



OKACOM

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



*Empowered lives.
Resilient nations.*

Terms of Reference (ToRs) for Consultancy Firm to undertake Strategic Environmental Assessment (SEA) for the Cubango-Okavango River Basin (CORB)

1. Background

The Cubango-Okavango River Basin (CORB) is one of the few relatively undeveloped river systems in the world, largely due to low levels of socio-economic development. A Transboundary Diagnostic Analysis (TDA) for the CORB facilitated by the Permanent Okavango River Basin Water Commission (OKACOM) almost 10 years ago, established the status of the basin from a socio-economic development and environmental integrity perspective. The TDA reported then (2011), that the basin at large was still relatively undisturbed. However, the TDA identified several concerns which include variation and reduction of hydrological flows, changes in sediment dynamics, changes in water quality and changes in the abundance and distribution of biota. Invariably, the TDA also observed then, that while the ecological and environmental integrity of the basin was still in good standing, future development with potential to harm the environment were inevitable.

Subsequently, the TDA informed the development of 20 years CORB Strategic Action Programme (SAP) which is currently under implementation. The TDA and the SAP, recognize that there must be development of the basin resources to fulfil the needs and raise economic status of the basin communities. The questions therefore are, how best and to what extent those resources should be utilized to achieve these aims without jeopardizing and threatening the long-term viability of the Cubango-Okavango ecosystem? Meanwhile, there are several policies, plans and programmes developed by various structures throughout the CORB which drives socio-economic development thinking. Unfortunately, development policies, plans and programmes are not supported.

Socio-economic development in the Angolan part of the CORB is guided by the "Plano Geral" which provides a compressive vision of potential development within the Angolan part of the basin. Recently, the Angolan Government established the Commission of the National Agency of the Okavango Region (ANAGERO), which is responsible for coordinating and providing leadership on the protection and preservation of the Angola Okavango/KAZA region's environmental components and their rational economic exploitation, taking into account existing social, economic, cultural, scientific and landscape values. In 1984, Namibia commissioned a major section of the Eastern National Water Carrier (ENWC) as implementation of the National Water Master Plan of 1974 took shape. This long-standing master plan further proposed to augment water supply, by extracting water from the Kavango River to the Central Area Network of Namibia by extending the water carrier. This phase entails the development of a 250 km pipeline from Rundu to the Grootfontein groundwater works, where the ENWC begins in this present day. In Botswana, development within the basin is guided by the Okavango Delta Management Plan (ODMP) which is an off shoot of Botswana's

ratification of the Ramsar Convention and declaration of the Okavango Delta as a Ramsar Site in 1997. At a regional level the development within the CORB is guided by the SAP.

Meanwhile, Ministries responsible for water in the CORB, recognize the need for formal guidance for communication and collaboration on transboundary environmental assessment (TBEA) in the context of the 1994 OKACOM Agreement. All three riparian states have adopted a comprehensive code of national environmental legislation and each recognizes the need for undertaking environmental assessments at both the strategic and project level. Their respective legislative provisions follow a broadly similar process of studies, consultation, analysis, report compilation, submission, and approval. Since legislative provisions for riparian states are similar, there is need for an overarching instrument that will unify the processes at a strategic level in the form of a SEA for all key policies, plans, programme and Transboundary EIA guidelines for the CORB. Both SEA and Transboundary EIA are critical instruments necessary for supporting Transboundary Environmental Assessment (TEA) and the application of the OKACOM Notification Consultation and Negotiations Guidelines. Additionally, the lack therein of a comprehensive socio-economic monitoring programme and the lack of robust water demand forecasting for the CORB further comprise policy development and planning at basin level.

1.1 Rationale

OKACOM promotes integrated transboundary management and sustainable socio-economic development within the CORB. Currently, there are several existing development policies, plans and programmes developed by the CORB riparian states. A recent Multi-Sectoral Development Opportunity Analysis (MSIOA) for the CORB which analyzed existing plans, policies and programmes identified several developments plans whose implementation could harm the CORB ecosystems in the absence appropriate strategic environmental management guidelines. Potential economic development policies plans and programmes of serious environmental concern include those that advocate for hydro-electric power dams, large scale irrigation schemes, urban expansion, large scale water transfers and eco-tourism development. The implementation of all those development and policies, plans, programmes and strategies will involve a high level negotiated decision-making by member states, guided by the recently (2018) approved OKACOM NCN Negotiation Guidelines. Such high-level decision-making and planning must consider environmental implications of the implementation high level development plans and should be guided by robust tools which include a comprehensive SEA and NCN guidelines.

Currently, water resource and economic development affecting the utilization of natural resources in the CORB has been driven by national and sectoral development plans and strategies within each member state with little consideration for transboundary impacts. No effective mechanism is in place to facilitate coordinated implementation of environmental safeguards at basin level, except for the recently approved NCN Guidelines. Currently, there is no comprehensive SEA and Transboundary EIA guidelines for the CORB, a scenario which undermines full application of the notification procedures. The apparent lack therein of a SEA for the CORB plans, policies and programmes means that economic development decisions within the CORB are not supported by a systematic and anticipatory process, undertaken to

analyze the environmental effects of proposed plans, programmes and other strategic actions. Consequently, environmental concerns are not adequately integrated into the high-level economic development policy decision-making processes within the OKACOM Members States. The lack therein of SEA and Transboundary EIA Guidelines to support high level policy decision-making and planning, possess a undermines the sustainable joint management of the CORB that is clearly advocated for by the OKACOM Agreement of 1994 and various subsequent instruments. Additionally, the lack of robust water demand forecasting and a comprehensive socio-economic monitoring framework for the CORB further weakens transboundary integrated water resources management plan and strategies for the basin, leading to largely uninformed decision making. OKACOM would therefore like to engage the services of a high experienced International Consultant to i) conduct a comprehensive SEA for the CORB including development of a Transboundary EIA Guidelines, ii) develop a comprehensive socio-economic monitoring framework for the CORB, and iii) develop a comprehensive water demand forecasting methods for the CORB, and a demand forecast for the next 10 years.

2. Objectives

2.1. Main objective are to

- a. develop a SEA for the CORB that identify potential significant effects on the environment of implementing the implementation of key policies, plans and programmes.
- b. develop a Transboundary EIA Guidelines for the CORB.
- c. develop a SEA Implementation framework which includes appropriate institutional arrangement
- d. assess socio-economic and environmental baseline for the CORB and develop a socio-economic monitoring framework for the CORB.
- e. develop a suitable water demand forecasting methodology for the CORB
- f. conduct a 10 years water demand forecasting for the CORB.

3. Scope of Work

This assignment entails a rigorous screening and scoping exercise which will identify and review key existing policies, plans and programmes that warrants a SEA. The screening exercise will identify all key plans, policies and programmes that warrants a SEA, while the scoping exercise will establish environmental and socio-economic baselines, environmental implications and concerns of implementing selected policies, plans and programmes within the CORB. The assignment will also include a socio-economic and environmental baselines assessment which will establish baseline conditions through a comprehensive situational analysis. Based on the socio-economic data and information, the assignment is expected to develop a comprehensive basin wide socio-economic monitoring framework which defines appropriate methodologies and methods, monitoring indicators, monitoring frequency and

appropriate institutional arrangements. The assignment is expected to deliver harmonized Transboundary EIA guidelines for the CORB based on the analysis and review of national EIA legislations and guidelines within the Members States. In addition, the assignment will be expected to develop suitable water demand forecasting methods for the CORB, and a 10-year water demand forecast for the CORB. In summary, the assignment is expected to deliver a i) comprehensive SEA Environmental Report, ii) a socio-economic monitoring framework for the CORB based baseline data and information, and iii) water demand forecasting methods for the basin and a demand forecast for the CORB. These three (3) final deliverables will be delivered in three (3) separate reports.

4. Duration of the Contract

The assignment is scheduled to be undertaken, for a maximum duration of 41 weeks.

5. Institutional Arrangement and Quality Assurance

OKASEC will provide technical support and oversight to the Consultancy. Quality assurance will be provided by a Technical Reference Group drawn from members of various OKACOM Technical Committees, experts from different ICPs and representatives of the Okavango Basin Steering Committee.

6. The Team Composition and Expertise Required

The team should comprise of regional and international experts with vast experience in conducting SEA for transboundary river basin or similar systems. The Team should also comprise of experts capable of developing a comprehensive socio-economic monitoring framework and water demand forecasting methods. The team should balance representation from national, regional, and international experts with at least one expert from each of the three (3) OKACOM member states (Angola, Botswana, and Namibia). **The Team Leader and the Co-Team Leader should have participated in a SEA, socio-economic monitoring, and water demand forecasting for similar systems preferably in leadership capacity.** In addition, the Team should ensure that expertise covers the desired spectrum of environmental and socioeconomic experts. The team composition listed below forms the minimum core team. The bidder can include additional team members as they see fit.

6.1 Team Leader

Main Function:

- i. Lead the development of an appropriate methodological approach for the development of a SEA, a Socio-Economic Monitoring Framework and water demand forecasting for the CORB.
- ii. Provide leadership and coordinate all SEA activities, including progress planning, policy analysis, reporting, fieldwork coordination, and capacity development

- iii. lead the identification and analysis of environmental and development policies for the CORB with view to establish possible environmental concerns associated with the implementation of such policies, plans and programmes.
- iv. collect, collate, and analyse existing socio-economic and environmental baseline data to establish the state of the environment and socio-economic development status within the CORB.
- v. lead the development of the SEA report for the CORB and the Socio-Economic Monitoring Framework.
- vi. lead the development of the water demand forecasting methodology for the basin and the 10-year water demand forecasting for the CORB.

The Team leaders should be an internationally renowned **Environmental Assessment and Management Expert** with following credentials:

- a. minimum of 10 years of experience in leading SEA processes in transboundary river basins in Africa or similar environments.
- b. at least MSc degree, but preferably a PhD in Environmental Sciences (specializing in any of the following: Environmental Management, Natural Resources Economics, Environmental Planning, Environmental Law, Environmental Engineering, and Integrated Water Resources Management) or another related field.
- c. accredited environmental practitioner (added advantage)
- d. proven working experience in Environmental Assessment at transboundary level.
- e. should have led similar assignment over the last five (5) years preferably in the SADC region or a similar environment.
- f. familiarity and experience in the CORB is desirable (added advantage).
- g. language: proficiency in English and Portuguese is desirable (added advantage).

6.2 Co-Team Leader: Socio-Economics expert

Main Function:

- i. provide leadership and coordination of socio-economic data collection and analysis, including policy analysis, project progress planning, reporting, fieldwork coordination, and capacity development.
- ii. lead the identification and analysis of environmental and policies guiding socio-economic development in the CORB with the view to establish possible environmental concerns associated with the implementation of such policies, plans and programmes
- iii. lead the identification, collection, and analysis existing socio-economic economic data and information to establish the status of socio-economic development within the CORB.
- iv. lead the development of the SEA reports for the CORB.
- v. develop a Socio-Economic Monitoring Framework for the CORB which include appropriate institutional arrangements and comprehensive methodological approach.
- vi. develop a water demand forecasting methodology for the basin.
- vii. conduct a water demand forecasting for the CORB for the next 10 years.

The Co-Team leader should have:

- a. a minimum of 10 years of working experience in socio-economic assessments and water resources economic in developing countries.
- b. at least a Masters (preferably a PhD) in desirable Social/Water Science which could include any of the following: Water Economics, Natural Resources Economics, Water Environmental and Recourses Economics, Economics, Development Economics, Development Studies, Political Economics, Integrated Water Resources Management or another related field.
- c. participated in the development of SEA and development of Socio-Economic Monitoring Framework over the last 7 years in leadership capacity (Preferably at transboundary level).
- d. demonstratable experience in statistical analysis and handling of huge data sets
- e. demonstrable experience in policy analysis and participatory planning.
- f. experience in social impact assessment of infrastructure development assessment, awareness creation, behavior change.
- g. expertise in socio-economic field studies and analysis, especially on poverty and gender related issues.
- h. proven working experience in the of fields water resources management, particularly water demand forecasting methods.
- i. language: proficiency in English and Portuguese is desirable (added advantage).

6.3 Environmental/Ecosystems Management Expert with strong background in Climate Change

Main Function:

- i. collect, collate, and analyse existing environmental and ecological baseline data which include but not limited to hydrological flows, water quality, climate data, soils, land cover land use changes, pollution, aquatic vegetation, aquatic macro-invertebrates.
- ii. document the state of the environment in the CORB as influence by climate and socio-economic development.
- iii. perform analysis environmental and development policies, plans and programmes within the CORB with the view to identify environmental concerns associated with the implementation of such policies, plan, and programmes.

The Environmental/Ecosystems Management Expert should have

- a. an MSc. (but preferably a PhD) in Environmental/Ecosystems Sciences with specialization in any of the following fields: Environmental Engineering, Environmental Chemistry, Environmental Management, Environmental Pollution, Environmental Monitoring, Wetland Ecology, Rangeland Ecology Land Use Planning, with strong background in GIS and Remote Sensing, and Integrated Water Resources Management.
- b. minimum of 10 years of working experience and traceable participation in environmental baseline assessment and spatial analysis within an IWRM framework.
- c. a minimum of 10 years' experience with GIS software e.g. ArcGIS and Quantum GIS, ERDAS, applications of GIS and remote sensing in water resources studies and exposure to huge datasets.

- d. proven experience on analyzing the impact of climate change on the environment and ecosystems
- e. proven experience in river basin land use land cover changes and impact of different land use practices on the environment and sensitive ecosystems.
- f. in-depth knowledge of key issues pertaining to the environmental land and water resources management in national and transboundary water courses in the SADC region is preferable.
- g. in-depth understanding of regional environmental policies including climate change policies.
- h. previous experience in similar projects at regional projects level within the SADC region is desirable.
- i. experience in environmental management, planning, policy analysis particularly experience in Environmental assessment. in developing countries with a minimum of 5 years as project manager, prior working experience in the Basin would be an asset.
- j. Language: proficiency in English and Portuguese is desirable (added advantage).

6.4 Hydrologist/Integrated Water Resource Management Expert

Main Function:

- i. collect, collate, and analyse existing hydrological baseline data which include but not limited to hydrological flows, groundwater, water quality, sedimentology, climate data and water resources utilisation (**estimation of abstraction levels within the basin**) within the CORB.
- ii. assess, describe, and characterize the distribution of hydrological flows within different parts of the basin and their potential influence on water resources utilization.
- iii. develop a water demand forecasting methodology for the basin.
- iv. conduct a water demand forecasting for the basin over the next 10 years in collaboration with the co-leader.

The Hydrologist/Integrated Water Resources Management must have

- a. at least a master's degree, but preferably a PhD in Hydrology or Integrated Water Resources Management, with strong background in GIS and Remote sensing, and Integrated Water Resources Management.
- b. at least 10 years' experience in hydrological modelling, and assessment of impacts of climate change and anthropogenic activities on hydrological flows in the CORB.
- c. demonstrable experience in water demand forecasting
- d. Language: English and Portuguese is desirable (added advantage).

6.5 Environmental/International Water Law Expert must have

Main Function:

- i. identify and analyse existing national, regional, and international water resources management legal frameworks relevant to the management of the CORB.

- ii. identify and review the Environmental Impact Assessment Laws for the OKACOM members state.
- iii. develop a high level Transboundary Environmental Impact Assessment Guidelines that will support the Notification Procedures.

An Environmental/ International Water Law Expert must have

- a. an MSc, but Preferably a PhD in Environmental Law or International Water Law.
- b. minimum of 10 years of working experience and traceable participation in the development transboundary/international waters legal frameworks.
- c. demonstrable experience in analyzing and developing transboundary EIA guidelines for river basins like the CORB.
- d. demonstrable experience in partaking in a SEA will be an added advantage.

6.6 Policy Analysis Expert.

Main Function:

- i. identify and analyse existing national, regional, and international water policies, plans and programmes relevant to water management in the CORB.
- ii. identify and review the Environmental Impact Assessment policies and strategies within the OKACOM members states which are relevant to the management of the CORB.
- iii. develop a high-level comprehensive policy analysis report for the CORB.

A Policy Analysis Expert

- a. an MSc, but Preferably a PhD in any of the following: Policy Analysis and Management, Public Policy Development and Analysis, Resource Economics, Social Policy Analysis, Natural Resources Policy Analysis, or any other related field.
- b. minimum of 10 years of working experience and traceable participation in the development transboundary/international waters policy frameworks.
- c. demonstrable experience in analyzing and developing transboundary water resources management policies for river basins like the CORB.
- d. demonstrable experience in partaking in SEA will be an added advantage.
- e. Language: English and Portuguese is desirable (an added advantage)

7. Deliverables Reports all in English and Portuguese and payment schedule.

Derivable Reports	Description of deliverables	Timeline	Payment Schedule
Inception Report	Demonstration of the understanding of the assignment and scope of work therein by assembling a complete competent team, presentation of clear methodologies and methods, implementable workplan and reasonable budget	4 weeks after inception meeting	10% of the professional fees
Scoping Report	a. a detailed situational analysis report which include a comprehensive screening to identification policies, plans, programmes that require environmental considerations as part of the high-level decision making. b. a succinct state of the environment and socio-economic development baseline report for the CORB which presents a preliminary analysis of the baseline, a brief description of issues to be addressed and methodologies therein, a brief description of the institutional and legal framework and the challenges of the environment. c. Overview of data and information, which must be collected for further analysis. d. Baseline water use and water demand for the basin. e. A separate stakeholder consultation report as an annex to the scoping report f. Monthly progress reports (English only)	12 weeks after approval of the inception report	30% of the professional fees
Draft SEA Reports. (separate reports)	a. A draft SEA Environmental Report which clearly defines all key performance indicators. b. Draft Transboundary EIA guidelines c. A draft Socio-economic Environmental Monitoring Framework d. A draft water demand forecasting methodology and a draft 10-year water demand forecasting for the CORB.	8 weeks after approval of the Scoping Report	20% of the Professional fees
Draft Final Report.	a. A draft SEA report b. A draft Socio-economic Environmental Monitoring Framework c. Draft Transboundary EIA Guidelines. d. A draft water demand forecasting methodology and a draft 10-year water demand forecasting for the CORB e. Monthly Progress Reports (English Only)	12 weeks after approval of the draft reports.	20% of the professional fees
Final Report and all instruments that were used for data collection.	a. A draft final SEA report b. Final Socio-Economic Monitoring Framework. c. Final water demand forecasting methodology and a draft 10-year water demand forecasting for the CORB d. All instruments that were used for data collection.	5 weeks after approval of the draft SEA	20% the professional fees

8. Duty Station

The consultancy will be managed through OKACOM Secretariat based in Gaborone, Botswana. However, the team of consultancy firm is expected to travel to the Basin across the riparian member states and will make regular consultations with relevant stakeholders within and outside the Basin geographic area.

9. Evaluation of Proposals

The Consultant will be evaluated based on the Technical and Financial criteria as indicated below:

Technical Proposal

- i. Background information of the Consultant: Profile and examples of similar work carried out and Capability and capacity of the Consultant to undertake the assignment.
- ii. Competency and experience: Qualifications and expertise of Consultants, Years of relevant experience and at least three (3) references from contactable referees on similar work previously undertaken. Personal CV of team members must be included with clear identification of the Team Leader.
- iii. Demonstration of the understanding of the work: Proposed methodology and approach on how to undertake the assignment.
- iv. A clear work plan of activities.

Financial Proposal

Financial proposal should be submitted clearly detailing total number of days to complete work and daily rates inclusive of all anticipated costs in Botswana Pula or US Dollars during the period of assignment. **The Financial Proposal should include cost for translation of key Reports from English to Portuguese.**

Furthermore, the Consultants will be scored on the following methodology:

- i. Technical Criteria weight: 70% (only applications meeting minimum of 70% of technical evaluation shall be considered for the financial evaluation); and
- ii. Financial Criteria weight: 30%.

Contract awarding shall be made to the Consultant whose offer has received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the Terms of Reference.

10. Submission of Proposals

All interested consultants should visit the OKACOM website and submit a Technical and Financial proposal online by Friday, 11 September 2020 at 21:00 (CAT).

The submissions should include;

- i. Lead Person with contact details (telephone, e-mail address, office physical address);
- ii. Short cover letter outlining the suitability of the Consultant for this assignment.
- iii. A full technical proposal with detailed methodology, deliverables, and timelines.
- iv. A detailed financial proposal in BWP or USD (submitted separately from the technical proposal: **bids which do not separate technical and financial proposals will be disqualified**)
- v. CV and Summary of qualifications and experience for the consultants, categorising the Lead Consultant and supporting consultants with clear articulation of their roles in the consultancy.
- vi. Certified copies of academic certificates for all the team members.
- vii. List of at least three (3) similar projects/assignment conducted by each Consultant over the last 5 years.
- viii. Registration documents which include a certificate of incorporation, share certificates (list of Directors) and the latest Tax Clearance certificate (if it is a company); and
- ix. Three (3) references from clients which similar work was conducted for over the last five (5) years.

*** OKACOM encourage applications of companies / bidders with composition of the team that include experts from the three (3) riparian states of Angola, Botswana and Namibia, and International experts.**

For any correspondence or clarification contact the "UNDP-GEF Support to SAP Implementation" Project Manager **Mr. Janeiro A. Janeiro** at janeiro.avelino@undp.org copying the OKACOM Programme Coordinator **Ms. Tracy Molefi** at tracy@okacom.org and the OKACOM Senior Scientific Officer **Dr. Mpaphi Casper Bonyongo** at or casper.bonyongo@okacom.org. telephone +267 3161593.