



OKACOM

*The Permanent Okavango River Basin Water Commission
Comissão Permanente das Águas da Bacia Hidrográfica do Rio Okavango*



Project Brief

The European Union Programme for Trans-boundary Water Management in the Cubango-Okavango River Basin





The Cubango-Okavango River Basin (CORB) is a trans-boundary basin with a drainage area covering parts of Angola, Botswana and Namibia. The basin remains largely near-pristine with a low level of major economic activities and a mostly subsistence-based economy.

Major developments planned for the future have been identified as potential threats on the ecological state of the Basin. To offset such potential threats, a Strategic Action Programme (SAP) for the sustainable development and management of the Basin was adopted by OKACOM. The SAP and the Basin Development and Management Framework (BDMF) which is a long-term planning framework, is focused on improving Basin governance by tackling specific issues categorised under four overarching thematic areas: 1) livelihoods and socio-economic development; 2) water resources management; 3) land management; and 4) environment and biodiversity. Collecting, storing and generating data and information, developing basin-wide data sharing tools and, jointly agreed decision support framework and Decision Support System (DSS) has been identified in the BDMF as fundamental to the responsible management of water resources of the CORB.



In order to provide technical expertise and assist in the development and enhancement of data sharing, water resources management and decision support tools, funding support was provided by the European Union (EU) jointly with OKACOM.

The EU through the 11th European Development Fund (EDF) Regional Indicative Programme for Eastern Africa, Southern Africa and the Indian Ocean (EA-SA-IO) 2014-2020 has provided funding support to the “The Programme for Transboundary Water Resources Management in the Cubango-Okavango River Basin” project, known as the EU-OKACOM Project. This Project focuses on establishing the foundation for sound decision-making by supporting the BDMF. In particular, it focuses on data collection, data management and analytical systems that provide scientifically sound information used in decision-making within OKACOM. Henceforth, the key facet of the project actions is related to the development of the OKACOM DSS. Furthermore, it also addresses issues pertaining to Thematic Area 2: Water Resources Management, by filling gaps in the data monitoring networks and developing early warning systems. It also addresses Thematic Area 3: Land Management with one of the aims being to introduce better land-use planning guidelines and addressing livelihood issues that lead to environmental degradation.

OBJECTIVES AND ACTIONS

The overall objective of the EU-OKACOM Project is to strengthen governance in the CORB and promote the sustainable management of its water and land resources. This is further elaborated into three specific objectives, which are being delivered through technical support:

- 1). Improve the DSS used in the BDMF, which will enable OKACOM to provide effective advice to Member States;
- 2). Strengthen water management through improved water resources data availability, and establish an early warning system; and
- 3). Strengthen land management through improved land use planning, reduction of environmental degradation and improved livelihoods.



PRINCIPLES UNDERPINNING THE DELIVERY OF THE PROJECT OBJECTIVES AND ACTIONS

Recognising the importance of trans-boundary management and significant level of prior interventions to support OKACOM in delivering on its mandate, the EU-OKACOM Project was packaged in order to adhere to the following principles:

- The scope and use of the DSS must be commonly understood and agreed upon – this recognises that any action taken will require engagement with OKACOM and the Member States to jointly outline what the DSS can do and what it is expected to do;
- The core of the enhanced DSS (including improved and expanded Basin Planning Tools) and monitoring programmes will be established as early as possible in the project timeline;
- Member States and OKASEC will be involved in all DSS development processes to the maximum extent possible within the available resources;
- Further to this, the responsibility to implement all project actions lies with the EU Project Manager with technical support from the Technical Assistance (TA) team;
- Individual activities will be aligned with, and will build on previous and current work of OKACOM;
- The detailed Scope of Work (SoW) for substantive tasks will be discussed and jointly agreed with OKASEC, other relevant project teams, with oversight from the EU Delegation before undertaking the work; and
- Reports and DSS outputs will be visual and concise and are to be provided in the two OKACOM languages of English and Portuguese

BUDGET STRUCTURE OF THE EU-OKACOM PROJECT

The EU support to the OKACOM was signed in April 2018, with an allocation of € 6 million to be utilised in four years.

Funding Structure	Budget	Implementation Modality	Function
1. DIRECT GRANT	€ 1,670,640 (plus OKACOM contribution €693,960)	OKACOM procurement	Project staff and management
2. TECHNICAL ASSISTANCE CONTRACT	€ 1,909,000	Contractual arrangement between the EU and TA Contractor	Funds provide for the technical support services (consultancies)
3. PROCUREMENT GRANT	€ 2,000,000	EU Procedures	Purchase of equipment for supporting improved monitoring in the basin

PROJECT RESULT AREAS

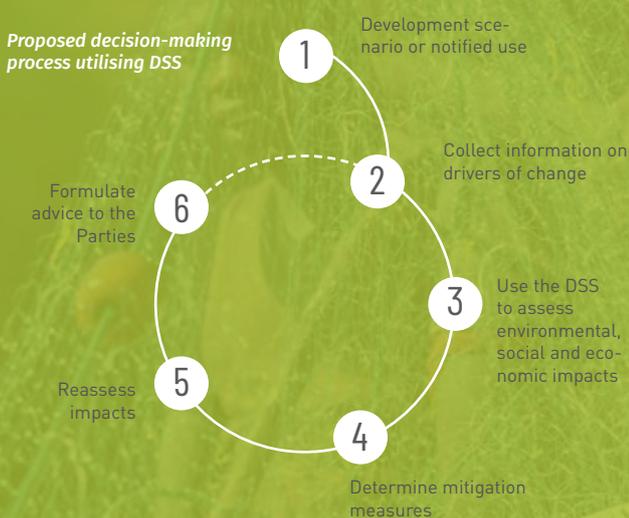
The project objectives directly translate into project result areas with specific actions. These result areas are being delivered progressively over the 4-year project period. The EU-OKACOM Project, which recently had a result-oriented monitoring (ROM) and progress review, has achieved significant progress in various result areas as summarised below:

RESULT AREA 1: CROSS-CUTTING SUPPORT TO BDMF

1.1

Result area 1.1- Decision Support System operationalised and OKASEC capacitated to fully utilise the DSS for analysis and provide advice to Member States

The Transboundary Diagnostic Analysis (TDA) and several other OKACOM-related programmes undertaken over the last 15 years have produced various water resources assessment tools. These provide substantive building blocks for the DSS, which is envisaged to promote a decision making process exhibited in the figure below. Nonetheless, these tools are not readily available nor fully embedded in OKACOM. This is largely because OKASEC do not have a framework to support the usage of these tools for decision making.



Therefore, this action is addressing these issues by updating and enhancing the suite of models, scenarios and static tools from previous studies, in order to make them easier to use, accessible via dashboards, and build OKACOM's capacity and desire to use the models by providing adequate data support. The terms of reference which provides specifications for the development and operationalisation of the DSS within OKACOM has been published. These work package will progressively be executed with finalisation planned for 2022.

1.2

Result area 1.2 - National databases upgraded and harmonised in support of the OKACOM DSS

An operational decision support system should be founded on sound data support that is anchored in an institution that has adequate expertise and an equitable budget for the sustenance of DSS-based actions. Through the development of the DSS, the EU-Project is also supporting the alignment of national databases in order to enhance data support for the OKACOM DSS. Therefore, extensive work has been done on understanding existing data infrastructure within Member States. This foundation work has been embedded in the terms of reference relating to the development and full operationalisation of the OKACOM DSS.

1.3

Result area 1.3 - Revised OKACOM Data-sharing document signed and operational agreements signed by data providers/custodians.

The regular exchange of data is critical for the efficient and sustainable utility of the DSS. This requires formalised rules and guidelines for sharing data by Member States. The OKACOM Protocol on Hydrological Data Sharing for the Okavango River Basin is the present data sharing framework for OKACOM. However, this protocol remains greatly inefficient for its purpose because it is very limited in scope due to its focus on sharing hydrological data only. This creates challenges for the adequate exchange of data. Hence, the EU-OKACOM Project has been working on improving the data sharing procedures through extensive Member State consultations and regional workshops. The amended data sharing procedures have been endorsed by the EU Delegation.



RESULT AREA 2 – WATER RESOURCES MANAGEMENT

2.1

Result 2.1 - Improved availability of water resources data through implementation of monitoring stations and equipment covering surface and ground water resources, water quality and sedimentation including capacity of institutions for monitoring

Water resources assessment is critical for understanding water availability and the opportunities it provides for development and meeting water demand including environmental water requirements. Therefore, consistent and robust basin-wide data collection and resources monitoring programmes need to be in place for easier evaluation of the baseline status of the Basin water resources and monitoring the impacts of economic development activities. This work is being done in close collaboration with the on-going UNDP-GEF SAP Implementation Project. Data collection capacity and the existing operational status of hydro-meteorological instrumentation is greatly varied among the Member States. The EU-OKACOM Project has set out to support the development of an integrated transboundary hydro-meteorological monitoring network to promote consistent basin-wide water resources data collection. Joint water resources monitoring surveys have been supported in tandem with the UNDP-GEF SAP Implementation Project as a starting point for basin-wide data collection capacity and strategic partnership building among water resources scientists in the Member States. Transboundary monitoring hydro-meteorological and ecological monitoring sites were jointly agreed upon at a regional transboundary water resources management workshop held in 2019, Maun, Botswana. Major milestones have been reached in respect of procurement of equipment related to the support for the DSS development, sediment, aquatic ecology, water quality and hydro-meteorological monitoring equipment as well as procurement of boats for water resources data collection. The next phase, is aimed at developing capacity on the utility and management of the various monitoring equipment within OKASEC and Member States.

2.2

Result 2.2 - Reduced flood damage in the basin due to improved flood forecasting and early warning systems (FEWS)

Another facet of water resources management in the context of OKACOM is to reduce flood damage in the Basin through improved flood forecasting and early warning systems. This is particularly vital for communities practicing crop and animal production close to the rivers, the tourism industry and for resource use related human-wildlife conflict which increases during flood periods. To-date, the EU-OKACOM Project has acquired high resolution topographical data for the area between Mucundi and Mohebo, which has been processed into a 10 x 10 m resolution Digital Elevation Model (DEM) to support accurate flood extent modelling. In addition, 35 years of historical satellite imagery data that shows the actual surface water extent of rivers on a monthly temporal scale have been procured. The process for integrating the high resolution DEM into the flood inundation modelling has begun. This work remains linked to the activities around hydrological monitoring, data management and data sharing arrangements wherefore, the data collected will be migrated and stored into the DSS database that will be updated regularly while at the same time the DSS will provide vital data analysis and presentation tools.

RESULT AREA 3 LAND MANAGEMENT AND LIVELIHOODS

3.1

Result 3.1 - Harmonised, basin-wide land use planning guidelines developed

The BDMF has identified land degradation as the one of the major threats to the sustainable management of the CORB. In various parts of the Basin, land degradation is exacerbated by subsistence farming and livelihood systems of local communities. Therefore, it is important to develop Land Management Guidelines that support key land use planning, rehabilitation and water resources developments that aim to halt or mitigate the potential transboundary impacts for selected livelihood-based activities. These may be geographically differentiated to address vulnerabilities in different sub-basins of the CORB.

3.2

Result 3.2 - Existing environmental degradation halted or reversed (in specific demonstration sites)

The TDA, BDMF and other previous OKACOM projects have presented evidence of localised environmental degradation with potential transboundary impacts. The land rehabilitation demonstration interventions seek to ensure that subsistence economic or livelihood activities are undertaken with full recognition of the threat they pose to the environment. This involves promoting education and awareness supported by the demonstration of climate-smart sustainable practices that needs to be adopted by local communities. Deliberate effort will be placed on ensuring that demonstrations of sustainable and climate resilient livelihood practices should provide incentives for socio-economic growth and not propagate loss of livelihood systems and benefits previously derived from the status quo practices.

The implementation of the land management component of the EU project has gained momentum. The EU-OKACOM Project has identified Conservation Agriculture demonstration within the upper Cubango-Okavango Basin as a tool to mitigate land degradation and terms of reference for technical support for implementing its activities have been developed. The project has set out a roadmap for promoting the use of Miombo woodland in the upper catchment for non-timber products by local communities. The overall objective of the activity is to capacitate small holder farmers in the upper catchment to sustainably implement conservation agriculture, so as to improve their economic productivity, food security and adaptation to climate change, whilst helping to reduce the rates of deforestation of pristine miombo woodland.



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Pictures courtesy of National Geographic Okavango Wilderness Project



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