REPUBLIC OF RWANDA

Kigali, 11 SEP 2025
Ref N° 2803/SPIU/025

RWANDA TRANSPORT DEVELOPMENT AGENCY
KG 563 St., Queen's Land House
P.O Box 6674
Email: info@rtda.gov.rw
KIGALI

REQUEST FOR EXPRESSION OF INTEREST
(Consulting Services)
RWANDA

BURUNDI-RWANDA INTEGRATED DEVELOPMENT PROJECT
(BRIDEP)
Expression of interest for the study for Assessing Navigable Water Bodies in Rwanda and Develop Inland Water Transport Organization Structure

Transport Sector
Financing Agreement reference: **LOAN No. 2100150044700**
Project ID No.: **P-ZI-K00-179**

The Government of Rwanda has received financing from "the African Development Fund (ADF)" towards the cost of the BURUNDI-RWANDA INTEGRATED DEVELOPMENT PROJECT(BRIDEP), and intends to apply part of the agreed amount for this Loan to cover the payments under the contract for **Study for Assessing Navigable Water Bodies in Rwanda and Develop Inland Water Transport Organization Structure.**
The services included under this project are the consultancy services for the above mentioned study within twelve (12) months duration of services.

The consultant shall conduct the study with due diligence and efficiency and in accordance with sound technical, administrative, financial, and economic practices. The consultant shall carry out all responsibilities related to these tasks, making sure to adhere to the best design practices, produce a final product that meets or exceeds the specified standards, maintains the most economical costs, and fully complies with the governing specifications.

Rwanda Transport Development Agency (RTDA) now invites eligible consultants to indicate their interest in providing these services. Interested consultants must provide information indicating that they are qualified to perform the services (brochures, description of proven similar assignments, proven experience in similar conditions, availability of appropriate skills among staff, managerial organization of the firm, brief description on skills and technology transfer, etc., Consultants may constitute joint-ventures to enhance their chances of qualification.

The detailed Terms of reference (TOR) for the assignment are available on RTDA website https://www.rtda.gov.rw.

Eligibility criteria, establishment of the short-list and the selection procedure shall be in accordance with the African Development Bank's *"Procurement Policy for Bank Group Funded Operations"* dated October, 2015, which is available on the Bank's website at http://www.afdb.org.

Interested consultants may obtain further information at the address below during office hours from 9:00 to 17:00 local time on Monday to Fridays.

Expressions of interest must be delivered to the address below by 03/10/ **2025** at 17:00 Kigali Time and mention "**Study for Assessing Navigable Water Bodies in Rwanda and Develop Inland Water Transport Organization Structure**", electronic submission is also allowed.

Attn: Director General
Rwanda Transport Development Agency/Procurement Unit
KG 563St, Queen's LAND House, 1st Floor
Email: procurement@rtda.gov.rw / info@rtda.gov.rw

Rwanda Transport Development Agency

Imena MUNYAMPENDA
Director General

STUDY FOR ASSESSING NAVIGABLE WATER BODIES IN RWANDA AND DEVELOP INLAND WATER TRANSPORT ORGANIZATION STRUCTURE

Terms of Reference

I. Background

The Government of Rwanda is committed to sustainable development and efficient utilization of natural resources, including water bodies. Inland water transport offers a vital opportunity for both economic growth and improved regional connectivity. In this context, an assessment of navigable water bodies across Rwanda is critical to identifying key areas for development, investment, and conservation. High standards of navigation are fundamental for the safety of vessels, crews, cargoes and for the protection of the environment.

In transportation, water transport system has various benefits:

1) Water transport is among the cheapest modes of transport,

2) It enhances multimodal transport and

3) It supports the regional integration program.

The Government of Rwanda aims to strengthen the position of water transport in the transport system and to facilitate its integration into the multimodal logistic chain. Development of Inland Water Transport with potential of cost-effectiveness and environmental sustainability is an underlying policy direction to achieve this objective.

Furthermore, the current Transport Policy and Strategy and regulatory framework under development, suggest among other activities to:

- Determine standards for navigable waterways and thereby navigable and non-navigable water bodies in accordance with the set standards;
- Classify all navigable water bodies to clearly establish their characteristics and exploitability for transport purposes.
- Align with the country's regulatory environment, institutional capacity, and infrastructure needs to develop inland transport organization structure.

Currently, in most water bodies, water transport activities are informally and traditionally performed with no studied assurance of inexistence of predictable risks and safety remains questionable.

The Government of Rwanda's intends to identify the underlying risk to human life, property and the environment to navigation in Rwandan water bodies and to seek a better basis to allow safe navigation.

Rwanda Transport Development Agency (RTDA) would therefore like to hire a consultancy firm to conduct a study to assess the navigability of Rwandan water bodies at the exclusion of Lake Kivu. The intended study will help RTDA in developing regulations on navigable and non-navigable waterbodies and in classifying navigable water bodies.

1. Objective of the Study

The objective of this assignment is to conduct a comprehensive assessment of navigable water bodies in Rwanda to determine their current status, navigability, and potential for sustainable use. This involves evaluating physical, environmental, economic, and regulatory factors influencing navigation.

The objectives of the assignment are:

1) To define and propose comprehensive technical and operational criteria for navigability, to serve as national standards for assessing and regulating water bodies.

2) To assess all significant water bodies in Rwanda based on the proposed criteria, and classify them as navigable, seasonally navigable, or non-navigable.

3) To map existing and potential navigation routes, assess navigation safety, and propose optimized formalized transport corridors.

4) To evaluate the current infrastructure and safety conditions supporting inland water transport and recommend improvements.

5) To develop an appropriate organizational structure for inland water transport, aligned with Rwanda's institutional and regulatory framework.

6) To identify and propose relevant digital tools and technologies to support navigation safety, route monitoring, and transport planning.

7) To ensure that all findings and recommendations are aligned with the Transport Policy and Strategy, and inform future regulation and investment.

8) Classify the water bodies based on navigability potential, types of vessels suitable, and seasonal variations in water levels.

9) Gather hydrological, geographical, and environmental data relevant to water transport.

10) To assess the potential for developing formal public water transport services and propose priority corridors, service models, and infrastructure requirements that respond to the mobility needs of island and lakeside communities.

11) Evaluate the physical characteristics (depth, width, flow, length, sedimentation, coordinates, seasonal variations) affecting navigability;

2. Scope of Work and Key Activities

The consultant shall undertake a comprehensive assessment of Rwanda's water bodies to identify, classify, and formalize navigable waterways, while proposing institutional, regulatory, and technological frameworks to support safe and efficient inland water transport. In addition to that the study shall apply to Rwanda's water bodies in the table 1 and to others not listed here where it is realized that transportation is being performed. Lake Kivu is excluded from the scope of this study.

SN	Name of Lake/River	Size	Location
1	Lake Cyohoha south	Small Lake	Bordered with Burundi
2	Lake Cyohoha north	Very Small lake	Beside Lake Cyohoha south
3	Lake Rweru	Big lake (But small part within Rwanda)	Bordered with Burundi
4	Lake Nyabugongwe	Small Lake	Beside Burundi Border
5	Lake Mugesera	Big Lake	Southern Province
6	Lake Sake	Small lake	Beside Lake Mugesera
	Lake Birara	Very small lake	Beside Lake Mugesera
7	Lake Gashanga	Very small lake	Beside Lake Mugesera
8	Lake Kidogo	Very small lake	Beside Lake Mugesera
9	Lake Rumira	Very small lake	Beside Lake Mugesera
10	Lake Miravi	Very small lake	Beside Lake Mugesera
11	Lake Kilimbi	Very small lake	Beside Lake Mugesera
12	Lake Gaharwa	Very small lake	Beside Lake Mugesera
13	Lake Mpanga	Small Lake	Close to Akagera national park, beside Tanzania Border
14	Lake Cyambwe	Small lake	Close to Akagera national park, beside

			Tanzania Border
15	Lake Nasho	Very small lake	Close to Akagera national park, beside Tanzania Border
16	Lake Rwakibali	Very small lake	Close to Akagera national park, beside Tanzania Border
17	Lake Ihema	Big Lake	Inside Akagera National park
18	Lake Kivumba	Very small lake	Inside Akagera National park
19	Lake Hago	Very small lake	Inside Akagera National park
20	Lake Mihindi	Very small lake	Inside Akagera National park
21	Lake Rwanyakizinga	Small Lake	Inside Akagera National park
22	Lake Muhazi	Big Lake	Eastern Province, Near Kigali
23	Lake Burera	Big Lake	Northern Province, Near Volcanoes National park
24	Lake Ruhondo	Big Lake	Northern Province, Near Volcanoes National park
25	River Rusizi	Big River	On DRC-Rwanda border
26	River Ruhwa	Long River	On Burundi- Rwanda border
27	River Kanyaru	Long River	On Burundi- Rwanda border
28	River Kibaya	Small River	Eastern Province
29	River Akagera	Big River	Burundi-Tanzania-Rwanda border
30	River Nyabarongo	Big River	Spreading across the country
31	River Akanyaru	Big River	Spreading across eastern-southern province border

The scope of work shall be structured around the following core components and activities:

Phase 1: Context Analysis and Stakeholder Engagement

1. Policy and Regulatory Alignment

Review the current Transport Policy and Strategy and draft legal frameworks related to inland water transport.

- Identify existing standards, mandates, institutional roles, and legal gaps related to the management of water bodies and water transport.
- Ensure that the study's methodology and recommendations are aligned with national priorities and regulatory frameworks.
- Identify necessary legal or policy updates needed to support inland waterway development.

2. Stakeholder Mapping and Initial Consultations

- Identify and engage relevant stakeholders
- Conduct initial consultations to understand local practices, transport needs, challenges, and expectations.
- Use insights from stakeholders to refine field assessment priorities and validation needs.

Phase 2: Standards Development and Assessment

3. Development of Navigability Criteria and Standards

- Review international best practices on navigability standards.
- Define technical, environmental, and operational parameters for water body classification.
- Propose comprehensive national standards for determining navigability (year-round, seasonal, or non-navigable).
- Facilitate a review session for stakeholder validation of the standards.

4. Assessment and Classification of Water Bodies

- Conduct hydrographic and environmental assessments of Rwanda's key lakes, rivers, and reservoirs.
- Apply the navigability criteria to classify each water body.
- Produce digital maps (GIS) of navigability classifications.

Phase 3: Route Safety and Infrastructure Review

5. Navigation and Safety Assessment

- Map existing navigation routes through field observation and GPS tracking.
- Evaluate current and potential routes based on depth, hazards, seasonal variation, and visibility.
- Assess safety practices and emergency preparedness.
- Recommend formalized and optimized safe corridors, with signage, buoys, and communication protocols.

6. Infrastructure and Facilities Assessment

- Inventory existing docks, ports, jetties, quay, landing sites, and related infrastructure.
- Assess technical condition, usage, and alignment with proposed navigable routes.
- Recommend infrastructure upgrades and new investment priorities.

Phase 4: Institutional and Technological Framework

7. Institutional and Organizational Structure Proposal

- Review institutional capacity, mandates, and coordination mechanisms related to water transport.
- Propose a fit-for-purpose inland water transport organizational structure, including roles, responsibilities, and staffing needs.

8. Technology and Innovation

- Identify relevant digital solutions and tools to support navigation, route monitoring, and safety.
- Recommend GPS tools, digital maps, real-time monitoring systems, and early warning mechanisms.
- Develop an integration and capacity-building plan for authorities and operators.

Phase 5: Reporting and Validation

9. Final Reporting and Stakeholder Validation

- Prepare comprehensive final reports including standards, classifications, route maps, infrastructure priorities, institutional proposals, and technological recommendations.
- Organize a validation workshop to present findings to key stakeholders and gather final feedback for refinement.

Phase 6: Public Water Transport Assessment and Planning

The consultant shall carry out a targeted assessment to support the planning and potential development of formal, regulated public water transport services. Activities under this component will include:

1. **Public Transport Demand Analysis**
   - Identify island and lakeside communities with unmet or underserved mobility needs.
   - Estimate potential passenger demand, trip purposes (school, markets, healthcare), and peak travel periods through surveys or local consultation.

2. **Identification of Priority Corridors**
   - Based on navigability data and settlement patterns, identify routes that are most viable for scheduled public transport services.

- Consider distance, population served, road accessibility alternatives, and economic activity.

3. **Public Service Design Guidelines**

- Propose route layouts, service frequency, and vessel types for initial public transport routes.
- Explore different models of service provision (e.g., publicly operated, contracted operator, PPP).
- Recommend safety protocols and boarding procedures for public operations.

4. **Institutional and Regulatory Considerations**
   - Identify the roles of national and local authorities in planning, licensing, fare setting, and monitoring public water transport.
   - Recommend the regulatory tools needed to establish and supervise public water transport operators.

5. **Inclusivity and Accessibility Measures**

- Address specific needs of vulnerable groups (women, children, people with disabilities) in the design and regulation of public water services.
- Recommend low-cost fare options or subsidies where relevant.

6. **The tasks to be carried out by the Consultant under this study shall also include the following:**

- Develop and propose criteria/standards to be used to determine the navigability of water bodies basing on international standards and best practices. The said standards shall consider among others water composition, size of the water body, water flow characteristics such as currents, waves and erosion conditions, depth requirements considering seasonal variations, existence of fauna and flora in the water bodies, sub-surface soil characteristics, other climatic features of importance (e.g. wind, floods, etc).

- Identifying where there is no significant adverse ecological impact (In order to determine whether an impact is significant within specific water bodies, it may help to refer back to those quality elements).

These are as follows:

- **Hydrological regime** (e.g.: Quantity and dynamics of water flow and Connection to ground water bodies);
- **Morphological conditions** (e.g.: Depth and width variation, Quantity, structure and substrate of the bed and Structure of the riparian zone or inter-tidal zone);
- **River continuity**;
- **Tidal regime** (e.g.: Freshwater flow, Wave exposure);

- Assess the existing infrastructure (ports, jetties, docking facilities, etc.) and identify gaps.
- Identify the infrastructural needs and environmental implications associated with water transport development.
- Assess navigable waters bodies, develop sustainable partnerships for assessments and providing feasible assessment methodologies that can be adapted and implemented for all navigable water bodies.
- Investigate and propose a new methodology for assessing the reliability of navigable water bodies;
- Collect and analyze data on existing water bodies, including rivers, lakes, and reservoirs, focusing on navigability, depth, width, seasonal variations, and water levels.
- Recommendations for dredging and port layout design.
- Identify potential environmental risks and propose mitigation measures, taking into consideration biodiversity, aquatic ecosystems, and water quality.
- Evaluate the need for additional infrastructure or rehabilitation of existing infrastructure to support water transport.
- Analyze the potential socio-economic benefits of developing navigable water transport (job creation, trade facilitation, fishing, tourism, and local livelihoods, etc.)
- Review regulatory frameworks and governance mechanisms affecting navigation and develop a new approach.
- Provide recommendations for the development and management of navigable water bodies.
- Examine environmental and ecological conditions, including water quality and biodiversity impacts.
- Ensuring that records and databases are maintained and updated.
- Mark water bodies in accordance with relevant laws and regulations as well as the findings of the study, to show water bodies that are navigable, navigable under conditions and non-navigable water bodies to be prohibited from navigation.
- Conduct the risk analysis and provide mitigations measures as well as social and environmental assessment for eventual navigation in each specific water body (being navigable or not).

- Identify and test essential controls within navigational procedures.
- Identify additional training related to the tasks for the government institutional staff.

3. Expected Results of the Study

By the end of the assignment, the consultant is expected to deliver the following tangible results:

1. National Standards for Navigability

- A comprehensive set of **navigability criteria and classification standards** developed, tailored to Rwanda's context and aligned with international best practices.
- Identify the Water-level recordings (e.g.: Tidal variations and Depth references)
- These standards will define physical, environmental, and operational thresholds to determine whether a water body is:
    - Navigable year-round
    - Seasonally navigable
    - Non-navigable

2. Classification and Mapping of Water Bodies

- All assessed water bodies (rivers, lakes, reservoirs) classified using the developed standards.
- Detailed **GIS-based maps** indicating the navigability status of each water body, with supporting technical documentation (The map should be accompanied by a description entailing the geographical location of each water body studied and the district (s) it belongs to).
- Database of classified water bodies with key characteristics (depth, width, obstructions, seasonal variation, etc.).

3. Navigation Route Mapping and Safety Analysis

- Mapped and documented existing navigation routes used by current operators (including informal routes).
- Assessment of navigability and safety conditions of both existing, potential routes and types of vessels in relation to size or tonnage, suitable to navigate in

each water body found navigable or potentially navigable shall be recommended to inform further developments.

- Identification of high-risk areas and recommended **formalized, optimized navigation corridors**.
- Proposed **safety enhancements**, such as route signage, buoys, operator protocols, and emergency response measures.

4. Infrastructure Assessment Report

- Inventory and technical assessment of existing inland water transport infrastructure (ports, dock, quays, jetties, etc.).
- Identification of infrastructure gaps and a **prioritized list of infrastructure investments** needed to support navigable routes.
- A proposed framework for launching and regulating public water transport services, including priority corridors, infrastructure requirements, operating models, and institutional responsibilities.

5. Institutional and Organizational Framework Proposal

- A proposed **institutional and organizational model** for inland water transport governance.
- Clearly defined roles, responsibilities, and coordination mechanisms between public institutions.
- Institutional capacity needs and recommendations for operationalizing the proposed structure.

6. Technology and Innovation Recommendations

- A tailored **technology roadmap** for improving inland water transport, including:
    - Navigation and route tracking tools (GPS, mobile apps)
    - Digital route maps and real-time monitoring systems
    - Early warning and hazard alerts
    - Conducted a bathymetric survey using advanced equipment such as multi - beam or single-beam echo sounders, GPS, and motion sensors to describe the physical characteristics of the bottom of a water body;
    - Developed navigation charts for all navigable water bodies across the country.

- Feasibility analysis and phased implementation plan.

7. Policy and Regulatory Alignment Matrix

- A clear assessment of how the study's outputs align with the national Transport Policy and Strategy.
- Recommendations for any necessary legal or regulatory reforms to support waterway classification, management, and enforcement.
- Propose a strategic action plan to develop, manage, and promote water transport in Rwanda.

8. Stakeholder Engagement and Validation Report

- Summary of consultations, stakeholder inputs, and validation outcomes.
- Documentation of stakeholder consensus around proposed standards, routes, institutional structure, and investment priorities.

9. Final Integrated Report

- A professionally compiled and formatted reports including:
    - Navigability standards
    - Classified maps and route assessments
    - Infrastructure and institutional proposals
    - Safety and technology recommendations
- Accompanied by all digital outputs (GIS layers, datasets, presentation materials) and delivered in both PDF and editable formats.

4. Economic and Financial Analysis

The consultant shall conduct economic and financial analyses in line with both MINECOFIN's guidelines for the preparation and assessment of navigable water bodies study reports of projects at the Central Government level in Rwanda accessible at https://www.minecofin.gov.rw/index.php?eID=dumpFile&t=f&f=19988&token=eea0f06c4caeda639de6712c5b10edfd2b080add and section 3.2 of the RDB's Public Private Partnerships Guidelines accessible at https://rdb.rw/wp-content/uploads/2018/08/PPP-Guidelines.pdf

5. Environmental and Social Impact Assessment

The consultant shall carry out an environmental and social impact assessment of the designed system following the African Development Bank Group Environmental and

Social Framework, IFC Performance Standards, and Rwanda's legal & regulatory framework related to environmental and social impact assessment including RDB Certificate and Authorization from Rwanda Water Board Resource(RWB) in the area where all assessment will be applied.

6. Obligations of the Consultant

The Consultant shall perform the Assignment with due care, efficiency, and diligence in accordance with the best professional practice and in full compliance with these Terms of Reference. The Consultant shall be responsible for the collection, analysis and interpretation of data irrespective of its source. The Consultant shall also be responsible for the conclusions drawn, the recommendations made, and all the Assignment outputs as stipulated in these Terms of Reference.

7. Inspection of Data, Documents and Software by the Client

The Consultant shall make available for the Client's inspection all important data, documents and software used in the performance of the Consultant's Assignment obligations. The documents to be availed for inspection shall include reports obtained from other Government Ministries and agencies, ordinance maps, aerial photographs and satellite imagery. The Consultant shall include in the Assignment deliverables all such data and documents as the Client shall reasonably request.

8. Confidentiality of Information and Data

The Consultant shall treat all documentation, information and data obtained in connection with the Assignment as confidential, and shall not, save in so far as may be necessary for the purposes of performance thereof, publish or disclose any particulars of the Assignment without the written consent of the Client.

9. Facilities and Services for Performing the Assignment

Except as stipulated in these Terms of Reference under "Obligations of the Client", the Consultant shall be responsible for all the facilities and services necessary for the full performance of the Assignment. These facilities and services shall include office/living accommodation, transport, equipment, surveys, investigations, testing, secretarial services, report reproduction, etc.

10. Handover of Assets Paid for by the Client

All assets used by the Consultant to perform its Assignment obligations which will be paid for by the Client shall be handed over to the Client upon completion of the Assignment.

11. Working Programs and Deliverables

The working program, deliverables and key milestones representing the completion of the assignment are outlined in the following sections.

11.1. Working program

The consultant shall organize the services in a logical order in accordance with the activity schedule of the study and shall make sure that the staff assigned to the study is at all times conversant with the necessary specializations for the perfect execution of the services. The work schedule for key activities, framework for achieving specific milestones and deliverables as specified in the ToRs should be obligatory to the consultant. However, the Consultant shall submit a more detailed working program outlining schedule for each and every activity for the whole assignment for the approval by the Client. The work plan shall be updated monthly.

11.2. Duration and Deliverables

The proposed duration for the assignment is twelve (12 months) Calendar months from the date of contract signature, assuming no more than two weeks for each review and comments period between deliverables. Each payment would be in cumulative percentage based on satisfactory receipt of an acceptable deliverable. The main deliverables after signing the contract shall be as captured in Table 3 below:

Table 1. Study deliverables and proposed schedule

No.	Deliverable	Schedule of submission
1	**Inception report** which shall contain final and detailed methodology, including any questionnaires, survey forms, test methods, analytical tools, software, and strategy for conducting the study. The inception report shall further contain proposal of the criteria/standards to be used to determine the navigability of water bodies as detailed in task n°1. The inception report shall finally summarize the preliminary observation on the determinants of the study and shall give the status of	Within maximum of 2-weeks after signing the contract.

	mobilization of the staff assigned to the study, a revised program of execution of the study as well as the statement of the particular studies that shall have to be envisaged. The inception report shall be submitted to the Client.	
2.	Stakeholders' workshop to validate the inception report. The Consultant shall be required to make presentation to stakeholders for validation.	Within maximum of 2-weeks after submission of the inception report.
3.	**Interim report** which shall constitute summary of the accomplished work and the actual progress made while undertaking various tasks. The interim report shall importantly contain **gathered data** against set navigability criteria, test and assessment findings for each assessed water body. The interim report shall also reveal the number of experts employed and their duration of services, the results and recommendations as well as the program of work for coming months. Interim report shall further identify the problems encountered and those that are liable to affect the implementation of the assignment, the delay that could result from it, the reasons and the attenuation measures. The interim report shall be submitted to the Client.	Within maximum of 3-weeks after approval of inception report. However, a monthly progress report shall be submitted.
4.	Stakeholder's workshop to validate the interim report. The Consultant shall be required to make presentation to stakeholders for validation.	Within maximum of 1-week after submission of the interim report.
5.	**Draft final report** which shall constitute a well-structured and comprehensive document containing the summary of collected data, their analysis, findings and recommendations for each of the tasks assigned to the Consultant. The draft final report will importantly and clearly show the criteria used to determine the navigability of water bodies, the list of water bodies that are navigable, ones that can be navigable under defined conditions, and those which are non-navigable. The draft final report shall be submitted to the Client.	Within maximum of 2-weeks after approval of interim report.

6.	Stakeholders' workshop to validate the draft final report. The Consultant shall be required to make presentation to stakeholders for validation.	Within maximum of 1-week after submission of the draft final report.
7.	The consultant shall submit a **final report and data** after the completion of the work. After having taken into account the corrections and amendments highlighted by the Client and stakeholders in the draft final report, the Consultant shall edit and submit the final report. The Client reserves the rights to make additional comments while not satisfied with the submitted output. The final report shall be submitted in English to the Client. All data shall also be provided directly to the Client in well-organized shape files.	Within maximum of 1-week after approval of draft final report.

11.3. Payment Schedule

S/N	Milestone	%age
1	Submission and approval of Inception Report	15%
2	Submission and approval of Interim report	20%
3	Submission and approval of Draft Final Report	30%
4	Submission and approval of Final Report	35%

Note:

- All deliverables shall be evaluated and approved by the Technical Evaluation Committee, composed of experts nominated from stakeholder institutions, in accordance with the scope of terms of reference.
- Any delay on the part of the consultant shall be penalized in accordance with Rwanda Public Procurement Law.
- The consultant shall provide all reports in both soft and hard form as follows:

- Hard and soft copies of inception report;
- Hard and soft copies of interim reports;
- Hard and soft copies of draft final report;
- Hard and soft copies of final report;
- Clean shape files presenting all data used in the final report.

- Payments are subject to approval of the report/reports against each deliverable

12. Methodology

The methodology to be used for this assignment will be, but not limited to:

- ✓ Data collection,
- ✓ Laboratory testing
- ✓ Data analysis
- ✓ Reports

13. Data Collection

13.1. Literature survey of related documents concerning the navigability criteria

The consultant shall draw inspiration from the international standards and best practices to define the navigability criteria. Other information that can contribute to the success of the study, like information related to accidents or incidents ever occurred in the surveyed water body may be gathered in advance from literature.

13.1.1. Field survey

The target water bodies should be surveyed using appropriate tools and testing methods to collect data as per defined navigability criteria.

13.1.2. Locally conducted interviews

Based on questions prepared beforehand for relevant institutions such as Rwanda National Police and, water transport operators, local authorities as well as inhabitants neighboring the water body, the consultant shall collect information related to accidents or incidents ever occurred in the surveyed water body or any other information relevant to the navigability of the water body.

13.2. Data analysis

Data analysis will be done by using the appropriate tools as will be stated in the inception report.

13.3. Reports

The deliverables of the assignment will be submitted to the client through well-structured reports as stated in section IV of the present document.

14. Qualification and experience of key personnel

The assignment will be output based. The consultant will be expected to mobilize all the resource persons required to successfully and timely complete the work. The consultants' team will at the minimum include the skills, experience and competencies as in Table 4:

Table 2. Qualification and experience of key personnel

No.	Position	Qualification	Minimum experience
1	Team Leader & Marine safety specialist or Navigation expert.	Master's degree /Bachelor's holders in Maritime Transport related field with experience as team leader in at least 3 similar studies and conversant with Maritime Transport and Safety	8 years for Master's degree holders 10 years for Bachelor's degree holders in the mentioned field. At least he /She should have been Team Leader on 3 projects related to the assignment for a master's degree holders while for a bachelor's degree holders at least 5 projects as a Team Leader. He/she must be registered membership in a relevant professional organization. Have worked in Sub-Saharan region(Africa)
2	Hydrologist, River Navigation Expert or Water Resources Specialist	Master's Degree/ Bachelor's degree in river hydraulics/ Hydrology Engineering / Water Resources Engineering or its	Master's degree holders with at least 8 years of general experience 10 in hydrological/Hydraulic investigations in the context of planning and designing navigation systems on rivers, hydraulic engineering including river navigation,

No.	Position	Qualification	Minimum experience
		equivalent;	morphology and sediment transport analysis, such as siltation, scour and dredging. Should have been involved for at least 3 projects related to river navigation, maintenance dredging issues, port infrastructure & development, marine and cargo handling and logistics management/Master's degree holders. Bachelor's degree holders with at least 10 years of general experience and having performed at least 5 projects related to hydrological/Hydraulic investigations in the context of planning and designing navigation systems on rivers, hydraulic engineering including river navigation, morphology and sediment transport analysis, such as siltation, scour and dredging. He/she must be registered membership in a relevant professional organization. Have worked in Sub-Saharan region(Africa)
3	Environmentalist	Master's degree/Bachelor's degree in environmental management or related discipline. Postgraduate courses in environment management issues would be an added advantage.	Master's degree shall have at least 8 years of general experience in environmental impact assessment of transport sector projects including preparation of Resettlement Action Plans (RAP) and at least worked on at least 3 projects related to environmental studies. Bachelor's degree holders with at least 10 years of general experience in the above mentioned experience. At least 5 years of general experience in experience in environmental impact assessment of transport sector projects including preparation of Resettlement Action Plans (RAP) and at least worked on at least 5 projects related to environmental

No.	Position	Qualification	Minimum experience
			studies. He/she registered membership in a relevant professional organization. Have worked in Sub-Saharan region(Africa)
4	GIS specialist	Master's degree/ Bachelor's degree in GIS, Geography, or Remote Sensing.	Master's degree with at least 5 years of general experience in map production in related tasks mentioned above and have worked on at least 3 infrastructure projects. Bachelor's degree with 8 years of general experience at least have worked on at least 5 infrastructure projects. Proficiency in GIS, and satellite imagery analysis. He/she registered membership in a relevant professional organization. Have worked in Sub-Saharan region(Africa)
5	Surveyor	Bachelor's degree in Surveying or geomatics.	Bachelor's degree with at least 8 years of general experience and worked on at least 3 related projects. He/she should have knowledge in maritime environment using surveying instruments applied in and related software. Having performed at least 2 Bathymetric survey. He/she registered membership in a relevant professional organization. Have worked in Sub-Saharan region(Africa)

The experts should demonstrate excellent information and data collection, analysis and reporting skills. They should be fluent in spoken and written English, the knowledge of French and Kinyarwanda among of the consultants being an added advantage.

15. Time Input of Key Personnel

The consultant shall propose a tentative time allocation for each key expert as guided in the attached time sheet and improve where necessary for proper and efficient execution of the assignment.

Position	Input	Unit
Team Leader & Marine safety specialist or Navigation expert.	12	Man-Month
Hydrologist, River Navigation Expert or Water Resources Specialist	6	Man-Month
Environmental Specialist & Social Safeguard	6	Man-Month
GIS Specialist	4	Man- Month
Surveyor	4	Man-Month

The consultant shall propose the necessary support staff required to effectively deliver the assignment on time.

16. Coordination

The study will be coordinated by the Client. All communications including the reports and the workshops will be in English.

17. Logistics

The Client will bear the costs directly associated with the organization of validation workshops. All other logistics costs including travels will be borne by the consultant.