



# TANZANIA PORTS AUTHORITY

## CONSULTANCY SERVICES FOR FEASIBILITY STUDY, PRELIMINARY ENGINEERING DESIGN, DETAILED ENGINEERING DESIGN, PREPARATION OF THE TENDER DOCUMENTS AND WORKS SUPERVISION FOR STRENGTHENING AND DEEPENING OF BERTHS 8-11 AT DAR ES SALAAM PORT

### REQUEST FOR EXPRESSIONS OF INTEREST (CONSULTING SERVICES – FIRMS SELECTION)

**COUNTRY:** TANZANIA

**NAME OF PROJECT:** Dar-es-Salaam Gateway Maritime Project

Project No.: P150496

Credit No.: [IDA-61170](#)

**Reference No.** TZ-TPA-14262-CS-QCBS

The Tanzania Ports Authority has secured credit from the World Bank towards the cost of the Dar-es-Salaam Gateway Maritime Project, and intends to apply part of the proceeds for consulting services.

The consulting services ("the Services") include provision of technical, financial and environmental feasibility assessment on the most suitable method of strengthening and deepening of berths 8 - 11 from the current level of approximately 11m to 15.5m below CD. To achieve this, the consultant shall provide a detailed assessment of technical, economic and financial viability for the rehabilitation and strengthening berths 8-11, which are currently operating as a container terminal.

The assignment covers feasibility study including preliminary design, detailed engineering designs, preparation of tender documents (Phase I & II) and works supervision (Phase III) for modernization and expansion of Berths 8-11 and container yard. This assignment will require an estimated maximum seventy five (75) man months for phase I & Phase II and maximum of sixty five (65) man months for Phase III. The assignment is expected to be completed in 48 months with Phase I lasting 8 months, phase II 4 months and phase III 36 months, where 24 will be for supervision of works and 12 months for defects liability.

The specific objectives of the consultancy services have been detailed in the TOR which can be accessed through the TPA website:

<https://www.ports.go.tz/index.php/en/tpa-media/procurements/current-tenders>

The Tanzania Ports Authority now invites eligible consulting firms ("Consultants") to express their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. The shortlisting criteria are:

1. The firm should have been in similar business for at least 10 years

2. The firm should have managed 2 contracts of at least 1million USD in the last ten years
3. The firm should have done at least 2 similar assignments in the last five years in the Sub Saharan African Region.
4. The firm should indicate availability of technical staff for the assignment, as detailed in the ToR.

**Note: Key experts will not be evaluated at the shortlisting stage.**

The attention of interested Consultants is drawn to paragraph 1.9 of the World Bank's Guidelines: Selection and Employment of Consultants [under IBRD Loans and IDA Credits & Grants] by World Bank Borrowers, January 2011, Revised July 2014 ("Consultant Guidelines"), setting forth the World Bank's policy on conflict of interest.

Consultants may associate with other firms in the form of a joint venture or a sub consultancy to enhance their qualifications but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

A Consultant will be selected in accordance with the Quality and Cost Based Selection (QCBS) method set out in the Consultant Guidelines.

Further information can be obtained at the address below during office hours i.e. 1000 to 1600 hours from Monday to Friday except on public holidays.

The office of the Director of Procurement & Contracts, Tanzania Ports Authority, One Stop Centre Building along Sokoine Drive, DAR ES SALAAM –Tanzania, Tel No +255-22-2111315, Fax +255-22-2112678, e-mail: dpc@ports.go.tz

Expressions of interest must be delivered in a written form to the address below (in person, or by mail, or by fax, or by e-mail) by 18<sup>th</sup> September 2019 at or before 10:00am Tanzanian time.

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TANZANIA PORTS AUTHORITY

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## **TANZANIA PORTS AUTHORITY**

### **TERMS OF REFERENCE (TOR) FOR**

### **FEASIBILITY STUDY, PRELIMINARY ENGINEERING DESIGN, DETAILED ENGINEERING DESIGN, PREPARATION OF THE TENDER DOCUMENTS AND WORKS SUPERVISION FOR STRENGTHENING AND DEEPENING OF BERTHS 8-11 AT DAR ES SALAAM PORT**

#### **1.0 INTRODUCTION**

- 1.1 Tanzania Ports Authority (TPA) was established by the Act of Parliament No. 17 of 2004. The roles of TPA as provided in the Act are to develop, manage, promote and operate ports in Tanzania.
- 1.2 Dar es Salaam is the principal port in Tanzania and handles over 90% of all import and export volumes for the domestic and transit markets (Malawi, Zambia, Democratic Republic of Congo, Burundi, Rwanda and Uganda). Port facilities are developed on the western side of the harbour and include 11 berths of which 4 are dedicated to container operations and 7 are for general cargo. Other facilities include the Kurasini Oil Jetties (KoJ) and the Single Point Mooring (SPM) for handling liquid bulk cargo and the Malindi/Lighter wharves used for the coastal trade.
- 1.3 Cargo traffic for the port has been constantly increasing reaching 14,863,273 tons in 2017/18 from 7,795,044 tons handled in 2013/14, reflecting an average growth of 6.2% annually.
- 1.4 During financial year 2018/2019, TPA has set aside funds to conduct a feasibility study, preliminary engineering designs, detailed engineering designs, preparation of tender documents and supervision of works for deepening and strengthening of berths 8-11 to improve handling capacity of the container traffic at Dar es Salaam port.
- 1.5 In view of this, TPA intends to procure a consultant to undertake feasibility study, preliminary engineering designs, detailed engineering designs, preparation of tender documents and supervision of works for deepening and strengthening of berths 8-11 at the Port of Dar es Salaam in order to increase handling capacity and operational efficiency.

1.6 Upon hiring the consultant, TPA shall sign a contract with the consultant to provide the consultancy services to undertake a feasibility study, preliminary engineering designs, detailed engineering designs, preparation of tender documents and supervision of works for deepening and strengthening of berths 8-11 project.

## **2.0 DESCRIPTION OF THE PROJECT**

2.1 In 2008, Tanzania Ports Authority (TPA) commissioned the consulting firm Royal Haskoning to prepare a 20-year Ports Master Plan (PMP) covering all coastal and lake ports of Tanzania to guide development of port infrastructure in the country.

2.2 The PMP among other things recommended the deepening and strengthening of berths at Dar es Salaam port to increase capacity and operational efficiency by enabling the port to handle panamax vessels.

2.3 The container terminal (berths 8-11) is currently operated by private operator Tanzania International Container Terminal Services Ltd (TICTS), a subsidiary of Hutchison Port Holdings Limited. In 2017/18 they handled a total of 535,525 TEUs, equivalent to 77% while the General Cargo operated by TPA handled 160,465 TEUs which is equivalent to 23% of the total container throughput of the port.

2.4 According to three different studies that have been conducted (Ports Master Plan by Royal Haskoning, Updating of Cargo Traffic by Sheilla and Business Development Case by MTBS), container traffic is expected to reach 2.5 million TEUs in 2032.

2.5 To provide for growth in container trade, TPA plans to develop an additional container terminal (berths 12-15) on the western side of the port. This project will also include deepening and possible widening of the entrance and all navigation channels within the port up-to the site of the new berths. The entrance and navigation channels will be designed to accommodate full size Post Panamax container vessels.

2.6 Accordingly, Tanzania Ports Authority plans to engage consultants to investigate the most efficient option to deepen and strengthen container terminal (berths 8-11) with the view of increasing its capacity to handle full size Post Panamax container vessels to cater for anticipated container traffic.

2.7 TPA and its development partners also favour and work to build capacity within Tanzania Ports Authority and around national consulting firms at large. In this regard, the consultants shall build meaningful partnerships with counterpart staff within TPA. Moreover, and where possible, consultants should involve/associate with national consultancy firms in this assignment.

- 2.8 TPA will allocate two dedicated staff members as counterpart staff; The Consultant should outline how they intend to involve the counterpart staff in their assignment and include necessary expenses for these counterpart staff (for travel allowances, training etc. as required) in their calculations, and in their proposal.

### **3.0 OBJECTIVE OF THE CONSULTANCY SERVICES ASSIGNMENT**

#### **3.1 General Objective of the Consultancy Services**

- 3.1.1 The general objective of the Consultancy services is to provide a technical, financial and environmental feasibility assessment on the most suitable method of strengthening and deepening of berths 8-11 from the current level of approximately 11m to 15.5m below CD. To achieve this, the consultant shall provide a detailed assessment of technical, economic and financial viability for the rehabilitation and strengthening berths 8-11, which are currently operating as a container terminal.
- 3.1.2 As berths 8 - 11 are currently operated by TICTS, it is mandatory, to obtain permits to access the study area from and in cooperation with the operator TICTS. All investigations at berths 8-11 and Container Terminal must be conducted in a manner that keeps disruptions to TICTS (and TPA) operations to a minimum level. It is of utmost importance to involve TICTS from the beginning of the investigations in areas of information and decisions and to involve them in the discussions of proceedings and results. It is furthermore a substantial part of the assignment to initiate, maintain and moderate communication between TICTS and TPA, concerning the future design and operation of the berths 8-11, and the transition to ensure no disruption whilst works are ongoing.
- 3.1.3 During Implementation of modernization works of the berths 8-11, it is envisaged that TICTS operations will be relocated to an alternative location within the TPA port premises. The consultant is expected to advise on the most feasible way of relocating operations at berth 8-11 with a minimum interruption on both operations of TICTS and TPA. The assessment of the logistics of the temporary relocation of TICTS and their operations, during the execution of the modernization works at berth 8-11, and the development of a detailed relocation arrangement and action plan forms a significant part of this assignment.

#### **3.2 Specific Objectives of the Consultancy Services**

The specific objectives of the consultancy services are to provide consultancy services by addressing the following:

- (i) Study the current container traffic volume and vessels mix and estimate the future growth based on surrounding countries potentials;
- (ii) Assess future crane loading characteristics on quay structure based on larger cranes (outreach) in view of foreseen larger (post-panamax) vessels calling at the modernized terminal;
- (iii) Assess future yard and gate capacities, scanner locations, gate and overall yard traffic flow.
- (iv) Assess handling capacity of the landside area and determine that would be the capacity once the rehabilitation and modernization of the terminal is completed.
- (v) Investigate the physical condition of berths 8-11 and adjacent facilities and come up with recommendations for modernization of the berths;
- (vi) Conduct preliminary and detailed geotechnical investigations of the marine and terrestrial berths environment and Container Terminal, as basis for preliminary and detailed design and preparation of tender documents;
- (vii) Prepare at least two preliminary engineering design options for modernization of berths 8-11 based on the agreed and approved viable options;
- (viii) Study and recommend the social and environmental viability for modernization of berths 8-11;
- (ix) Undertake a thorough economic and financial analysis for the preferred option considering whole life costs and future through-put trends based on the existing rates and other infrastructure levies as contained in the existing port tariff Book;
- (x) Prepare employer's requirements and tender documents necessary for proceeding with procurement processes for tendering of works for the physical execution of the modernization of the berths.
- (xi) Initiate, mediate, moderate and facilitate continuous communication with and between TPA and TICTS (and if required, with other stakeholders). From the start of the assignment, all design and operational decisions must be based on mutual interest, benefit and agreement between both parties, (TPA and TICTS).

#### **4.0 SCOPE OF THE ASSIGNMENT**

4.1 The assignment covers feasibility study including preliminary design, detailed engineering designs, preparation of tender documents and works supervision for modernization and expansion of Berths 8-11 and container yard.

- 4.2 This assignment will be divided into three phases, of which Phase I will cover Feasibility Study and Preliminary Design and Phase II will cover Detailed Engineering Designs and Tender Documents, while the Phase III will cover supervision of works.

At the end of Phase I, and Phase II there will be “break points” and periods during which TPA and other stakeholders will review the results and come up with recommendations. The break point period after Phase I will enable TPA and other stakeholders to review and make recommendations for Phase II while a break point period at the end of Phase II will enable TPA to finalize reviewing detailed engineering designs and the process of procurement of a contractor for Works.

## 5.0 SPECIFIC TASKS OF THE ASSIGNMENT

The specific tasks and services to be provided by the Consultant for this assignment shall include but not necessarily be limited to:

### 5.1 Phase I: Feasibility Study and Preliminary Design

- (i) Reviewing and analyzing all available TPA data on the number, type and frequency of ship calls at Dar es Salaam port with a view to establishing future trends; reviewing and analyzing all data made available by TICTS on their operations and cargo throughput;
- (ii) Reviewing and analyzing the main drivers for changing ship size in the liner shipping and tramp trades;
- (iii) Reviewing and analyzing all available as-built drawings for berths 8-11;
- (iv) Reviewing and analyzing all available geotechnical information collected for the construction of berths 8-11 and at any intervening period;
- (v) Conducting additional preliminary geotechnical investigations for marine and terrestrial areas of berths 8-11, where available data are insufficient for the preparation of the preliminary design options;
- (vi) Reviewing and analyzing all post dredge-survey drawings made following the capital dredging works carried out in 1997;
- (vii) Reviewing of the following recent studies provided by TPA:
  - ✓ TECHNITAL (2017): Feasibility Study including bathymetric, hydrodynamic and geotechnical surveys for dredging of Dar es Salaam Port Entrance Channel, Turning Circle(s) and Harbor Basin;
  - ✓ HPC-INROS LACKNER (2017): Port Operational Baseline Study and Gate and Traffic Management Plan.

- ✓ MTBS (2017): Transaction Advisory Study;
  - ✓ ROYAL HASKONING (2018) Green Port Study;
  - ✓ WAPCOS (2016) ESIA for modernisation of berths 1-7 and RoRo berth;
  - ✓ INROS-LACKNER (2013): Feasibility Study for the modernisation of berths 1-7 and new RoRo berth;
  - ✓ ROYAL HASKONING (2009) National Ports Masterplan;
  - ✓ Any other studies according to availability at time of contract signing
- (viii) Reviewing and analyzing all interim bathymetric data collected by TPA in intervening periods, including post-dredge surveys made following maintenance dredging;
- (ix) Conducting additional preliminary bathymetric investigations, where available data are insufficient for the preparation of the preliminary design options;
- (x) Reviewing and analyzing all investigations and studies which could add to the required pool of information, as made available by TICTS.
- (xi) Investigating the presence of wrecks or other hazards to navigation in or adjacent to the berths, including the port basin or vessel turning area;
- (xii) Undertaking a physical condition survey of berths 8-11 and adjacent facilities including the Kurasini Oil Jetty (KOJ):
- (a) The actual physical condition of the respective berths including the condition of foundation piles, revetments and slope/toe protection, suspended decks, beams, fender piles, fender panels, block-walls, bollards, ladders, steps, apron surfacing and paving and any associated infrastructure including cable ducts, drains, rail and other facilities;
  - (b) The actual depth alongside the berths, up-to a distance 50m perpendicular to the line of the quays.
- (xiii) Undertaking a structural analysis of berths 8-11 with a view to establishing apron loadings (in the as-built and the as-is condition), including:



- (a) uniform distributed loads, maximum wheel and maximum axle load capacity of each different berth;
  - (b) the maximum corner loading for the existing mobile harbour and other cranes when operating in different service conditions/different apron locations; and
  - (c) the estimated residual strength of quay wall structures.
- (xiv) Undertaking bathymetric surveys to determine levels of sedimentation to revetment slopes under the suspended decks of berths 8-11;
- (xv) Making recommendations, consistent with recognized international standards and practices for the development needed to most efficiently and effectively:
- (a) Deepen berth 8-11 to 14.5m (as a base case) and 15.5m (as an option), below CD:
    - The existing tidal regime, bathymetric and geotechnical conditions at Dar es Salaam;
    - The existing block-wall foundation or suspended deck foundation depth;
    - The need to maintain a linear quay extension allowing TPA to accommodate ships of different length overall;
    - The need for adjacent ship maneuvering and turning basins; and
    - Depths fronting adjacent structures.
  - (b) Deepen the harbour basin and vessel maneuvering/turning area adjacent to berths 8-11 to 14.5m (as a base Case) and 15.5m (as an option) below Lowest Astronomical tide considering:
    - The need to optimize the size of berthing and maneuvering areas by carrying out vessel simulator studies for various size and types of ships (up-to a maximum of 305m length and 40m beam or other design vessel as may be advised by TPA);
    - The need for port tug assistance;
    - The presence of tidal streams and currents within Dar es Salaam port and the need if any to elongate turning basins along prevailing tidal stream, and/or current direction;

- Traffic conditions and use of the navigation channel as part of the turning basin area.
- (c) Strengthen the decks on berths 8-11 to accommodate live and other loads caused by the use of the operational equipment.
- (d) Develop viable outline options based on (xi) and undertake a SWOT (Strengths Weaknesses Opportunities Threats) analysis on all design alternatives;
- (e) Make recommendations for a preferred option based on the findings of (xii) and provide all Front-end Engineering and Design (FEED), cost estimates and drawings of the preferred option;
- (f) Undertake thorough assessment of mode of operations and recommend the optimum number and type(s) of equipment required based on the design of the terminal;
- (g) Develop a viable plan to mitigate environmental impacts associated with the deepening and strengthening works. This should include considering possible use of dredged material as a resource (PIANC Report No. 104-2009) and, an early scoping investigation - made in accordance with Tanzanian laws and regulations - that can be presented to the National Environmental Management Council for consideration. Reviewing the existing approved (NEMC) full ESIA for the modernization of berths 1-7, provide an explicit discussion (including funders) on the need if any for further EIA Studies that will be required before execution of the said works;
- (h) Undertake thorough technical, economic and financial analysis of the preferred option, considering whole life costs and future throughput trends to confirm the affordability of the project by TPA (based the existing wharfage and other infrastructure levies contain in the existing port tariff);
- (i) Develop, in continuous consultation, negotiation and cooperation with and between TPA and TICTS, a viable action and logistics plan, with time schedule, handling equipment requirements and cost forecast, and identify an alternative location in the port, to enable ongoing operations by TICTS (and TPA) during the temporary relocation of their operations to this alternative location, during construction and modernization works at berths 8-11. The action and logistics plan must keep negative impact on operations for both parties, TPA and TICTS to a minimum and must be based on mutual interest and agreement between the two parties.
- (j) Make recommendations for any further areas of research required.

## 5.2 Phase II: Detailed Engineering Designs and Tender Documents

5.2.1 Depending on the decision by the client as explained in 3.0 above, after selection of the preferred option for the preliminary design and after mutual agreement on the action and logistic plan for the relocation of TICTS operations within the port during modernisation works at berth 8-11, the consultant shall be given a go ahead to proceed with Phase II of detailed engineering designs and preparation of tender documents.

5.2.2 The consultant shall further review all available and relevant documents, available design from similar works currently being carried out at berths 1-7, and previous studies, update and further collect data, including the execution of a detailed geotechnical and bathymetric surveys, necessary to provide all detailed engineering designs, drawings and cost estimates for the preferred design option.

### 5.2.3 Preparation of Tender Documents

The consultant will be required to prepare appropriate and complete tender documents for the deepening and strengthening of berths 8-11 in line with the prevailing Standard Bidding Documents of the Government of the United Republic of Tanzania and the World Bank.

### 5.2.4 Updated Feasibility Study Report

Upon completion of Phase II, the consultant will be required to update the feasibility study and produce a Consolidated Final Study Report.

## 5.3 Phase III: Supervision of Works

5.3.1 The Consultant shall be fully responsible for the supervision of the construction in accordance with ToRs and supervision standards of similar projects. The Consultant shall, in general, exercise the powers of the Engineer in all matters concerning the contract and the execution of the works. She/he shall supervise the dredging and construction works with due diligence and efficiency in accordance with sound technical, administrative, financial and economic practices.

The consultant shall perform all duties associated with such tasks to ensure that only the best construction practices are followed and that the final product is in full compliance with the contract specifications. In particular, the Consultant's duties and responsibilities shall include but not limited to:

- (a) Get Satisfied thoroughly as to the nature and scope of the works, of all information available and of documents and materials to be used by the Contractor in executing the works as to enable them perform their

duties satisfactorily, study and check all documents associated with the project, foresee possible problems and advise TPA appropriately during the construction and maintenance period.

- (b) Check and establish that the Contractor mobilises and supplies to the contract all plant, equipment and machinery that have been committed in the tender and ensure that all such items of equipment remain on the contract until their release has been authorised.
- (c) At all times, take necessary measures and provide appropriate advice to TPA to enable the construction contract to be completed in a timely and cost effective manner, in conformity with the contract conditions and specifications.
- (d) Review and approve the Contractor's drawings and methodology for identifying and marking of all utilities falling within the construction area. In addition and in liaison with TPA, review and approve the Contractor's methodology and cost for removal of utilities affected by the works and ensure that the relocation work is done in accordance with TPA and contract requirements.
- (e) Inspect, test and approve all materials and completed works to ensure compliance with technical specification requirements.
- (f) Keep updated records including reports, works diaries on a daily basis with the contents and format to be agreed with TPA, correspondence, instructions given to Contractor, test records, measurement and quantity calculations, payment records and all other relevant documents pertaining to the works operations and supervision contracts.
- (g) Prepare and submit consolidated monthly reports on physical and financial status, site meetings, contractual matters, etc., with recommendations for action by the each party i.e. TPA, Contractor and Consultant,
- (h) Monitor the implementation of environmental impact mitigation measures during the construction of the works as indicated in the Environmental Management Plan. In particular, monitor the following recommendations for environmental protection during implementation of the project:
  - (i) Minimize water and soil pollution by directing runoff waters into tailing ponds,
  - (ii) Minimize noise and dust levels,
  - (iii) Ensure safety during construction by ensuring the Contractor installs appropriate temporary road signs for traffic control and

- safety, and enforce the wearing of appropriate safety clothing and accessories in high risk areas,
- (iv) Enforce installation of fire extinguishers and first aid kits on site,
  - (v) Enforce the Contractor to follow labour laws on Employment, Pay, working hours, safety etc. as per appropriate Labour Laws and TPA OSHA regulations,
  - (vi) Shape and landscape all borrow pits and quarries on completion of works,
- (i) Camp sites (for Contractor) to be located to an area which minimizes disruption to local population, fauna and flora and water courses; provide adequate drainage facilities and treatment of sewage and waste disposals. Where necessary Consultant should ensure that the Contractor's camp areas are dismantled and rehabilitated once construction is completed.
  - (j) Prepare control charts of the main activities and a project master schedule, indicating both past performance and forecasts for completion including time involved in each case.
  - (k) Record, examine and evaluate all claims submitted by the Contractor and submit timely recommendations thereof for consideration by TPA,
  - (l) When the implementation of the contract reaches a value of 60% of the initial construction contract, the consultant shall prepare and submit within one month a detailed progress report with updated cost of the contract, implementation schedules and substantiate any request related to additional funding, if such is needed to full completion of the project. The Consultant shall make an update of detailed progress report when 80% of works contract has been completed. At this stage, the Consultant shall also prepare the draft Project Completion Report (PCR) in line with the World Bank requirements.
  - (m) Prepare and submit to TPA a report on final cost of executed works.
  - (n) Review and approve the final construction report and as-built drawings as prepared by the Contractor, and submit to TPA.
  - (o) The Consultant may, with prior consultation with TPA, effect changes that will improve design or specification for the works. Such changes shall not increase the contract time nor shall the increase in contract sum resulting from such changes exceed 0.1 percentage of the initial Contract and should be agreed and approved with TPA.

- (p) The Consultant shall prepare a Supervision Manual which will lay out procedures to be followed during the execution of the works. The Manual will also serve as a basis for on-the-job training of TPA staff and any visiting students during the implementation of the works contract.
- (q) Direct and monitor the implementation of traffic and general safety and HIV/AIDS Sensitization campaigns & programs
- (r) The Consultant shall allow a lump sum of 10 percentage of its contract price (payable under reimbursable terms) for the event of adjudication or arbitration and provide the necessary personnel and expertise to advise and assist the Employer in any such process and prepare any further analysis of the contractor's claims submissions as may be necessary to assist the Employer in the presentation of his case.
- (s) Carry out inspections, prepare a defects snag list and draft the "Taking Over Certificate" before commencement of "Defects Liability Period."

#### 5.3.2 Defects Liability Period

The Consultant shall oversee the completed works during the 12 months Defects Liability Period through regular visits. The Consultant is expected to carry out three (3) site visits at regular intervals during which the Consultant shall draw attention of the Contractor to any defects if and when noticed and shall supervise such remedial works. Prior to expiry of the defects liability period, the Consultant shall inspect the works according to the Condition of Contract and issue instructions for rectifications of all defects, imperfections of faults, and supervise the remedial works. Following the Employer's acceptance, the Defects Liability Certificate shall be issued.

## 6.0 METHODOLOGY AND GENERAL UNDERSTANDINGS

- 6.1 The consultant is required to clearly indicate the methodology and approach that will be used while carrying out this assignment and how the proposed methodology is deemed to be the best to achieve the objective of the assignment. The methodology should be enabling the consultant to carry out a detailed analysis of the whole scope in order to properly advise TPA on technical, economic, financial and social and environmental aspects of the project.
- 6.2 In undertaking the study, the consultant shall keep in mind that the study must be authentic and thorough as it will form the basis for making important investment decisions and not just a bureaucratic requirement.

- 6.3 Accordingly, the consultant shall exercise all reasonable skills, care and diligence in the performance of the study and shall carry out all responsibilities to recognized professional standards.
- 6.4 The consultant shall act as a faithful advisor to TPA and shall supply all expertise, knowledge, advice and skills required to carry out and complete the study expeditiously in accordance with the conditions of engagement.
- 6.5 The consultant shall further be responsible for undertaking all the fieldwork and ensuring all data collected is quality assured and corrected wherever appropriate. The consultant shall keep a record of all information collected and present this in a manner which allows statistical comparisons to be made. Qualitative assessments must be backed up by case studies and relevant industry examples.

## **7.0 SKILLS AND EXPERIENCE REQUIRED**

- 7.1 The Consultancy team shall be required to possess expertise in port engineering, port operations, financial analysis, environmental impact assessment and project management. The Consultant is expected to propose how the key staff will be deployed (home/field) to meet the requirement of the assignment in their respective submission.
- 7.2 A minimum time requirement of 60 Person-Months to accomplish both phases of the assignment has to be considered by the Consultant. However, the consultant may consider person-months beyond the minimum but should not exceed 75 person-months.
- 7.3 In order to fulfill the objectives of the services, the proposed team to undertake this assignment shall be required to consist the following:

### Phase 1 and Phase II

- (a) Project Team Leader
- (b) Deputy Project Team Leader
- (c) Port/Coastal Engineer
- (d) Structural/Civil Engineer
- (e) Port Operations specialist
- (f) Services Engineer (Mech./Electr.)
- (g) Geotechnical Specialist
- (h) Topographical/Hydrography surveyor
- (i) Quantity Surveyor
- (j) Economist/Financial/Business analyst
- (k) Procurement Specialist
- (l) Environmental Specialist
- (m) Transaction Facilitator

### Phase III

- (a) Project manager
- (b) Contract specialist.
- (c) Resident Engineer
- (d) Geotechnical/Civil Engineer
- (e) Environmentalist/sociologist
- (f) Hydrographical Surveyor
- (g) Materials Engineer
- (h) Quantity surveyor

Proposed Person- Months for the assignment For Phase 1 and Phase II

S/No.	Key Staff	Minimum Expected Man-Month	Maximum Man-Month
1.	Project Team Leader	8	10
2.	Deputy Project Team Leader	6	7
3	Port/Coastal Engineer	7	8
4	Structural/Civil Engineer	6	8
5	Port Operations Specialist	4	5
6	Services Engineer (Mechanical/Electrical)	4	5
7	Geotechnical Specialist	5	7
8	Topographical/Hydrography surveyor	4	5
9	Quantity Surveyor	4	5
10	Economist/Financial/Business analyst	4	5
11	Environmental Specialist	4	4
12	Procurement Specialist	2	3
13	Transaction Facilitator	2	3
	<b>TOTAL MAN-MONTH</b>	<b>60</b>	<b>75</b>

Proposed Person- Months for the assignment For Phase III

S/No.	Key Staff	Minimum Expected Man-Month	Maximum Man-Month
1.	Project Manager	12	16
2	Contract specialist	7	9
3	Resident Engineer	15	16
4	Geotechnical/Civil Engineer	5	5
5	Environmentalist/Sociologist	4	4
6	Hydrographical Surveyor	4	5
7	Materials Engineer	4	5
8	Quantity Surveyor	4	5
	<b>TOTAL MON-MONTH</b>	<b>55</b>	<b>65</b>

7.4 Qualification and experience required for the key personnel shall be as follows:

**Phase I and Phase II**



**(a) Project Team Leader**

Project Team leader will be responsible for the overall management and supervision of the project in terms of target achievements and quality performance. The Team Leader is expected to have qualifications in port management and operations and have a postgraduate degree in Business Administration, Economics Engineering/Management and must have vast experience of not less than 15 years in undertaking feasibility studies for transport infrastructure development, designing, implementing and managing multi-disciplinary projects, contract administration and supervision of projects.

**(b) Deputy Project Team Leader**

The Deputy Project Team Leader shall be the second overall in-charge of the project He/she must be a registered Port/Coastal Engineer or, Architect or Civil Engineer with a degree in port/coastal engineering or Architecture or civil engineering or an equivalent qualification. Postgraduate qualification in port/coastal engineering and oil terminal port operations is a must.

He/she must have a cumulative experience of not less than ten (10) years in undertaking feasibility study for transport infrastructure development, designing, implementing and managing multi-disciplinary projects, contract administration and supervision of projects.

He/she must have been involved in study and design of at least two (2) projects of similar nature and complexity to this assignment.

**(c) Coastal Engineer**

The Coastal Engineer shall be a registered Professional Engineer by relevant board and a minimum bachelor degree or equivalent qualification in Coastal Engineering. He/She shall be required to possess not less than 10 years of experience in port/harbour or transport infrastructure development projects or projects of similar nature. He/she must have been involved in design and supervision of at least 3 marine infrastructure projects of similar nature and complexity.

**(d) Structural Engineer**

Structural Engineer shall be a registered Professional Engineer by relevant board with a valid practicing license and possessing a bachelor's degree or equivalent qualification in structural Engineering. He/She shall possess not less than 10 years of experience in structural design and transport infrastructure. He/she must have been involved in study and design of at least one (1) marine infrastructure project of similar nature and complexity.

**(e) Port Operations specialist**

He/She shall be a graduate in shipping or Logistics or transportation and registered professional engineer, with diverse background in port industry. He/She must have at least 10 years of practical experience in Port

Operations and has been involved in study and design of at least 3 marine infrastructure projects of similar nature and complexity.

**(f) Services Engineer**

The Services Engineer (can be a split position electrical / mechanical) shall be responsible for design of service facilities and must be a registered or chartered Mechanical / Electrical Engineer or Building Services Engineer, with at least a bachelor's degree or equivalent qualification. He/She shall be required to have not less than 10 years of practical experience in designing transport infrastructure projects of similar nature. He/she must have been involved in study and design of at least two (2) infrastructure projects of similar nature and complexity.

**(g) Geotechnical Specialist**

The Geotechnical Specialist shall have a minimum degree of BSc as Geologist and/or Geotechnical Engineer, with a minimum experience of 10 years, 5 of which should be related to similar marine projects, involving marine dredging works and marine pile foundation.

**(h) Quantity Surveyor**

The Quantity Surveyor shall be responsible for undertaking quantity surveys and analysis. He/She must be registered Quantity Surveyor, with a valid practicing certificate and at least a bachelor's degree qualification or equivalent in Quantity Surveying or Building Economics. He/She shall be required to have not less than 10 years of practical experience in assignments of similar nature. He/she must have been involved in study and design of at least one project of similar nature and complexity.

**(i) Topographical/Hydrography Surveyor**

The Topography/Hydrography Surveyor shall be a registered Surveyor with a valid practicing certificate and bachelor's degree or equivalent qualification in Surveying. He/She shall be responsible for survey drawings, topographic maps, bathymetric surveys, profiles, location plans and cadastral surveys. He/she shall be required to have not less than 10 years of working experience in survey in related projects. He/she must have been involved in study and design of at least two projects of similar nature and complexity.

**(j) Economist/Financial/Business analyst**

The analyst shall be responsible for undertaking traffic, economic, and financial assessment of the project and must possess a postgraduate degree in the field of economics/finance/business and with not less than 10 years of practical experience in undertaking feasibility studies for transport infrastructure development projects, including but not limited to assessment of traffic demand, traffic forecasting, economic and financial analysis and investment planning. He/she must have been involved in

study and design of at least 3 marine infrastructure projects of similar nature and complexity.

**(k) Procurement Specialist**

The procurement specialist shall be responsible for preparation of technical specifications and bidding documents in accordance with the applicable Public Procurement Act and its Regulations of the United Republic of Tanzania. He/She must be a registered with the Procurement and Supplies Professionals and Technicians Board and possessing Master's degree qualifications in procurement and supplies. He/She must have a practical experience of not less than 10 years in undertaking projects of similar nature and complexity.

**(l) Environmental Specialist**

He/She shall be responsible for environmental studies and must be a graduate with a background in environmental science and must be registered by NEMC as EIA expert. He/She should have proven experience of not less than five (5) years in undertaking environmental studies for transport infrastructure development projects. Experience in the ports sector will be an added advantage.

**(m) Transaction Facilitator**

The Transaction Facilitator will play a key role during Phase I of the assignment in initiating continuous communication, negotiation and cooperation with and between Senior Management of TPA and TICTS, to achieve mutual agreements. He/She shall be required to have not less than 15 years of business transactional project management experience, good leadership and inter-social communication skills, and must have been involved in projects of similar size in the sub-Saharan African cultural context. He/She must be fluent in English and Kiswahili. The Transaction Facilitator will have to be deployed predominantly in field works at TPA premises, representing TPA interests, in permanent contact with representatives of Senior Management of TPA and TICTS.

**Phase III**

**(a) Project Manager:**

She/he must be a registered Civil Engineer with a degree in Civil Engineering or an equivalent qualification. Postgraduate qualification in Port/Marine Engineering is added advantage. She/he must have a minimum of twenty (20) years of cumulative experience related to Port and Marine design and Construction. Experience in contract administration under FIDIC Conditions of Contract is an added advantage. She/he must have served as a Project Manager on at least three (3) port Construction projects of similar nature in the past ten 10 years. In addition, she/he must have relevant international experience and a working experience of at least

3 years in developing countries. Fluency in written and spoken English is mandatory

**(b) Contract Specialist**

She/he must be a registered Civil Engineer or Quantity Survey with a degree in Civil Engineering or an equivalent qualification. Must have a Postgraduate qualification in Contract Management. She/he must have a minimum of seven (7) years of cumulative experience related to Contract Management of large Construction Projects. She/he must have served in a similar capacity on at least two (2) Construction projects of similar nature in the past seven 7 years. In addition, she/he must have relevant international experience and a working experience of at least 3 years in developing countries. Fluency in written and spoken English is mandatory.

**(c) Resident Engineer**

She/he must be a registered Civil Engineer with a degree in Civil Engineering or an equivalent qualification. Postgraduate qualification in Port Engineering is added advantage. She/he must have a minimum of fifteen (15) years of cumulative experience related to Port and Marine design and Construction. Experience in contract administration under FIDIC Conditions of Contract is an added advantage. She/he must have served as a Resident Engineer on at least three (3) port Construction projects of similar nature in the past ten 10 years. In addition, she/he must have relevant international experience and a working experience of at least 3 years in developing countries. Fluency in written and spoken English is mandatory.

**(d) Geotechnical/Civil Engineer**

She/he must be a registered Civil Engineer with a degree in Civil Engineering or an equivalent qualification. Postgraduate qualification in Port/Marine Engineering is added advantage. She/he must have a minimum of seven (7) years of cumulative experience related to Port and Marine design and Construction. She/he must have served in a similar capacity on at least two (2) Port Construction projects of similar nature in the past seven 7 years. In addition, she/he must have relevant international experience and a working experience of at least 3 years in developing countries. Fluency in written and spoken English is mandatory.

**(e) Environmentalist/ Sociologist**

She/he shall be qualified and must be a graduate in Environmental Management Studies or related discipline. She/he must have sound knowledge of environmental and social issues, initiatives and implementation of mitigation measures related to civil engineering infrastructure projects. She/he must have served as an Environmentalist in at least two (2) Port/Marine structures design projects of similar nature in the past ten years. She/he must have at least 3 years working experience in Sub-Sahara countries. Fluency in written and spoken English is mandatory.

**(f) Hydrographical Surveyor**

She/he must possess a minimum of a diploma in Marine Surveying. She/he must have at least ten (10) years cumulative experience in Port/Marine design and construction. She/he must have served in similar capacity on at least two (2) Marine construction projects in the past 10 years. In addition, she/he must have a working experience of at least 3 years in Sub-Sahara countries. Fluency in written and spoken English is mandatory.

**(g) Materials Engineer**

She/he must have a minimum of ten (10) years of cumulative experience in Geotechnical/materials matters related to Marine structures and works. She/he must have served in similar capacity on at least two (2) marine projects of similar nature in the past ten (10) years. In addition, she/he must have relevant international experience and a working experience of at least 3 years in developing countries. Fluency in written and spoken English is mandatory.

**(h) Quantity Surveyor**

She/he must have a degree in Quantity Surveying or equivalent qualification. She/he must have a minimum of eight (8) years' experience in quantity surveying related to contractual issues, marine construction and measurement. She/he must have served in similar capacity on at least two (2) Port/Marine projects of similar nature in the past ten (10) years. In addition, she/he must have relevant international experience and a working experience of at least 3 years in developing countries. Fluency in written and spoken English is mandatory.

## **8.0 SERVICES TO BE PROVIDED BY TPA**

TPA shall provide the Consultant with among others the following:

- (i) Data for existing port, as available including traffic;
- (ii) Previous ports development studies including Ports Master Plan;
- (iii) Permit to access the project areas; and
- (iv) Introduction to Government Authorities and stakeholders that the consultant may require consultations in relation to this assignment.

## **9.0 DELIVERABLES AND REPORTING REQUIREMENT**

9.1 It is envisaged that the elapsed time to complete Phase I and Phase II of the assignment is fifteen months (Phase I: Nine months. Phase II: Six months). The consultant shall submit reports and other documents on the basis of Terms of Reference and to cover other aspects which in their opinion, and after discussion with TPA, is deemed essential for completing the study.

## 9.2 Deliverables for Phase I:

The Consultant shall be required to deliver the following outputs:

- (i) **Inception Report**, which has to be submitted one (1) month after the commencement of the assignment. This Report shall summarize the Consultant(s) initial findings and will present a first assessment of available data. The Inception Report shall also contain:
  - (a) Details regarding the methodology to be applied by the Consultant during the execution of the project;
  - (b) An outline of activities expected to be completed until the date of the presentation of subsequent reports; and
  - (c) The Consultants understanding of the assignment.
- (ii) **Conceptual Design**, which has to be submitted two (2) months after commencement of assignment, outlining the options being considered for deepening and strengthening works together with preliminary cost estimates (+/- 40%);
- (iii) **Interim Feasibility Study Report** has to be submitted and presented five (5) months after the commencement of the assignment. This Report shall summarize all work executed, present detailed options SWOT analysis, engineering principles, design drawings and cost estimates for the preferred option for all infrastructure works and shall outline scenarios and arrangements anticipated for an action plan and logistics for the relocation of TICTS operations during construction works at berths 8-11.
- (iv) **Draft Feasibility study and EIA Scoping Report**, which has to be submitted together with the interim feasibility report. This report will identify the main issues of concern and detail all consultation with stakeholders, relevant authority's specialists and the wider public which has been undertaken during the scoping phase. Should an EIA be deemed necessary, an essential element of the report will be the inclusion of Terms of Reference for a full EIA study, ultimately leading to preparation of the Environmental Impact Assessment.
- (v) **The Draft Final Feasibility Study Report and EIA Scoping Reports and a Professional Presentation** which has to be submitted eight (8) weeks after receipt of comments on the Interim Feasibility Study Report and Draft EIA

Scoping Report from the client (TPA). The Draft Final Report shall include any revisions that the Consultant deems appropriate after receiving comments from both TPA and TICTS and other relevant experts or peer reviewers in respect the Draft Reports. The draft Final Feasibility Study shall include the mutually agreed draft action- and logistics- plan for the relocation of TICTS during construction works at Berths 8-11, and a professional Presentation. As part of the final submission, all data gathered by the Consultants shall also be submitted.

- (vi) **The Final Feasibility Study Report, Preliminary Engineering Design and Environmental Reports** which have to be submitted four (4) weeks after receipt of comments on the Draft Final Feasibility and EIA Scoping Reports.

### 9.3 Deliverables for Phase II:

The Consultant under Phase II shall be required to deliver the following outputs:

- (i) **The Draft Detailed Engineering Design and Draft Tender Documents**, which have to be submitted after three (3) months after commencement of Phase II of the assignment, and a professional Presentation.
- (ii) **The Final Detailed Engineering Design and Final Tender Documents**; which have to be submitted three (3) months after receipt of comments on the Draft Detailed Engineering Design and Draft Tender Documents.

### 9.4 Deliverables for Phase III:

The Consultant shall be required to deliver the following outputs under this phase:

- (i) **Inception Report**  
The Consultant shall prepare an Inception Report four (4) weeks after the commencement of actual supervision of works. This report shall include results of the review of the contractor's work program, any modifications thereto, status of the consultant and contractor's mobilization and any other matter requiring the Employer's action. This report shall be prepared and submitted to TPA Headquarters in six (6) copies; 2 copies to WB and 1 copy to TPA Port Manager.
- (ii) **Progress Reports**  
The Consultant shall prepare progress reports every month for the duration of the contract. These are to be submitted in 6 copies and should reach TPA and 2 copies to the World Bank not later than 15 days after the end of the month being reported on. The distribution of the reports will be as follows: six (6) copies to TPA HQ, 2 copies to WB and one (1) copy to the TPA Port Manager.  
The monthly reports should be based on the physical and financial progress as well as dealing with contractual and technical matters. They

will make use of graphics and include statements covering (but not limited to) the following:

- Physical progress related to programme and time,
- Explanations for variances to the above,
- Expenditure related to cash flow forecast and budget,
- Explanation for variances to the above
- Claims and disputes if any,
- Suggestions for resolving any technical and other problems which occur and those affecting the progress of the works,
- Identification of potential problems
- Labour Issues and Human resources, mechanical equipment and materials,
- Material Testing undertaken and quality control,
- Local issues/stakeholder issue,
- A revised cash flow forecast, and
- Report of environmental issues (including monitoring of EMP).

**(iii) Detailed Progress Report**

When the implementation of the civil Works contract reaches a value of 60% of the initial construction contract, the consultant shall prepare and submit within one month, a detailed progress status report with updated cost of the civil Works contract, implementation schedules and substantiate any request related to additional funding, if such needed to full completion of the project. This report in ten (10) hard copies shall be submitted to TPA HQ and one copy be sent to TPA Port Manager The Consultant shall make an update of detailed progress report when 80% of works contract has been completed. At this stage, the Consultant shall also prepare the draft Project Completion Report (PCR) in line with the World Bank requirements.

**(iv) Draft Completion Report**

The draft completion report in ten (10) copies shall be submitted to TPA HQ (includes copies to the WB) not later than one month after the issue of completion certificate of construction Works and one (1) copy be sent to the TPA Port Manager. The report should contain sufficient details to enable TPA to know the type, quality and quantity of materials used and all information which together with the as built drawings (original and 8 copies) and specifications will help TPA in future maintenance.

The report shall also include a summary of major difficulties encountered during construction and the means employed to overcome them, lessons learnt, changes (if any) made in the original designs, modifications to specifications and conditions of contract, all variation orders, assessment of claims by the contractor, utilisation of provisional and price variation and physical contingencies sums, cumulative monthly payments to the Contractor, by date and number of payment certificate and break down into foreign and local currencies and including a similar payment schedule for supervision services. The details of the overall project costs (construction and supervision) with justification for any significant



differences with the original shall be given in the final report. The report shall include a separate volume on proposed future maintenance activities.

**(v) Final Completion Report**

Upon issuance of the defects liability and the final payment certificates, the Consultant shall prepare within 30 days a Final Completion Report and submit in ten (10) copies to TPA HQ, 2 copies to the WB and one (1) copy be sent to the TPA Port Manager.

**(vi) Project Completion Report**

Upon conclusion of the Works Contract, the Consultant shall prepare within 30 days a Project Completion Report and submit in ten (10) copies to TPA HQ (includes the WB) and one (1) copy be sent to the TPA Port Manager.

Note:

All reports shall be submitted in hard copies indicated and one electronic form in both PDF and source file version.

9.5 The consultant is required to note the following:

- (i) The Report of each stage above of the study shall be submitted in 10 hard copies and 5 CD Soft copies.
- (ii) Prepare a summary report of the proposed project options for discussion with the client (TPA).
- (iii) The presentations will be made twice during Phase I: Upon submission of the Interim and Draft Final Feasibility Study and reports.; the outcome of the discussions will form suggestions for preferred project option and will be reflected into the project design as appropriate. And once during Phase II: Upon submission of the Draft Final Detailed Design and Draft Final Tender Documents.
- (iv) The consultant will be required to prepare and submit reports in English Language and presented on A4 sized paper. All Reports shall be submitted initially as draft versions which shall be finalised to accommodate clients' comments. Survey data for both draft and final reports shall be submitted in a format compatible to Windows 10 or the latest version. For drawings a different size e.g. A3 or A2 can be used as may be required.
- (v) The consultant shall report to the Director General of TPA for all contractual and correspondence issues whilst day to day operational matters will be dealt at the Directorate of Investment and Planning.

- (vi) The consultant shall observe reports presentation requirements as per indications outlined under Chapter 9 Timeframe.

## 10.0 TIMEFRAME FOR THE ASSIGNMENT

The duration of the Services (Phase I , Phase II and Phase III) shall be 48 months with Phase I: taking 8 months; Phase II: taking 4 months and Phase III 36 months (24 months for supervision and 12 months for defects liability) . The following timeframe in months shall be adhered in carrying out the assignment:

### Timeframe for Feasibility Study and Preliminary Engineering Design

Activity	Number of Months Since Start
<b>PHASE I</b>	
Signing of the Contract/Start	M=0 Month
Submission of Inception Report	M+1
Comments on Inception Report	M+1.5
Submission of the Early Options Report	M+2
Comments on the Early Options Report	M+2
Submission of the Interim Feasibility Study Report	M+4
Comments on the Interim Feasibility Study Report	M+4.5
Submission of the Draft Final Feasibility, EIA Scoping Reports	M+6
Presentation of the Draft Final Feasibility and EIA Scoping Reports	M+7
Comments on Draft Final Feasibility and EIA Scoping Reports	M+8
Submission of the Final Feasibility and EIA Scoping Reports	M+8
Acceptance and Approval of Final Report	M+8

<b>PHASE II</b>	
Submission of Draft Detailed Engineering Design and Draft Tender Documents	M+9
Presenting of the Draft Detailed Engineering Design and Draft Final Tender Documents	M+9.5
Comments on the Draft Detailed Engineering Design and Draft Detailed Tender Documents	M+10
Submission of the Final Detailed Engineering Design and Final Tender Documents	M+11
Acceptance and Approval of the Final Detailed Engineering Design and Final Tender Documents	M+12

<b>PHASE III</b>	
Inception Report	M+18

Progress Reports	Prepared every month
Detailed Progress Report	When the implementation of the civil Works contract reaches a value of 60%
Draft Completion Report	Not later than one month after the issue of completion certificate of construction Works
Final Completion Report	Within 30 days upon issuance of the defects liability and the final payment certificates.
Project Completion Report	Within 30 days upon conclusion of the Works Contract
Defects liability period	M+30

## 11.0 PAYMENTS SCHEDULE

The following payment schedule is set for the assignment. Bidders should keep these in mind while preparing their proposals.

### PHASE I (100%)

- (i) 20% of the total sum of Phase I, shall be paid upon signing of the contract as an advance payment subject to submission of a reputable local Bank Guarantee;
- (ii) 10% of the total sum of Phase I, shall be paid upon submission, approval and acceptance of Inception Report;
- (iii) 10% of the total sum of Phase I, shall be paid upon submission, approval and acceptance of the Early Options Report;
- (iv) 25% of the total sum of Phase I, shall be paid upon submission, approval and acceptance of Interim Report;
- (v) 10% of the total sum of Phase I, shall be paid upon submission, approval and acceptance of the Draft Final Report;
- (vi) 25% of the total sum of Phase I, will be paid upon submission, approval and acceptance of the Final feasibility study Report, Preliminary Engineering Design and Tender Documents.

### PHASE II (100%)

- (i) 40% of the total sum of Phase II, will be paid upon submission, approval and acceptance of the Draft Detailed Design and Draft Tender Documents.
- (ii) 60% of the total sum of Phase II, will be paid upon submission, approval and acceptance of the Final Detailed Design and Final Tender Documents.

### **PHASE III**

The Consultant shall quote the cost of his expatriate/local staff, technical, equipment and other costs as she/he deems to be required. He shall summarize his monthly and total costs and accompany the same with a schedule showing the Consultant involvement. The Costs shall be quoted to cover the consultant's performance of his duties described under item 5.0 above in accordance with the following:

- Monthly costs, subsistence and allowances for expatriate personnel;
- Monthly costs, overtime and allowances for local personnel;
- Transportation for key personnel (not at site);
- Cost of producing and printing reports as described in item 9 including secretarial expenses;
- International and Local travel (for Local staff) costs;
- Shipment of personal effects, reports, documents etc; and
- Other costs which must be specified by the consultant.

Payments will be made monthly for undertaking the assignments described under Phase III of the assignment to cover fees for approved personnel and approved reimbursable.

Recoverable advance of not more than 20% of the Phase III sum may be provided for mobilization costs against an acceptable Bank Guarantee.

The advance payment will be set off by the Client in ten (10) equal instalments against the statements starting from the 5th invoice of the services, until the Advance Payment has been fully set off.

Reimbursables, which cover all out of pocket payment, will be made against acceptable documentary evidence.

No other payments will be made to the Consultant under this contract.