 members	Community Transboundary NRM Forum, at Sekonga Lodge, Zambia
Key persons not met:	
Christopher Munwela	Chief Fisheries Biologist, MFMR, Katima Mulilo. Unavailable due to changed date of meeting.
Damian Nchindo	Senior Fisheries Biologist, in field and unable to contact by phone.
Val Sparg	Owner, Kalizo Lodge (confirmed support for project on phone)

ANNEX 4: REVIEW OF PROGRESS MADE ON IMPLEMENTATION OF RECOMMENDATIONS FROM MID-TERM REVIEW

MID-TERM REVIEW RECOMMENDATIONS	PROGRESS NOTED DURING FINAL EVALUATION OF THE PROJECT
Legislation	
• There has been some frustration with obtaining signatures from the minister for the management plans from the conservancies. The project should continue to lobby for support from the ministry and politicians through the use of meetings, positive press releases and through invitations of politicians to community meetings.	This was finally resolved in November 2012 through meetings in Windhoek with the Permanent Secretary and subsequently the Minister (who is very positive about the initiative) and the MFMR Fisheries Management Committee. Unfounded concerns over the level of community participation in the decision-making process for the FPAs were addressed through further meetings between MFMR staff representing all Directorates, the conservancies, communities and traditional authority. The Traditional Authority in Bukalo, and separately the Area Indunas in Impalila and Sikunga Conservancies, made it very clear to the MFMR that they were unhappy about the time that the MFMR was taking to ratify decisions that they had taken and acted on almost two years previously. Meanwhile, the FPAs received extremely positive press coverage in both TV and press. The success of establishing the FPAs resulted in the Millenium Challenge Account awarding both conservancies grants to assist them in both establishing infrastructure and in managing the FPAs until they are fully functional and independent. The FPAs are regarded as model developments by KAZA and the Sikunga FPA has been visited by a number of conservation agencies to learn about the successful initiative, including Angolan government officials and German international agencies. Furthermore, the manager of the Sikunga Conservancy has been invited to address conservation agencies in an international forum in Johannesburg. Involvement of the private sector in partnership with Sikunga Conservancy was widely publicised in the Namibian media, particularly the donation of a boat by the sponsors of the Zambezi Classic angling tournament to the conservancy to assist in patrolling the FPA. The project has also successfully engaged with, and assisted in guiding, a similar initiative on the Zambian sector of the Zambezi by the African Wildlife Foundation in partnership with the Department of Fisheries and the Barotse Royal Establishment, where fishing communities are themselves identifying FPAs.

• There is a need to continue the active engagement with the MFMR policy division in including the project recommendations for changes in the Inland Fisheries Act and Regulations.	The Ministry has now admitted the need to recognise the conservancies in the Fisheries Act and to be able to establish bye-laws in partnership with fishing communities. Further discussions will take place in 2013, in which the new EU project should be able to play an active participatory role.
Community engagement	
• Community based natural resource management initiatives, such as the current project, require long-term support. The project should therefore attempt to engage with other regional initiatives such as the KAZA programme.	The project has actively engaged with KAZA and assisted that organisation in becoming more widely integrated into aquatic resource conservation in the project's area. The project identified the potential to not only continue support in the Namiban project area but also to expand the initiative to other rivers in the KAZA area, and secured a further four years of project support through the EU. The project has engaged with SAREP to assist in developing fisheries management plans and monitoring programmes for the Kavango River in Angola, Namibia and Botswana, and this partnership will be greatly strengthened in the new EU project.
• The project, in its final year, should ensure that the baseline data, reports and tools necessary for the replication of the project elsewhere are available and filed in a numbered system.	The project established two formal, numbered report series. Technical Reports cover complete stand-alone reports such as commissioned consultancy reports, reports on completed fisheries initiatives, and project final reports. Field Documents are designed to report on work in progress and include, for example, reports on project workshops, documents on actions taken by the project with regard, e.g. to establishment of FPAs, and the project's recommendations for changes to legislation. Research projects were identified by and supported by the project, which also sourced funding. Being separately funded and administered, the final reports of such projects do not qualify as full Technical Reports for the project, but they are legitimate project outputs and hence included in the Field Document series. From the two phases of the project, nine Technical Reports and 11 Field Documents have been published so far, with a minimum of 11 further documents to be completely imminently (including EUS documentation for activities supported by the project, radio script compilation, compilation of project

	presentations at international conferences, compilation of popular articles, final evaluation and final project reports, project documents for MCA grants, EU and SASSCAL projects , fisheries monitoring report, market survey report). A further, third series of reports will be a compilation of archival material on the Caprivi fisheries resulting from previous projects funded by other donors including USAID as well as NORAD Scientific papers emanating from the project will include a paper on challenges in management of African river and floodplain fisheries with emphasis on the Zambezi, a book chapter on relationship between Zambezi recreational and commercial fisheries, a paper on distribution and migration patterns of the Caprivi killifish, a paper on the development of FPAs comparing successes and failures, and papers on trends in fish catches and market data. Two posters have been produced but printing will only take place next year in the EU project. One, on "Protecting Caprivi Fish stocks for Future Generations" was held up by the MFMR delay in gazetting the FPAs, while the other, illustrating the fishes of the region, was delayed to allow for the collection of greatly improved photos of the fishes as a result of improvement in camera technology.
• The project should take considerable care to ensure that all initiatives relating to the conservancies are driven by the community group. This may require the project playing a more passive role in the facilitation of meetings. This is important for ensuring the acceptance of the committee on a wider community level. In this regard, all projects and employment funded by the conservancy should be channelled through the conservancy account so that the benefits derived from the conservation initiatives are clear and transparent.	The project takes care to ensure that the communities have ownership of their activities, and simply provides support and advice when necessary. The Impalila and Kasika conservancies hold transboundary meetings every second month with their Zambian counterparts in Sekute Trust and invite all relevant government departments as well as the project. The communities have made it very clear to MFMR that the activities they have initiated to protect their fish stocks and fisheries are theirs and theirs alone. The project continues to help to bring together the stakeholders for discussions, including angling and tourist groups, but usually takes a back seat in discussions, except when asked for scientific advice.
• Prior to the completion of the current project phase it is recommended that the structure and function of all community	A major and specific concern here during the mid-term review was the apparent weakening of the Muyako fisheries committee's control over activities on Lake Liambezi. The project therefore commissioned a consultancy to review the committee's structure and effectiveness. This review was

groups supported by the project be evaluated.	unfortunately rather weak. With regard to other communities supported by the project, the issues affect various cross-cutting sectors. Conservancy committees have responsibilities for all natural resources, not just fish. Sikunga Conservancy committee is successful whatever criteria are used to evaluate it. Impalila has functioned successfully but now issues over financial mismanagement have arisen. Kasika did not have a fully functioning management structure at the time of the mid-term review, but the new committee is now engaging very positively with the project. The Lisikili area has had major issues with internal conflicts between its separate communities and therefore the project pulled back from its involvement there until the community members can get their act together and establish a unified conservancy structure. In Zambia, the AWF has taken the initiative in establishing village and area fisheries committees. The new EU project will engage actively with these in close cooperation with AWF, DoF and the BRE.
• Interviews with the community and discussions with the WWF natural resource advisor made it clear that support would be required to community groups, not only with accessing benefits but also for packaging this information so that the committee could provide effective feedback to its members at the AGM.	MCA grants have been secured for the Sikunga and Impalila conservancies for the management of their FPAs. Activities include major publicity campaigns including posters and brochures about the nature and purpose of the FPAs. These projects fully address the comments in this recommendation. In addition, the project attends conservancy AGMs and provides assistance in answering questions raised about fisheries issues.
• The project should consider taking the fisheries committees to visit other successful conservancies to view community owned tourist facilities and so that they could exchange ideas on potential income sources and implementation measures.	This activity has been written into, and is a major component in, the new EU project. The project has also secured the endorsement of the BRE for transboundary visits by Namibian conservancies and Zambian fisheries committees.
• The project should help develop appropriate communication media to ensure that conservancy committees are able to effectively communicate their activities to members and stakeholders at the AGM. This	This will be done through the MCA project activities, and in addition through the forthcoming posters. Monitoring results from the community fish monitors employed by the project will also be packaged for easy understanding of fisheries trends at the local level.

will include the development of a monitoring system which could include methods developed in the events book used for wildlife.	
• The project should facilitate the development of suitable pamphlets and posters highlighting conservancy approaches and successes which can be used to lobby for support and make use of the media to inform the public of project successes.	Posters and pamphlets are included in the MCA projects, in addition to the project's two posters to be published in the near future. Positive media coverage has been achieved for the FPAs. Sikunga Conservancy has been visited by many organisations, including an Angolan delegation, to learn about the success of the FPA.
• The project should investigate possible strategies for revenue sharing from angling license sales and the devolution of the responsibility for licensing to local communities.	Awareness is filtering into the MFMR that this is a major issue that needs to be addressed. After sensitisation by the project in various meetings, the conservancies themselves are strongly lobbying through appropriate channels for the rights to manage their licensing, and to register their own fishing communities. KAZA is now lending support to this initiative also.
Research	
• The project should make use of its research collaborations and its own research and monitoring projects to provide information on the current state of the resource and to provide biological and social baseline information on the project through:	
- Facilitating the assessment of available fisheries monitoring data to provide a report on the status of the fisheries at the end of 2012.	This report is in preparation, both for the fisheries monitoring and for market data. Preliminary results show a high standard of monitoring and results that can be used immediately for management recommendations.
- Developing a statically sound but locally	The project has engaged with the MFMR to secure agreement that the ministry should fulfil its

appropriate catch assessment system. In developing this system, project experiences with fish monitors need to be considered and the system should include not only a database for the storage and analysis of the data, but should also make strong recommendations on the sampling strategy and frequency necessary for statistical rigour.	obligations under its membership of the FAO Code for Responsible Fisheries to provide accurate catch data for its fisheries. This entails having an affordable but statistically sound monitoring system in place. In addition to this need to secure MFMR commitment, time constraints on the part of project personnel and the consultant provisionally engaged to set up such a system (Dr Olaf Weyl of SAIAB), and the securing of a new EU project that will allow continued involvement by project staff, led to a decision to postpone the establishment of the system until 2013. Databases have been established through the project for the storage and analysis of the monitors' data and analysis of data collected by the project so far is nearing completion.
- Facilitating a 2012 frame survey to determine the current fishing effort and assess to what extent the fishery is developing. Here the project should also investigate linkages with the annual aerial game count during which numbers of canoes could also be assessed.	It was not feasible to organise a major activity such as a transboundary frame survey within the final year of this project. It is recognised that a new frame survey is necessary and this will be addressed in discussion with MFMR and Zambia DoF during 2013.
- Take a proactive role in ensuring that the research results from the three research projects are communicated to the fisheries management authorities.	The project has done this through widely circulating the final reports of the two completed research reports (GoGreen and INCEMA), and through emphasising the recommendations of the GoGreen project in particular in meetings with senior MFMR personnel (Minister, PS, FMC) and emphasising the need to take notice of the recommendations in the revision of Namibian legislation. The results have also been drawn to the attention of DoF and AWF in Zambia.
- Aid in the development of research proposals and engage research partners in undertaking research on possible unexploited fish resources developing in the offshore zone of Lake Liambezi.	A project proposal to do this has been submitted to the GoGreen initiative. Funds have been secured through the SASSCAL project for Mr R. Peel to complete his PhD on the fisheries ecology of Lake Liambezi following his achievement of a distinction in his MSc study, incorporating also research projects for MFMR staff to complement the PhD research programme.

- Aid in the development of research proposals that aim to better understand the social and economic impact of fisheries in rural communities in the Caprivi region.	The project funded a visit by Dr James Abbot of Nippissing University, Canada, a socio-economist with considerable experience of Caprivi fisheries issues, to develop ideas for further socio-economic research. The visit has resulted in plans for publication of existing data and ideas for further socio-economic studies that will be pursued during the new EU project. In addition, a separate in-depth study of the socio-economic structure of Sikunga Conservancy is underway by the University of Hannover in Germany, to aid in the development of a comprehensive management plan for all the natural resources of the conservancy, under the Green Development Initiative. The Zambezi/Chobe project was actively involved in the planning for that project.
Reporting and replication	
• In its final year, the project should attempt to consolidate all reports and associated information and data in a central database to provide the basis of project replication.	This has been done through the Technical Report and Field Document series described above. These will shortly also be made available on-line. In addition, all data are now consolidated in a central database, with separate copies stored elsewhere on external hard drives in case of loss of any one or more copies through inevitable hardware malfunctions.
• Despite the discontinuation of support to fish ranching in 2011, I suggest that the project plans a final assessment of the costs and benefits of fish ranching to communities and implementers.	The project engaged a consultant (Ms C. Murphy) to evaluate the fish ranching programme. The results of this review were encouraging and therefore the project included fish ranching in the activities of the EU project proposal, since then it has also engaged with AWF in Zambia and KAZA to develop joint fish ranching initiatives.
• The project should develop “toolbox” and “lessons learnt” documents that could be used as manuals in the process of fish conservancy and FPA formation.	The Field Document of the establishment of the FPAS fully documents the steps that were taken to ratify the FPAs under existing government legislation through the conservancies, Traditional Authority and Regional Council. A further Field Document will be put together on the follow-up activities.
• The project should consider a repository or database for all raw data collected during project-funded research such that these are available for assessment after the	This is in place as described above.

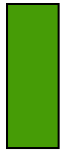
completion of the project.	
• The project should develop a final monitoring and evaluation report in which suitable indicators for the long term assessment of project impacts are evaluated and project data are used to develop a baseline against which current and future project impact can be measured. Such baseline data could include incident data from enforcement patrols, income for communities, biodiversity inside and outside FPAS, catch rates and harvest volumes, average size of fish harvested and the number of committees or area of river under conservancy control.	This recommendation covers several different activities. The project is producing a full, comprehensive Final Report, with an external consultant producing an Evaluation Report. Data on the fisheries are currently being analysed and published. The MFMR is responsible for enforcement patrols in general, while FPA patrols are undertaken by community guards appointed by the conservancy. FPA structures will be strengthened through the MCA grants.
• It is important that the project develops a clear exit strategy during its final year of implementation. The exit strategy needs to be developed with the stakeholders, clearly outlining roles and responsibilities of all stakeholders in particular those of the Departments of Fisheries in Namibia and Zambia so that project activities continue as recommended. Part of this process will be to reassess the need for an advisory committee for the project, which to date has not been formed.	Recognising that the MFMR does not yet have the capacity to fully implement the strategies put in place during the two phases of the Zambezi/Chobe project; and recognising that the successes of the project in working with conservancies to develop successful FPAs can be implemented more widely in the region, the project developed a new project proposal for submission to the EU for funding under its Food Security Thematic Programme (FSTP). This project continues the activities of the present project, extends lessons learned to the other rivers and floodplains of the Upper Zambezi, Kwando and Kavango river basins, and supports and integrates other research and management projects in the region. The project, under NNF, partners and/or associates with MFMR Namibia, DoF Zambia, Fisheries departments of Botswana and Angola, ORI, SAREP, SASSCAL, KAZA, AWF, SAIAB, HIFI (Hull). The project is for four years and should in that time thoroughly integrate all fisheries co-management activities by the countries under the KAZA umbrella to ensure long-term success.

ANNEX 5: LFA OR RESULT CHAIN

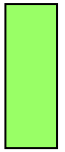
Note: in analysing performance, the following Key was applied: ***Red*** = limited progress (<1/3 of indicators achieved); ***Light Green*** = good progress (1/3 – 2/3 of indicator achieved); ***Deep Green*** = very good progress (>2/3 of indicator achieved)

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
Project Goal: The shared Zambezi/Chobe River fisheries resources sustainably managed by promoting transboundary coordination and collaboration on the introduction of fully integrated fishery management systems.						
Project Purpose: By end 2012, a fully integrated management system for livelihood and sports fisheries, that provides optimal benefits to all stakeholders reliant on this valuable resource, is in place in targeted pilot communities.	- Local fishery management structures operational (i.e., conservancy committees, Fisheries Committees, Traditional Authority, etc.) (minimum of 4) - New fishery management practices introduced at local level, including gear restrictions and mandatory licensing, Fish Protection Areas, sport fishery agreement with conservancies etc.	- Fisheries committees (4 in total) in Caprivi and in Zambia formed but not yet mandated to take over responsibilities for fisheries management.	- Five Fisheries committees formed in Caprivi. - Muyako Committee initiative to introduce local rules and manage the fishery at Lake Liambezi with MFMR acting in advisory capacity has suffered through intervention of unscrupulous outside business interests employing foreign fishers. Integrated law enforcement approach unfortunately now necessary and being implemented. After	- Fish Protection Areas officially proclaimed. - Fisheries Committees managing the FPAs. - Official agreement between communities and Lodge owners on FPAs.	- FPAs fully functional with approved management plans. - Conservancies Act harmonised with Inland Fisheries Act to allow full management rights for conservancies - Inland Fisheries Act regulations include recognition of community-based regulations - MFMR assisting in	

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			this, fresh community initiative will be attempted in 2013. - FPAs established with approved management plans, and fully and effectively functioning in Sikunga and Impalila Conservancies despite delays in formal ratification by MFMR. - Negotiations succeeded in sourcing funding from Millennium Challenge Account, Nwanyi Angling Club and private sources for management of FPAs by conservancies. - Close cooperation established between Sikunga Conservancy, angling and tourism lodges in managing the Sikunga FPA. - Successes widely publicized and conservancies being visited by conservation and international delegations to learn from experiences. - Zambian fisheries committees established with assistance of AWF and the support of the Barotse Royal Establishment (BRE) have now agreed to the establishment of several FPAs in Zambia.		development of management plans with fishing committees based on Liambezi model.	

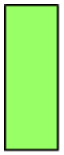
Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			- Agreement of BRE and DoF obtained for reciprocal visits by fishers' representatives. - Excellent cooperation established between Impalila and Kasika conservancies, Sekute Trust, Sekoma Island Lodge, and government departments in managing natural resources including fish in the eastern project area. - MFMR accepts the need for review of the inland fisheries legislation to harmonise with the Conservancies legislation and empower communities to manage their resources, and the importance of organising licensing through the conservancies. Discussions will continue beyond the end of this project.			
Output 1: Cross-border collaboration achieved in management of the fisheries resources	- Meetings of senior fisheries staff from three countries at least biannually (target of at least five meetings during duration of the Project). - Minutes produced and communicated to local officers - Regular (at least monthly) joint (Namibia and Zambia) patrols done and arrests made	- Communication between countries established and strengthened in latter part of Phase 1. No formal cross-border collaboration meetings have been held to date.	- Joint patrols (Zambia, Namibia & Botswana) conducted on the Zambezi & Chobe Rivers. - Conservancy meetings attended between Zambia, Botswana & Namibia. - Transboundary Joint Commission fisheries sub-committee meeting and workshop held in January 2011. - Minutes and all proceedings	Minutes available of cross-border meetings held. ToR developed and agreed of cross-border committee. A joint work plan of the cross-border committee produced. Joint patrols held between	Cross-border committees functioning effectively	

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			and presentations from workshop initially published on CD and then in Field Document no 2/3. - The respective government departments have not, however, continued with further meetings as agreed. Nevertheless, in the absence of government departments commitment, communities themselves have established excellent cooperation, e.g. Impalila and Kasika conservancies, Sekute Trust and Sekoma Island Lodge meet bimonthly to discuss management of natural resources including fish in the eastern project area, and government departments are invited to attend these meetings. - Meetings held in DoF HQ, Chilanga to review harmonisation of legislation. - Approval received to work with all relevant stakeholders in Zambia with DoF and BRE. - AWF in Zambia now working with DoF and BRE to develop management strategy for Zambian sector of Caprivi floodplain. - Strong links now established	MFMR and DoF.		

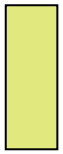
Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			with KAZA office in Kasane to discuss future fisheries management strategy throughout KAZA project area. - Meeting held with Kasane tour operators to discuss possible management options for Chobe River fishing/tourism. Kasika Conservancy accepts in principle idea of FPA in Chobe River to promote tourism.			
Output 2: Management plan for the fisheries developed during Project Phase 1 successfully implemented (in collaboration with neighbouring countries) for the benefit of the communities.	- Published management plan - Minutes of stakeholder meetings showing approval - Reports from field officers - Fishermen licensed and abiding by agreed regulations. - MFMR and Zambia enforcement staff working in close consultation with management committees. - Monitoring indicates stabilisation/improvement of fish stocks.	- Draft Namibia Management Plan developed in first phase, incorporating recommendations from research reports, CBNRM reports and Evaluation report - Fishermen ignoring existing regulations. - Very few gillnets licensed - Licensing through Regional Council impractical	- Management plan, primarily for project activities, published as FD no 1.2. - MFMR now recognises impracticality of issuing licenses only through the Regional Council, whereby only 20% of fishermen have valid licenses, and will consider proposals for amendments to Inland Fisheries Resources Act to address this problem. The issue has been taken up by conservancies and also by KAZA. - Muyako committee established own management plan for Lake Liambezi closely in line with project aims. Fishermen there originally adhered to stricter rules than under Inland Fisheries Resources Act, but commercial greed has created difficulties	- Communities managing their own resources with assistance from government. - Monitoring programme in place.	- Management plan fully implemented.	

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			with an influx of foreign fishers, resulting in the need for strong external coordinated management intervention. - Conservancies developed management plans for FPAs following guidelines. - Conflict between tourism and fishing sectors in Chobe River drawing press attention – project has taken on mediation role and Kasika Conservancy accepts in principle idea of FPA in Chobe River to promote tourism. - Project is reviewing harmonisation of Zambia and Namibia legislation. - Monitoring continues smoothly. - Data analysis nears completion and shows very clear trends that verify the excellent quality of data being collected by community monitors.			
Output 3: Fish Protection Areas established and fully functional in targeted pilot communities	- Fish Protection Areas (a minimum of 4) gazetted by MFMR under inland fisheries regulations with defined boundaries, as per community requests - Monitoring indicates absence of fishing - Fish guards reports on Fish Protection Areas (monthly reports)	- Fishing in main river channels currently a free-for-all - Currently no reserves proclaimed - Lodges report severe stock depletion by illegal fishing methods	- Letters signed by Impalila and Sikunga conservancies to manage their own FPAs. - Requests approved by Regional Council and Traditional Authority. - Minister approved FPAs verbally, dependent on production of management	- Fish protected Areas proclaimed and managed by the communities. - Fisheries committees fully functional and involved in the management of FPA.	- FPAs fully functional, well- established, well-managed, and recognised by all stakeholders.	

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
	- Lodges cease complaints		plans. - Management plans developed in stakeholder workshop and submitted to Minister for ratification. - Field Document no 2/6 published detailing all steps taken in establishing the FPAs, including draft Government Gazette notice for Minister to review. - MFMR Minister, PS and Fisheries Management Committee briefed. Minister again reiterates desire to gazette FPAs - MFMR delegation re-briefed by all relevant community structures in Caprivi on consultation process. Report on process submitted by MFMR delegation to Minister. - Negotiations succeeded in sourcing funding from Millennium Challenge Account, Nwanyi Angling Club and private sources for management of FPAs by conservancies. - Impalila and Sikunga Conservancies successfully managing FPAs having employed fish guards for the purpose. - Successes widely publicised			

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			and conservancies being visited by conservation and international delegations to learn from experiences. - Zambian fisheries committees established with assistance of AWF and the support of the Barotse Royal Establishment (BRE) have now agreed to the establishment of several FPAs in Zambia. - Agreement of BRE and DoF obtained for reciprocal visits by fishers' representatives. - Close cooperation established between all stakeholders including tourist lodges and angling organisations. - Three additional requests received from communities to assist with FPAs in their areas.			
Output 4: Tourist angling lodges operating in agreements with local fishing committees/ conservancies	- Contributions from angling fees paid to lodges to committees/ conservancies. - Catch records from lodges. - Establishment of Fish Protection Areas (a minimum of 4) and agreements over catch & release angling.	- Friction between lodges and MFMR over licensing enforcement. - Complaints about falling catches. - No Fish Protection Areas.	- Several meetings held between lodge owners & Sikunga conservancy. - Lodges, Nwanyi Angling Club and communities fully agree on FPAs and angling club actively engaging with conservancies to draw up management agreements. - Nwanyi Angling Club obtained sponsorship for a boat and engine to assist Sikunga Conservancy's community-employed fish guards to	- Minutes available of meetings held between lodges and communities discussing management aspects. - Reports received from lodges and communities stating benefits received from FPA.	- Extension of agreements to FPAs as they become established.	

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			protect the FPA. Some Impalila and Zambian lodges already paying conservancy to fish in Kasaya Channel FPA. Sekoma Lodge, Zambia, provided Impalila Conservancy with boat engine to control Kasaya Channel FPA.			
Output 5: Capacity built in research and monitoring of fish resource	- MFMR Officers attendance on courses - Certificates, further qualifications for MFMR staff - Publication of these, papers, reports - Reports on training of fish guards by field officers - Production of publicity material (minimum of 4) for education in communities (e.g. posters)	- Newly appointed scientist has degree and training in GIS - Present research capacity limited (no papers published in international journals)	- One staff member finishing his Masters. - 13 staff indicated interest in doing post graduate studies. - Project assisted with three research proposals, all funded and two completed and reports published by end-project. - Two draft posters prepared and displayed at conference of South African Society of Aquatic Sciences (SASAqS), constructive comments received and being incorporated in final design. Translation completed. Excellent new photos now available, particularly for fish, and being inserted. Publication delayed until FPAs are formally gazetted, but will now take place in early 2013. - Paper on Lake Liambezi management completed and	- Two scientists from MFMR receiving Master degrees. - Scientists from MFMR develop research proposals and implement research activities. - Papers published in international journals.	- Scientific papers published. - Ongoing statistical analysis based in MFMR.	

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			published as project report no TR2/4. - Scientific papers including comprehensive data from research programmes to be submitted for publication. - Catch monitoring programme extended and improved. - Market monitoring programme extended and improved to include bulk export as well as retail sales. - Papers on monitoring programmes being prepared for publication. - Several popular articles written and published about Caprivi fish and fisheries. - Presentations on project made to SASAqS conference in SA, June 2011 and to World Fisheries Congress in Edinburgh in May 2012.			
Output 6: Collaboration in next phase of NNF fish ranching project	- Progress reports from NNF consultant Ms P. Lilungwe on project activities and collaboration with CCP project - Increased protein source at sites away from perennial water bodies	- Successful stocking of 34 pans/ponds in first phase - Growth monitored - Many requests for project expansion to new areas	- Fieldwork for research on growth rates of important fishes completed. Report on project published and MSc thesis submitted to UNAM and passed with distinction. - Unsatisfactory relationship between fish ranching and fish farming components of CPP project. - Main project funding by CPP project discontinued.	- Reports published on results attained. - Growth rates of fish stocked presented.		

Goals & Objectives	Indicator (what you are measuring)	Baseline (December 2009)	Current status (December 2012)	Data Source/ Means of Verification	Planned Final Result, December 2012	Achievement Rating
			- MFMR failed to recruit Ms Lilungwe to continue project activities under Ministry auspices. - Reports on continued fish ranching by communities supported during the project led to evaluation by project consultation, report no TR2/5. Positive findings led to incorporation of renewed fish ranching programme in EU and KAZA projects, including coordination with small-scale fish farming in Zambia.			

ANNEX 6: REFERENCES AND DOCUMENTS REVIEWED

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