



**OKACOM**

**Permanent Okavango River Basin Water Commission**

**Benefits of Transboundary Water Cooperation” “Counting our Gains”**

**Cubango-Okavango River Basin Case Study**

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## Table of Content

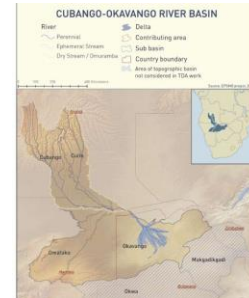
<b>INTRODUCTION .....</b>	<b>3</b>
THE TRANSBOUNDARY RIVER BASIN .....	3
DESCRIPTION OF THE PROCESS OF THE TRANSBOUNDARY WATER COOPERATION .....	3
<b>BENEFITS OF THE TRANSBOUNDARY WATER COOPERATION.....</b>	<b>4</b>
TYPES OF TRANSBOUNDARY BENEFITS .....	4
NEED OF AN ASSESSMENT OF BENEFITS (ACTUAL AND POTENTIAL) OF TWC .....	4
<b>HOW BENEFITS ESTIMATES HAVE BEEN DERIVED? .....</b>	<b>5</b>
<b>HOW BENEFITS ASSESSMENT'S FINDINGS HAVE BEEN COMMUNICATED? .....</b>	<b>6</b>
COMMUNICATION STRATEGY USED .....	6
HOW THE BENEFIT FINDINGS WERE USED BY TARGET AUDIENCES .....	6
<b>HAVE THE FINDINGS OF THE ASSESSMENT BEEN USEFUL IN STRENGTHENING THE TWC PROCESSES...?</b>	<b>7</b>
ASSESSMENT OF IMPACT .....	7
KEY MESSAGES AND LESSONS LEARNED .....	7

## Introduction

### The transboundary river basin

The Cubango-Okavango River system (see map) rises in Angola, flows past Namibia and terminates in the arid Kalahari sands of Botswana. It is 1,900 km long, in near-natural condition and includes the iconic Okavango Delta, which is the largest wetland in southern Africa. The Delta is renowned for its abundance of plant and animal life; few other places globally offer such a concentration of large mammals.

The main characteristics of the present-day hydrological regime are the large difference between the two headwater streams, the Cubango and the Cuito, and the massive storage capacity for floods in the floodplains along the system. The Cubango exhibits a flashy hydrograph with sharp increases in flow after rain events, receding quickly to low base-flow levels. The Cuito exhibits a smoother rise and fall, more characteristic of large monsoonal systems, because of the combined effects of groundwater contributions to base-flow and wet-season storage of floodwaters in vast floodplains and their drainage back into the river in the dry season. The Cubango-Okavango river system as a whole is a floodplain-driven system and these floodplains sustain the river in the dry season and also store floodwaters that would otherwise increase flooding downstream.



Agriculture is the main activity practiced by the inhabitants of the basin; predominantly extensive livestock farming. At present irrigated agriculture is limited but there are plans, particularly in Angola and Namibia, for large expansion of cultivated areas which will have consequences for river flow. Other basin activities include hunting, the tourism and concession industry, hydropower, aquaculture and rural households collecting natural resources for food (predominantly fish), construction and fuel.

The human population in the basin consists predominantly of rural communities, most of which are located either adjacent to the river or along access routes. The main differences between national social development indicators and those of the Cubango-Okavango Basin, stem from the remoteness of the basin from national centres. In general, the people of the basin are poorer, less healthy and less well educated than other groups in their respective countries.

The main areas of environmental concern include: *i/* variation and reduction of hydrological flow; *ii/* changes in sediment dynamics; *iii/* changes in water quality and *iv/* changes in the abundance and distribution of biota. These areas of concern are conditioned to four major drivers namely: *i/* population dynamics and urbanization; *ii/* land-use change; *iii/* poverty and *iv/* climate.

More complex to solve, largely because of their structural nature, are constraints resulting from a lack of institutional coordination and effective implementation, as well as enforcement of existing policies and legislation. The most significant constraints for the effective sustainable management of the basin lie in the institutional framework. These constraints are largely of a structural nature, namely the fragmentation of management responsibilities across different line-function ministries, the lack of inter-sectoral planning, limited coordination between different spheres of government, weak institutional structures at local level, lack of skills, management capacity and resources for integrated planning, effective monitoring, implementation and enforcement.

### Description of the process of the transboundary water cooperation

OKACOM was established in 1994 by the 'Agreement between the Governments of the Republic of Angola, the Republic of Botswana and the Republic of Namibia on the Establishment of a Permanent Okavango River Basin Water Commission (OKACOM). OKACOM serves as a technical advisory body to the Parties on matters relating to the conservation, development and utilization of water resources of common interest.

In April 2007 the three Parties concluded the 'Agreement between the Governments of the Republic of Angola, the Republic of Botswana and the Republic of Namibia on the Organizational Structure of OKACOM' (the OKACOM Structure Agreement) which establishes the organs of OKACOM as: *i/ The Commission* – policy guiding body of the OKACOM; *ii/ The Okavango Basin Steering Committee (OBSC)* - technical arm of the Commission and *iii/ The*

*Secretariat* – provider of information management secretarial, administrative, financial management support function to the commission. It is the key organ in overseeing effective implementation of OKACOM decisions.

The three main stages that can be depicted in the trajectory evolution of OKACOM include: *i/ infancy* - from 1994 to 2004 - signing of the OKACOM agreement and trials procedures in defining its scope of work; *ii/ growth* – from 2007 to 2012 – focused on: *a)* development of the Transboundary Diagnostic Analysis (TDA) and the Strategic Action Programme (SAP) for the basin; *b)* establishment of a fully functional Permanent Secretariat and *iii/ maturity* – from 2013 to present – focused on setting up of the basic conditions for the start-up implementation of the SAP.

The key OKACOM achievements are aligned with the main outcomes associated with the main stages of its evolutionary trajectory. The signing of the OKACOM agreement in 1994 corresponded to a bold demonstration of political will for Transboundary Water Cooperation (TWC) amongst the riparian States despite the fact that in 1994, Angola was entering into the most violent civil war in the sub-region, with the headwaters of the basin being the main theater of military operations. The finalization of the TDA and SAP in 2012 provided clarity on the desired scope of work of TWC as well as on the required delivery structures. This process culminated with an international recognition of OKACOM by being selected as one of the four finalists for the *2012 Thiess International Riverprize* by the *International River Foundation* (IRF). In 2013 the GEF Secretariat approved an allocation of \$6.1 million for the start up implementation of the SAP for the Okavango river basin.

Some of the key challenges experienced in the above process can be outlined as follows: *i/* ability to develop a programme intervention content that is relevant; generates visible positive changes in conditions of basin people and ecosystem's health while being sustainable in a long term; *ii/* establishment of an effective transboundary river basin institution, equipped with appropriate resources and skills mix; *iii/* securing the long term financial sustainability of the transboundary river basin organization; *iv/* developing the most effective benefit sharing model amongst riparian's and *v/* securing effective engagement of basin stakeholders.

## Benefits of the transboundary water cooperation

### Types of transboundary benefits

Examples of benefits of the transboundary water cooperation in the Okavango river basin are summarized as follows:

**Economic benefits within basin:** through the TDA/SAP process, Member States have better understanding of the basin sound developments opportunities without over-stretching the limits of the “acceptable development space”. Formulated mechanisms to define the “acceptable development space” facilitate informed negotiation and management of “*trade-offs*” amongst Member States with respect to their possible development pathways.

**Environmental benefits:** Platform established for development of a basin wide mosaic and transboundary RAMSAR sites to strengthen wetlands biodiversity conservation and associated socio-economic returns (e.g. Okavango Delta Ramsar Site in Botswana and Bwabwata Ramsar Site in Namibia – possibilities of setting a RAMSAR Site in Angola along the Cuito sub-basin).

**Geopolitical benefits:** Through OKACOM, a negotiation platform has been established for riparian's States to **balance trade-off** from country specific priority development initiatives by enacting the SADC Protocol on Shared Water Courses / prior notification process – and subsequent implementation of agreed joint actions after a structured and properly digested notification process. In addition to this OKACOM also has an already signed OKACOM Hydrological Data Sharing Protocol.

### Need of an assessment of benefits (actual and potential) of TWC

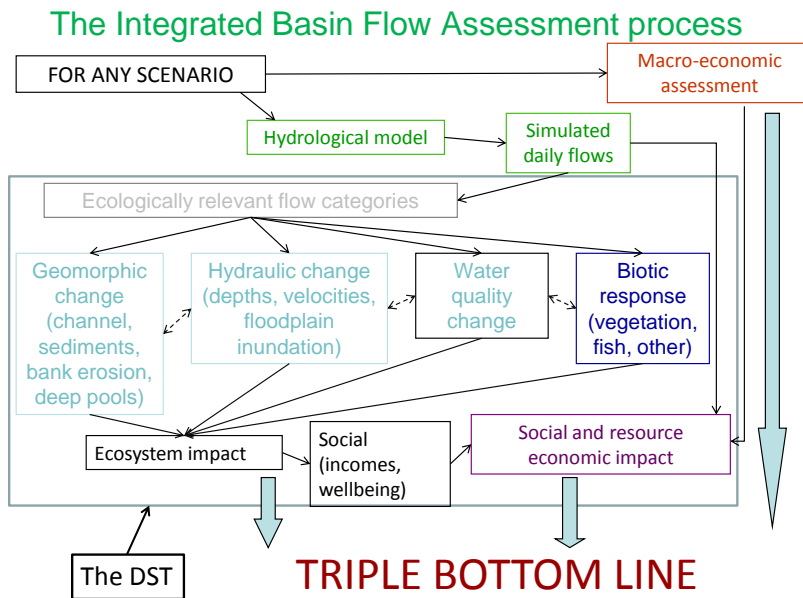
The need for the benefits assessment (TDA and SAP) was made immediately after the signing of the OKACOM agreement. OKACOM Member States needed to have a common understanding of trends and issues (TDA) in the Okavango basin to be able to ascertain the joint development opportunities of the basin (SAP) for the long term improvement of livelihoods of basin population and overall sustainable management and development of basin

resources. At present, Member States have requested the CIWA/World Bank to assist the undertaking of a Multi-Sectoral Investment Opportunity Analysis in the basin to inform investment interventions. The primary concept note has been approved by CIWA Advisory Committee.

## How benefits estimates have been derived?

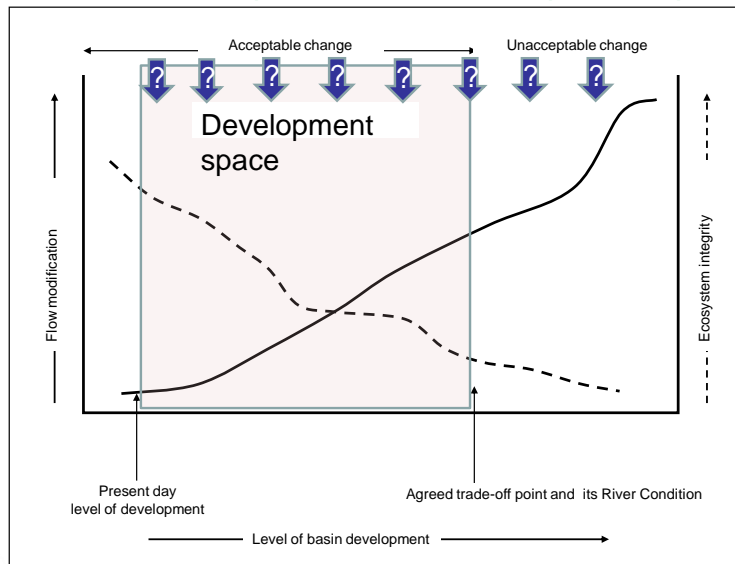
### Methodology used

- For this purpose, the Integrated Flows Assessment (IFA) methodology was used, framed in a decision support system responding to “**what if**” type of questions on possible development scenarios and, supported by economic valuation of ecosystems response in the provision of goods and services.
- The basic decision support tool has the following structure:



- The “acceptable development space is negotiated as per diagram below:

## How scenarios help define the Development Space



## How benefits assessment's findings have been communicated?

### Communication strategy used

Benefits assessment's findings are being communicated using

- The OKACOM Communication Strategy developed
- Supported by communication messages articulating in simple and pragmatic languages the responses of the “what if” type of question un-packing potential returns on investments from different possible development scenarios and quantification of such returns in monetary terms using economic valuation techniques to assist informed planning, management and decision making
- including spatial visualization of such returns as well by using info-graphic techniques in printed posters and brochures as well as in animated digital formats

### How the benefit findings were used by target audiences

Benefit findings were communicated to targeted audiences through:

- Policy briefs specifically produced for policy makers
- Consolidated production of technical TDA report for basin technocrats, science/academic community and private sector
- Compilation of over 70 technical specialist reports supportive of the TDA
- Uploading of all such technical reports in the OKACOM dynamic website
- Production of the River Cousins Comic Book – targeted to the youth and students at tertiary education level
- Participation in the 2012 *International Riverprize* Competition in Australia – targeted to international community of river scientists

Targeted audiences to communicate the benefit findings included:

- Policy makers
- Basin population
- Business industry within the basin
- Youth at tertiary education level
- International community of river scientists

## Have the findings of the assessment been useful in strengthening the TWC processes

### Assessment of impact

The policy brief has steered the endorsement of the SAP at Cabinet level in at two of the three riparian Member States (Botswana and Namibia). The SAP document and resulting PIF document have been endorsed by GEF and funding secured for the PPG process towards developing detailed intervention approach for SAP implementation. OKACOM Member States have doubled they annual cash contribution to secure 100% of operational costs of the Secretariat. And ultimately, OKACOM has secured GEF funding for the implementation of the SAP for the Cubango-Okavango river basin

### Key messages and lessons learned

Key lessons learned include the following:

- Country-specific governance principles must be addressed with care.
- Stakeholders must be engaged on an issues-driven principle.
- An environmental flow assessment, as done for the TDA, should be completed BEFORE detailed engineering planning and design begins, as negotiations around the desired trade-off point between conservation and development should guide development.
- Rural people rely on rivers for far more than water, and so ecosystem condition and its links to livelihoods must be factored into flow assessments.
- Basin-wide flow assessments can provide insights into win-win situations that are not apparent in project-based assessments. In the context of the Okavango, it highlighted the potential for sharing benefits rather than water.
- Developing an understanding of the complexity of flow assessments and IWRM is a long process. Senior scientists and managers in any country may never have approached their knowledge and work from this perspective before. Grasping that river ecosystems react to imposed flow changes, and approaching their data in new ways to predict how this may manifest itself, takes time, as does learning new ways to cope with data-poor situations.
- The complex technical languages of technical and scientific studies need to be simplified to the needs of policy makers – how to translate the outcomes of the “what if” type of modeling techniques into plausible policy communication messages – “policy brief”

### *Main challenges*

Some of the main challenges besides the ones discussed earlier include the following:

- To find common ground when there are different governance principles in each country.
- To harmonise the values and aspirations of different stakeholder groups.
- To coordinate and train into one basin-wide technical team more than 40 people, who speak one of two languages (English and Portuguese) and have backgrounds in many different disciplines.
- To describe the links between eight flow indicators, 70 biophysical indicators and eight socio-economic indicators and use these links in a structured way to predict development-driven change.
- Time required to reach-out targeted stakeholders specially the policy makers