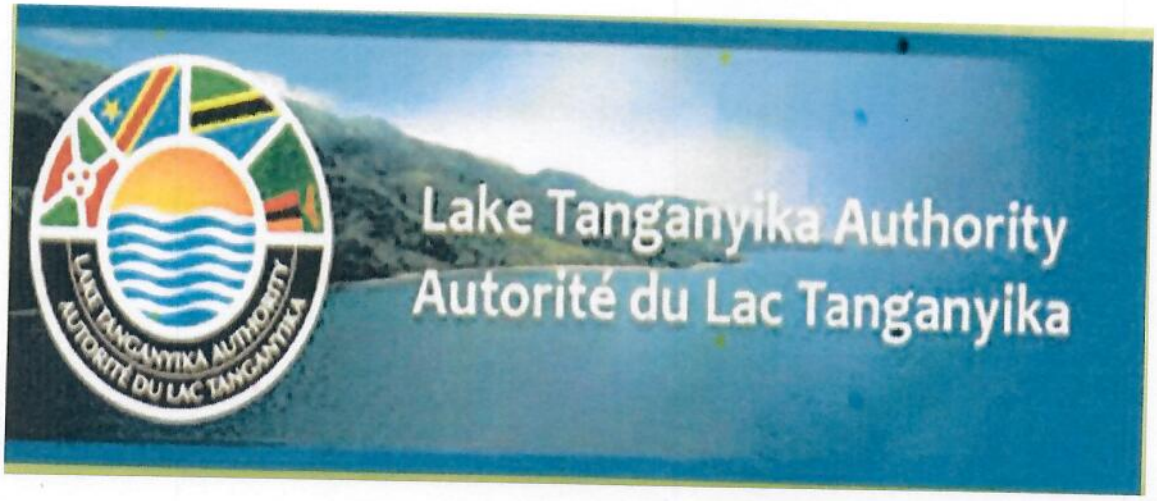
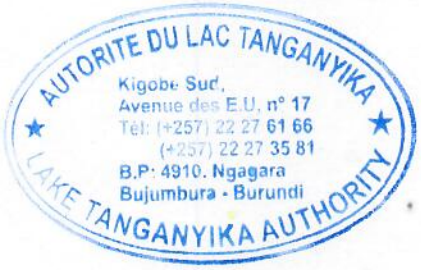


TERMS OF REFERENCE (ToRs) FOR THE FEASIBILITY STUDY ON THE DREDGING OF THE LUKUGA RIVER



0. INTRODUCTION

Lake Tanganyika lies at an altitude of around 773 m above sea level, in the western part of the Albertine Rift Valley. With a length of 677 km, an average width of 50 km (72 km at its widest point), a surface area of 32,900 km2, a coastline of 1,828 km and a maximum depth of 1,471 m, it is the second largest lake in Africa after Lake Victoria, the second deepest lake in the world after Lake Baikal in Russia and the longest freshwater lake in the world.

Lake Tanganyika is shared by four riparian countries: the Democratic Republic of Congo (DRC) (45%), Tanzania (41%), Burundi (8%), and Zambia (6%). Except for parts of the eastern and northern shores, the lake is bordered by the steep sides of the rift valley, especially on its western edge, which rises 2,000 meters above sea level. This confines the lake's catchment area to 231,000 km². The watershed extends across the territory of five countries: Tanzania (67%), DRC (16%), Zambia (7%), Burundi (6%), and Rwanda (4%).

Two main rivers flow into Lake Tanganyika: the Rusizi River, which enters the northern part of the lake from Lake Kivu, and the Malagarazi River, which flows into the eastern side of the lake. There is only one major outflow, the Lukuga river, which flows into the Congo river basin.

Regarding water level variations in Lake Tanganyika, based on observational data available from 1846 to the present and previously published modeling studies (Serrat-Capdevila et al., 2018; Otieno Odongo & Partners, 2013), all these studies and observations show that Lake Tanganyika has experienced fluctuations in its water level over different periods. For example, the highest recorded lake level was 783.3 m in 1878; the second highest was 777.1 m in 1964, while in 2024, the lake level was 777.32 m.

These water level fluctuations in Lake Tanganyika have harmful consequences for the communities living along its shores, including the destruction and flooding of infrastructure and public property, as well as deterioration in water quality.

1. CONTEXT AND JUSTIFICATION

The Lukuga River is the only outflow of Lake Tanganyika that can influence the lake's water level and serves as a significant fluvial axis in the region. The Lukuga River is located in the Democratic Republic of Congo. It is the outflow of Lake Tanganyika, flowing for about 350 km to join the Lualaba River, the upper section of the Congo River. Its source is located on the Katanga Plateau near Musofi and plays major economic, ecological, and social roles. However, silting, sediment accumulation, and the reduction of the lake's draft depth have decreased its navigability, caused recurrent flooding, and degraded aquatic ecosystems.

In this context, a technical, economic, environmental, and social feasibility study for the dredging of the Lukuga River is necessary to inform decision-makers and address the dramatic rise in the water level of Lake Tanganyika.

In 2024, following the spectacular rise in the water levels of Lake Tanganyika, which caused a great many material damages and loss of human life, an extraordinary meeting of the Lake Tanganyika Authority Conference of Ministers was held on 3rd October 2024 to specifically address this problem. At the end of this meeting, studies for the dredging of the Lukuga River were recommended as one of the priority actions to be carried out in the short term.

It is therefore in this particular context that this work is being carried out.

2. OVERALL OBJECTIVE

To carry out a comprehensive feasibility study to assess the relevance, viability, impacts, and implementation arrangements of the Lukuga River dredging project, and to determine its impact on the significant rise in the level of Lake Tanganyika.

3. SPECIFIC OBJECTIVES

- Assess the current state of the river (hydrology, bathymetry, sediments, current uses).
- Identify priority areas for dredging.
- Propose suitable technical dredging options.
- Assess the environmental and social impacts (preliminary Environmental Impact Assessment).
- Draw up a cost-benefit analysis and a financing plan.
- Propose an implementation schedule with budget estimates.

4. EXPECTED RESULTS

- Hydromorphological and ecological diagnostic report;
- Updated bathymetric map;
- Analysis of dredging options (techniques and equipment);
- Preliminary environmental and social impact assessment (Environmental and Social Management Framework);
- Economic and financial feasibility study report;
- Project implementation plan for the dredging operation.

5. PROPOSED METHODOLOGY

The study must combine:

- Fieldwork (topographic and bathymetric surveys, sediment sampling);
- Literature review (historical data, previous studies);
- Hydrodynamic modeling, if necessary;
- Socio-economic surveys of lakeside communities;
- Stakeholder consultations.

6. DELIVERABLES

- Inception report and methodologie;
- Interim report (diagnostic and preliminary analysis);

- Final comprehensive report with technical annexes, maps, and data;
- Report presentation and executive summaries both in French and English.

7. DURATION OF THE ASSIGNMENT

The assignment must be completed within a period of two (2) months from the effective start date (contract signature).

8. PROFILE OF THE EXPERT OR CONSULTING FIRM

The consultant is responsible for assembling their team to carry out the task and for adjusting team composition as needed. The team must reflect the required specialties and competencies necessary for the successful execution of the assignment.

The service provider must have:

- Proven experience of 10 years in river hydraulic and dredging studies;
- A multidisciplinary team: hydrologist (minimum 5 years' experience), hydraulic engineer (5 years), environmental expert (5 years), and socio-economist (5 years);
- Knowledge of the local context is an asset.

9. MONITORING AND VALIDATION ARRANGEMENTS

A technical committee of monitoring experts will be set up by the Lake Tanganyika Authority to validate each stage and deliverable of the study. Meetings will be held whenever necessary to better supervise and guide the work.

10. TECHNICAL AND FINANCIAL PROPOSALS

The consultant must submit a technical and financial proposal to the Lake Tanganyika Authority Secretariat. The document must not exceed 20 pages and must include:

A) The technical proposal must contain or indicate:

1. A cover letter;
2. The methodological approach for carrying out the assignment to achieve the expected results, including a brief explanation;
3. A work plan detailing the field activity schedule, dates for meetings (virtual or physical), and submission of the final report, all within a 60-day period;
4. A list of proposed experts and their CVs;
5. An implementation schedule showing methodology and a sequential work plan with activity durations or corresponding dates.

B) The financial proposal must indicate:

- The total cost of the assignment in USD (all taxes included);
- Payment terms (preferably in 3 installments);

- The total allocated budget for this activity is USD 30,000 (THIRTY THOUSAND US DOLLARS).

All activities under this assignment must remain within this budget.

11. SUBMISSION OF PROPOSALS

Your proposal should be sent to the Executive Director of Lake Tanganyika Authority Secretariat via his personal assistant, Ms. Christelle Nijimbere, at the email address: christelle.nijimbere@lta.alt.org , with a copy to the LTA Directorate of Environment at: irnkina@yahoo.fr

12. TENDER TIMELINE

Activity	Date
Publication of Terms of Reference	12th June 2025
Deadline for proposal submissions (4 pm)	26th June 2025
Review and selection of proposals	30th June 2025
Contract signing	02nd July 2025
Submission of final report	02nd September 2025

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