



TERMS OF REFERENCE

For The Appointment of a

Service Provider for The

Review of The Estuarine

Management Plan (EMP) For The

Orange – Senqu River Mouth Estuary

August 2023

1. The Orange Senqu River

The Orange-Senqu River originates in the Lesotho Highlands, from where it flows westwards to its mouth at Alexander Bay/Oranjemund on the Atlantic West Coast. The river basin is the third largest in Southern Africa, after the Zambezi and the Congo, covering a total area of 1,000,000 km² of which almost 600,000 km² is inside the Republic of South Africa. Four countries – Botswana, Lesotho, Namibia, and South Africa - share the Basin, and the river forms the border between South Africa and Namibia at its lower reaches.

Lesotho, the upstream country falls entirely within the basin and contributes over 40% of the stream flow from only 3.4% of the total basin area but is one of the smallest users of water from the basin. South Africa is by far the biggest user of water from the Orange-Senqu River Basin, and this use drives the economic heartland of South Africa. The Botswana part of the Basin is entirely covered by the Kalahari Desert with very little surface runoff, but groundwater contributes to the water demands in this portion of the basin.

The water requirements in the lower reaches of the river are driven primarily by irrigation demands from both Namibia and South Africa, and the need to maintain environmental flows to the estuary. As the most downstream portion of a heavily developed basin, water resources quality in this stretch is a concern. Similarly, the middle and lower reaches of the river are subject to periodic and often devastating floods. The Orange River estuary is ranked as one of the most important wetland systems in Southern Africa but has experienced environmental degradation. This wetland system was re-designated as a Ramsar Site, but because of its threatened status it was placed on Montreux Record in 1995.

The effective management of the Orange-Senqu River Basin is, therefore, particularly complex, but is also vital to the regional economy. As a result, the riparian States prioritized this basin for the establishment of a Shared Watercourse Institution under the Southern African Development Community (SADC) Revised Protocol on Shared Watercourses.

2. The ORASECOM Agreement

The Orange- Senqu River Commission (ORASECOM) was one of the first of the Shared Watercourses Institutions to be established in SADC. It is an advisory body, issuing recommendations to its Member States (The Parties) aimed at optimizing the development and management of the water resources of the Orange-Senqu River Basin for the benefit of all the people in the Parties.

The Agreement establishes Council as a technical advisor to the Parties on matters relating to the development, utilization, and conservation of the water resources in the River System. The Parties may also assign other functions pertaining to the development and utilization of water resources to the Commission. Article 5 of the Agreement empowers Council to take all measures to make recommendations on *inter alia*; water availability in the basin, equitable and reasonable sharing of water, studies on the development of the River System, the extent to which stakeholders should be involved in the management of the system, the prevention of pollution and the control of aquatic weeds and plans for emergency situations.

All recommendations provided by Council to Parties must be contained in a report, signed by the leader of each delegation. These reports must also include estimates of the cost of implementing the recommendation and may suggest how these costs may be apportioned between the Parties. Recommendations to Parties must therefore not only indicate what must be done, but also how it must be done.

3. The ORASECOM UNDP-GEF Project to support the Strategic Action Programme Implementation

ORASECOM, with support from United Nation Development Programme (UNDP), managed to secure further financial support from the Global Environmental Facility (GEF) to implement selected priority activities of the Strategic Action Programme (SAP). The UNDP-GEF project titled, Support to the Orange-Senqu River Strategic Action Programme (SAP) Implementation, the project will be implemented by UNDP and executed by ORASECOM over a 5-year period.

The overall objective of the SAP Implementation project is the strengthening of joint management capacity for implementation of the basin-wide IWRM Plan and demonstrating environmental and socioeconomic benefits of an ecosystem-based

approach to water resources management through the implementation of SAP priority actions in the Orange-Senqu River basin.

The project is supporting the Orange – Senqu River Basin member states through ensuring that critical ecosystem of the transboundary Orange-Senqu River Mouth is rehabilitated and sustainably managed. The focus of this support will be on local interventions that: (i) improve the condition of the Orange – Senqu River mouth salt marshes; (ii) enhance the estuary nursery function to improve the stock status of collapsed/over-exploited fish species; and (iii) improve the water quality of the river flowing into the system. This will be achieved through the following outputs:

- Reviewing the Estuary Management Plan
- Natural flood plain functioning restored and marked improvement in estuarine habitat condition achieved;
- Status of over-exploited/ collapsed estuarine species improved and;
- Nutrient input from agricultural areas below Vioolsdrift.

4. PURPOSE

4.1 To appoint a Service Provider to review the Orange River Mouth estuary Estuarine Management Plan (EMP).

4.2 The development of the EMP is required in terms of Chapter 4, Section 34 of the National Environmental Management: Integrated Coastal Management Act, 2008 (Act 24 of 2008) (“Act”) and the National Estuarine Management Protocol (“the Protocol”) as the guiding document for the development and implementation of the EMPs. Furthermore, the Department of Forestry, Fisheries and the Environment (DFFE) has developed a holistic and inclusive “**Guidelines for the development and implementation of Estuarine Management Plans**” (EMPs) to supplement the Protocol in providing clear procedures and guidance to the responsible management authority who develop and coordinate the implementation of EMPs.

5. INTRODUCTION AND BACKGROUND

5.1 Estuarine ecosystems are complex systems because they are subjected to a multitude of influences, namely: marine, riverine and terrestrial ecosystems. Estuaries form a connection between marine and freshwater systems and are part of regional, national and global ecosystems either directly via water flows or indirectly through the movement of fauna. In addition to the biota that these estuaries support, they are characterised by high biodiversity and productivity; and provide a range of environmental and socio-economic benefits. Pressures in estuaries can influence a wide variety of ecological processes and affect socio-economic benefits. Therefore, to achieve greater harmony between ecological processes and human activities while promoting sustainable use of estuarine resources, an Estuarine Management Plan (EMP) is required.

5.2 To realise and maximise the environmental and socio-economic benefits (ecosystem services) from the estuary, such should be achieved based on sound sustainability principles.

5.3 An estuarine management framework is provided, based on the minimum requirements stipulated in the Protocol, structured in terms of the three main phases, namely the Scoping phase, Objective setting phase and the Implementation phase.

The Scoping phase comprises a situation assessment to reflect on the current status of estuarine management in a specific estuary, conducted in collaboration with other relevant lead authorities and interested and affected parties, including estuarine scientists.

The Objective setting phase entails the preparation of the Estuarine Management Plan, in accordance with the minimum requirements of the Protocol.

The Implementation phase comprises the execution and monitoring of the estuarine management plan. During the implementation phase responsible departments (or sectors) are required to develop project plans for management priorities identified in the estuarine management plan, and to execute and monitor progress in accordance with monitoring plans. At least every five (5) years a detailed review of an estuarine management plan needs to be conducted in accordance with the Protocol.

5.4 In essence, the review process re-enters the Scoping phase of the Estuarine Management Framework revising the earlier Situation Assessment based on information as follows:

- a) The effectiveness of the EMP and success with meeting the Objectives, taking into consideration information from the monitoring programmes during the preceding years (e.g. measured in terms of the performance indicators and targets).
- b) Environmental change (if any) at the local and wider scale that could affect the estuarine resource or the implementation of the EMP.
- c) Changes (if any) to legislation, land-use planning, goals and policies that may require the EMP to be amended.

6. OBJECTIVES OF THE PROPOSAL

6.1 The appointed service provider is expected to fulfil and carry out the following two main objectives:

Objective 1: Review and update the Situation Assessment Report

The service provider is expected to review (Scoping Phase) the Situation Assessment Report (SAR) for the Orange River Mouth EMP and update the SAR with all pertinent local information in the form of local research reports and management processes. This information is available in the form of maps and reports from various government departments, agencies and research institutions. It is imperative that past and current local knowledge is considered during this phase where possible. The information should be collated in the form of an updated Situation Assessment Report (SAR). This updated SAR should also highlight any major information gaps and make recommendations to address the gaps. An updated geographical description and map of the estuary should be developed identifying different habitats and potential and existing management zones. The map should identify and record all developments within the estuarine functional zone (EFZ). The possible direct impacts of these and other local developments should be noted.

Objective 2: Review and update the Estuary Management Plan (EMP)

The Objective Setting Phase involves the review of the EMP and the update of the management actions of the EMP in consultation with key stakeholders. This process is informed by the Situation Assessment conducted in the Scoping Phase. In accordance with the Protocol, the EMP must include the following components.

7 SCOPE/ EXTENT OF WORK

7.1 Scoping phase is a crucial part of the assignment as stakeholder support in this initiative is essential. The description of the current situation should include information on:

- Description of the legislative instruments that are currently applicable to the effective management of the estuary, including existing and planned management strategies/ plans (i.e. catchment management strategies, IDP, SDF, Coastal Management Programmes, etc.) and their relevance to the proposed management of the estuary;
- Provide a detailed understanding of the structure (abiotic and biotic components), functioning and state of the estuary, including the underlying processes and drivers. This should also include the Reserve for the estuary if it has been determined (or identify the need for determining a reserve) and indicate the present ecological state of the estuary where possible
- Description of socio-economic context (demographic, economic profile, etc.) and the level/s of dependence of local communities on the estuary. This will include assessment of the opportunities and constraints within the ecological system (including potential carrying capacity for activities), taking into account its current and recommended ecological state and limits of acceptable change where available; Conservation Planning (Protected Areas, Ramsar sites etc.).
- Identify the goods and services or human use activities and their impacts or potential impacts on the present ecological state of the estuary
- Current institutional structures governing estuarine issues within the ORM Estuary
- Finally, an assessment of the opportunities and constraints (e.g. legal obligations, constraints of tenure, prior usage, health and safety, natural hazards) should be done to guide the development of the EMP.

The estuary should be represented spatially in the form of a GIS Map indicating the following:

Important biophysical features (open channel area, Macrophyte beds, Invertebrate (prawn) beds, saline and freshwater interfaces etc.); All protected/conservation areas; Areas earmarked for rehabilitation; Land-use and planning provisions of surrounding lands; Infrastructure (e.g. roads, bridges); Cultural & heritage sites; Recreational activities (e.g. swimming, boating etc.); Living resource exploitation (e.g. bait collection, fishing areas, etc.); Mari-culture activities; Riverine and groundwater inflows; Wastewater discharges (i.e. sewage,

industrial waste); Storm-water drains; Solid waste dump sites (current and historical); Water circulation and sediment transport systems

More specifically, the service provider will be required to:

a) Review legislation and how it pertains to the management of environmental threats within the ORM Estuary

Review governmental legislation, e.g. national, provincial, regional and local (i.e. DWAF 1999: Resource Directed Measures for the Protection of Water Resources, National Environmental Management Act, etc.). Requirements, linkages and overlaps with existing management plans and strategies (required by legislation) should be documented, e.g. IDPs and SDF's.

The arrangements for co-operative governance or management should then be assessed in relation to the existing legislation and available capacity. Procedures for the establishment or use of a local forum should be delineated and an optimum management scenario identified in association with local stakeholders.

It is important for the service provider to explain exactly how this legislation impact on this specific estuary (ORM estuary), as the structure and function of individual estuaries, as well as the managerial interaction of the respective governmental departments will vary. An assessment of local by-laws also needs to be included.

b) Determine the goods and services provided by the estuary

Identify the various goods and services provided by the specific estuary (both existing and potential), as well as the means to ensure the continued provision of these services. Where possible, quantify the economic value of the different goods and services. Consult the latest National Biodiversity Assessment addressing estuary classification, prioritisation, protection and rehabilitation

for guidance.

c) Identify issues relating to the exploitation of living resources

Describe the degree to which exploitation of living resources occurs in the estuary and its potential impact on the goods and services provided by the system, such as the levels of consumptive use that can be sustained by fishing, bait harvesting, Mariculture etc. Include the limits to exploitation, such as access and contamination (such as sewage, heavy metals, persistent organic pollutants, etc.).

d) Assess the water quantity and quality requirements

Synthesize all available information on the current freshwater flows (e.g. ground water, river flow and effluent) entering the estuary and the relationship between these and water quality and mouth condition. This synthesis should be integrated with the DWS Reserve and ORASECOM basin-wide Environmental Flows processes for the specific river and estuary, where appropriate.

This can include a desk top assessment of land use practices in the overall catchment, as well as the damage caused by specific land use practices within the estuary itself. This process should be conducted through the Catchment Management Agency (under the National Water Act). The transformation of habitats by the changes in water flow or the impacts of altered or polluted flows on the biota within the estuary (present and historic) should also be addressed.

The findings of existing and future national and regional evaluations done for the DWS and/or DFFE, such as the classification and prioritization of South African estuaries based on health and conservation priority status for the determination of estuarine water reserves must be incorporated.

e) Determine priority restoration actions

Within the specific estuary, identify sections where restoration is required and suggest potential means of rehabilitation. More specifically, the impacts of the different land use practices both in the catchment and estuary should be identified.

Degraded areas, as well as proposed rehabilitation measures, should be highlighted to assist managers with future rehabilitation efforts, through an understanding of the gravity of the various types of degradation. A list of all available degradation profiles and for each specific estuary should be provided. This should include all successful and potential rehabilitation options associated with each type of degradation. In addition, monitoring programmes should be suggested for the rehabilitation of each degradation profile.

f) Advise on the protected area potential

Indicate whether the is suitable for inclusion in the future network of Protected Areas (e.g. MPA, PA, NHS, etc.). Both specific requirements of the listed conservation area type and the associated application procedure that results in declaration should be described.

g) Awareness-raising and public participation/stakeholder involvement

The service provider should develop a generic awareness programme for the estuary as part of the EMP (Objective 2). It should relate to what estuaries are, the environmental roles they play and the goods and services that they provide. The valuation of the roles, goods and services must be addressed. This section must highlight the threats to estuaries, as well as how the implementation of existing legislation and political support can aid the management of these systems.

In addition, processes for involving relevant stakeholders and user groups in estuary management and decision-making should be provided.

7.2 Objective Setting Phase involves the development of the EMP in consultation with key stakeholders and should include information on:

- An executive summary of the Situation Assessment Report (SAR) that highlights the key information that would inform and/or influence the management decisions within the estuary;
- A geographical description and a map of the estuary based on the Estuarine Functional Zone (EFZ) clearly identifying the boundaries of the system.
- The local vision and objectives that give effect to the strategic vision and objectives of the protocol;
- A list of management objectives and activities, that at minimum addresses the following: conservation and utilisation of living and non-living resources (taking into account the priority biodiversity list in the latest National Biodiversity Assessment), social issues, land-use and infrastructure planning and development, water quality and quantity, climate change, education and awareness; compliance and enforcement, and any other activities that will be required to maintain and or improve the condition of the estuary;
- Details of intended spatial zonation of the estuary specifying activities that may or may not take place in different sections of the estuary, and indicating:
 - which organs of state will need to be consulted given the type of zonation that is proposed; and
 - which organs of state will need to enact the relevant laws to implement the proposed zonation (for example if a no-fishing zone is proposed then either DFFE (Fisheries) will be required to consider declaring a closed area or a protected area, respectively);
- A detailed integrated monitoring plan with a list of performance indicators for gauging the progress with respect to achieving the objectives of the EMP; and

- Details of the institutional capacity and arrangements required for managing different elements of the EMP, considering different departmental mandates.
- should identify key research needs for the effective management of the estuary.

The EMP should identify management actions to be addressed by the responsible government departments (as per their legislative mandates). The management actions will be translated into project plans (including human and financial) as an implementation plan within a period of five years.

8 EXPECTED DELIVERABLES/ OUTCOMES

8.1 Below are the deliverables that must be completed for the Scoping Phase:

Situation Assessment Report:

- Consult with all Ministers, MECs, Municipalities and local authorities whose area of responsibility will be affected by the proposed EMP.
- Publish or broadcast the intention to review the EMP.
- Convene stakeholder meetings to introduce the review of the EMP process.
- Prepare a draft Situation Assessment Report (SAR) based on the review.
- Convene stakeholder meetings to present, receive comments and gain approval of the updated SAR.
- Prepare final updated SAR.

NB* Project co-ordination would be carried out within the project team. Monthly reporting, or alternative reporting periods as agreed to with the ORASECOM will be required.

Deliverables:

- Inception report 1 month after the date of the inception meeting.
- Monthly progress report and presentation 1 month after the date of appointment.

- Draft Situational Assessment Report 6 months after the inception meeting
- Final SAR and draft EMP 10 months after the date of inception meeting
- Presentation of findings as required by ORASECOM and DFFE.
- Every report as highlighted above should be accompanied by a presentation.
- All reports must be delivered in hard copy (three original copies each), and in electronic MS Word format to be compatible with the latest Windows operating system, in font Arial 12, and/or flash-drive. All reports must include an executive summary. All supplementary information (including copies of all reference documents and meeting minutes) gathered during the study must be submitted in electronic copy (HDD) with the final report.

9 PERIOD / DURATION OF PROJECT / ASSIGNMENT

- 9.1.1** The project duration is 12 months from the date of appointment of the service provider but must be finalized and invoiced by the end of the determined time frame (12 months).
- 9.1.2** All work is to be carried out in accordance with the time schedule as agreed with the Programme manager.
- 9.1.3** The study should begin on the day of appointment, with a mandatory inception meeting within 2 (two) weeks of appointment hosted by the ORASEOM and DFFE (Oceans and Coasts), to brief the service provider on the project, and to clarify any issues that might not be clear.
- 9.1.4** The progress report should be submitted to the ORASECOM and DFFE (OC) 3 months after the date of appointment.
- 9.1.5** The draft report should be submitted to the ORASECOM and DFFE (OC) 6 months after the date of appointment.
- 9.1.6** Allow a 3 (three) week for comment by the client, following which the final report will be delivered 12 months after the date of appointment.

10 COSTING / COMPREHENSIVE BUDGET

A comprehensive budget must be provided inclusive of all disbursement costs, expenses, and VAT.

11. Project Oversight and Management

The consultant's team will work under direct supervision of the ORASECOM, DFFE and the Department of Water and Sanitation.

12. Composition of the Team

1.2 PERSONNEL REQUIREMENTS

The Consultant/ Consulting team should provide all the below required staff to carry out all the stated tasks and other duties in the project. Consultant shall include a detailed time schedule showing each specific task that will be used as a tracking sheet to meet the project deliverables. Personnel scheduling chart, identifying each individual by name and his discipline, and showing on a Gantt chart the estimated number of man-days of each individual, shall be used on the project.

The Consultant shall also note that civil servants and other staff of the public administration cannot be recruited as experts.

PERSONNEL FOR TASKS

i. Team Leader

Qualifications and skills:

- Written and oral fluency in the English language is essential.
- The Expert must have at least a Master's degree in one of the Natural Science/Coastal Management or related sciences. A PhD qualification would be an added advantage;
- Compulsory registration with South African Council for Natural Scientific Professions (SACNASP) or equivalent as a Professional Natural Scientist (registration certificate or current subscription confirmation must be provided with application) Computer literacy: Competency in word processing and spread- sheet applications is essential with experience with the development and maintenance of databases an added advantage;

Specific professional experience

- The expert should have a minimum of Ten (10) years proven experience in developing environmental management plans (experience in developing the EMP development would be an added advantage);
- Experience in managing projects that rehabilitate degraded estuaries
- Extensive stakeholder engagement;
- Previous experience of working in the ORASECOM Member States, especially the Orange – River Mouth would be desirable.

ii. Environmental Management Specialist

The Consultant should have at least a Bachelor's degree in fields related to Environmental Management. Must have at least 10 years experience working in developing Environmental Management Plans (or EMP);

iii. Stakeholder Engagement Specialist

Responsible for working with communities on their participation in the development of

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environmental management plans. Must have a Bachelor's Degree in one of the Social Sciences with at least five (5) years experience working with communities on similar projects.

iv. Estuarine Specialist

The Consultant must have at least a Bachelor's degree in natural/marine science and/or management or related fields. A Masters degree would be added advantage. Must have at least five (5) years' experience working in the estuarine field. Previous experience developing estuarine management plans would be desirable. Compulsory registration with South African Council for NaturalScientific Professions (SACNASP) as a Professional Natural Scientist (registration certificate or current subscription confirmation must be provided with application)

13. Other Provisions

10.1 Taxes

ORASECOM shall not be liable for any taxes due to Tax Authority/ies in South Africa. The onus is on the Contractor to submit the tax returns and declare all income/monies received from ORASECOM to the tax Authority/ies in South Africa where applicable.

13.1 Travel

The Consultancy Team will be expected to conduct consultations with key role players on the subject matter of the assignment mainly in South Africa and Namibia. The costs of the travel is to be covered under the financial proposal.

14. Submission of the tender

The bidder should submit a separate **Technical and Financial Proposals** clearly detailing total number of days to complete work and daily rates inclusive of all anticipated costs in **South African Rands** during the period of assignment. **The term “all-inclusive” implies that all costs (professional fees, taxes, communications, transport, consumables, VAT etc.) that could be incurred by the consultant in completing the assignment is already factored into the fees submitted in the financial proposal.**



Travel and daily allowance costs should be identified separately in line with allocated consulting days.

Separate Electronic Technical and Financial proposals should be submitted with a subject line clearly titled: “**Consultancy for the review of the Estuarine Management Plan (EMP) for the Orange – Senqu River Mouth Estuary**” through email to Mr Michael Ramaano mike.ramaano@orasecom.org with a copy to lusia.kalipi@orasecom.org and mike.ramaano@gmail.com no later than **1600hrs on 27 September 2023**.

Request for clarifications should be **emailed** to Mr Michael Ramaano, mike.ramaano@orasecom.org, with a copy to Mr Ruwen Pillay, rupillay@dfpe.gov.za, no later than **1600hrs on 15 September 2023**. No telephonic requests for clarification will be permitted.

