

**BOARD APPROVAL**  
**Lapse-of-time Procedure**  
**26 September 2019**

**FOR INFORMATION**

## **MEMORANDUM**

**TO : THE BOARDS OF DIRECTORS**

**FROM : Vincent O. NMEHIELLE**  
**Secretary General**

**SUBJECT : ERITREA – GROUNDWATER ASSESSMENT, AQUIFER MAPPING**  
**AND WELL DEVELOPMENT PROJECT\***

### **TSF PILLAR 1 GRANT OF UA 0.511 MILLION**

The **Grant Proposal** with the **draft Resolution** related to the above-mentioned project were submitted for your **consideration on a Lapse-of-time basis** on 11 September 2019.

Since no objection was recorded by 5:00 p.m. on 26 September 2019, **the said Proposal is considered as approved and the Resolution adopted.**

**Attach.**

**Cc.: The President**

**\*Questions on this document should be referred to:**

|                   |                  |          |                |
|-------------------|------------------|----------|----------------|
| Mr. G. NEGATU     | Director General | RDGE     | Extension 8232 |
| Ms. G. W. GICHURI | Director         | AHWS/FAE | Extension 4015 |
| Mr. G. PENN       | General Counsel  | PGCL     | Extension 3220 |
| Mr. J. COOMPSON   | Regional Manager | RDGE.2   | Extension 8415 |
| Mr. O. M. CHANDA  | Division Manager | AHWS.2   | Extension 3544 |
| Ms. A. M. MECCA   | Division Manager | PGCL.1   | Extension 3309 |
| Ms. N. OGAL       | Task Manager     | RDGE.2   | Extension 8233 |

# AFRICAN DEVELOPMENT BANK GROUP



**PROJECT: GROUNDWATER ASSESSMENT, AQUIFER MAPPING AND WELL DEVELOPMENT PROJECT**

**COUNTRY: STATE OF ERITREA**

**TRANSITION STATE FACILITY – SUPPLEMENTARY FUNDING**

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## PROJECT APPRAISAL REPORT

*June 2019*

|  |                          |   |
|--|--------------------------|---|
|  | <i>Task Manager:</i>     | N. OGAL, Senior Water & Sanitation Engineer, RDGE.2   |
|  | <i>Team Members:</i>     | T.N.F. OKU, Environment Officer, RDGE.4<br>M. NANDUJJA, Senior Procurement Officer, SNFI3/COUG<br>S. SAKWA, Senior Financial Management Officer , SNF4/RDGE<br>N. NASSUNA, Principal Legal Counsel, PGCL.1<br>D. ELHASSAN, Senior Gender Expert, RDGE.2 |
|  | <i>Sector Manager:</i>   | O. M. CHANDA, AHWS.2  |
|  | <i>Sector Director:</i>  | G.W. GICHURI, AHWS &AWF   |
|  | <i>Division Manager:</i> | J. COOMPSON, RDGE.2   |
|  | <i>Director General:</i> | G. NEGATU, RDGE   |
|  | <i>Peer Reviewers:</i>   | J. SIFUMA, Senior Water and Sanitation Expert, RDGE.2<br>M. NTEGE, Senior Water and Sanitation Engineer RDGE.2<br>F. ASAYE, Senior Procurement Officer, RDGE.2  |

# **AFRICAN DEVELOPMENT BANK GROUP**



## **ERITREA**

### **GROUNDWATER ASSESSMENT, AQUIFER MAPPING AND WELL DEVELOPMENT PROJECT**

#### **TRANSITION STATE FACILITY – SUPPLEMENTARY FUNDING**

### **PROJECT APPRAISAL REPORT**

**RDGE/AHWS/PGCL**

September 2019

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## **Currency Equivalents**

May 2019

National Currency = Eritrean Nakfa (ERN)

1 UA = 21.39270 ERN

1 UA = USD 1.38576

## **Government Fiscal Year**

1 January – 31 December

## **Weights and Measures**

|                   |   |                   |
|-------------------|---|-------------------|
| 1 metric ton      | = | 2204 pounds (lbs) |
| 1 kilogram (kg)   | = | 2.204 lbs         |
| 1 meter (m)       | = | 3.28 feet (ft)    |
| 1 millimeter (mm) | = | 0.03937 inch (“)  |
| 1 kilometer (km)  | = | 0.62 mile         |
| 1 hectare (ha)    | = | 2.471 acres       |

## Acronyms and Abbreviations

|                 |   |
|-----------------|---|
| <b>ADF</b>      | African Development Fund  |
| <b>ERN</b>      | Eritrean Nakfa  |
| <b>FM</b>       | Financial Management  |
| <b>IFR</b>      | Interim Financial Reports   |
| <b>GOSE</b>     | Government of the State of Eritrea  |
| <b>GWAAMWD</b>  | Groundwater Assessment, Aquifer Mapping and Well Development                        |
| <b>LCS</b>      | Least Cost Selection  |
| <b>MOLWE</b>    | Ministry of Land, Water and Environment   |
| <b>NCB</b>      | National Competitive Bidding  |
| <b>NIDP</b>     | National Indicative Development Plan  |
| <b>OCB</b>      | Open Competitive Bidding  |
| <b>PP</b>       | Procurement Plan  |
| <b>PCU</b>      | Project Coordination Unit   |
| <b>PPF</b>      | Project Preparation Facility  |
| <b>QCBS</b>     | Quality and Cost Based Selection  |
| <b>RWSISPRC</b> | Resilient Water and Sanitation Infrastructure Support Project for Rural Communities |
| <b>SBD</b>      | Standard Bidding Document   |
| <b>TSF</b>      | Transition State Facility   |
| <b>UA</b>       | Units of Accounts   |
| <b>USD</b>      | United States Dollars   |
| <b>WRD</b>      | Water Resources Department  |

## Project Information

### *Client's information*

|                          |   |
|--------------------------|---|
| <b>Recipient:</b>        | The State of Eritrea                        |
| <b>Executing Agency:</b> | Ministry of Land, Water Environment (MOLWE) |

### *Financing plan*

| Source                        | Amount (UA)       | Instrument         |
|-------------------------------|-------------------|--------------------|
| ADF (Approved in 2016)        | 466,967.00        | PPF Advance        |
| TSF (Supplementary Financing) | 511,573.00        | TSF Grant Pillar I |
| <b>Total Cost</b>             | <b>978,540.00</b> |                    |

### *Key financing information*

|                    |            |
|--------------------|------------|
| TSF Pillar I Grant | UA 511,573 |
| Service charge     | N/A        |
| Commitment fee     | N/A        |
| Duration           | N/A        |
| Grace period       | N/A        |

### *Timeframe - Main Milestones (expected)*

|                   |                |
|-------------------|----------------|
| Project approval  | September 2019 |
| Effectiveness     | October 2019   |
| Completion        | December 2020  |
| Last Disbursement | March 2021     |

## Project Executive Summary

|                                |  |
|--------------------------------|--|
| <p><b>Project Overview</b></p> | <p>The Groundwater Assessment, Aquifer Mapping and Well Development (GWAAMWD) project was approved by the Bank on 18 November 2016. It comprises consultancy services for hydrogeological survey, geophysical investigations, and aquifer mapping within ninety (90) village communities in rural Eritrea. The project will also develop thirteen (13) production wells within identified priority locations and provide maps for groundwater resources within the targeted 90 village communities. The GWAAMWD project was designed to prepare ground for an investment operation, the Resilient Water and Sanitation Infrastructure Support Project for Rural Communities - RWSISPRC, to be implemented in the subsequent planning phase.</p> <p>This proposal for the Transition State Facility (TSF) Pillar I resources is for supplementary resources to support the Government of the State of Eritrea (GOSE) to implement the GWAAMWD project. Tenders for the consultancy services for the hydrogeological survey, geophysical investigations, aquifer mapping and supervision of well development were floated and upon opening of the financial proposals, it was found that all the qualifying firms had bid amounts exceeding the estimated budget of UA 156,489. This rendered the amount of UA 466,967.00 from the African Development Fund (ADF) Project Preparation Facility (PPF) resource envelope allocated for the GWAAMWD project by the Bank Group inadequate. On 25 June 2018, the Bank received a request for supplementary funding of an amount of USD 575,617 (approximately UA 415,380), all of which would be utilized to bridge the budget deficit for the consultancy services.</p> <p>The Bank has conducted a review of the costing for the consultancy services with a view to establish the rationale for the supplementary funding, which translates to over three times the initial budget estimate for the consultancy services. The findings are that: i) The costing of the consultancy services only considered costs for the hydrogeological survey and supervision of well development but did not factor in the costs for geophysical investigations, aquifer mapping, data collection and analyses. Previous groundwater studies within the country did not always involve geophysical surveys and aquifer mapping and as such, deriving the cost for the consultancy services from historical records led to an inaccurate budget estimate. ii) Eritrea being a transition state, the perceived and actual difficulties, cost of doing business, and logistical constraints translated into the international firms assigning relatively higher mark-ups to cover uncertainties and risks than had been envisaged at project design. iii) The cost information that had been provided and used to arrive at the cost estimate for the consultancy services was not current and had to be adjusted. Due to limited information on the sector, some of the assumptions that had been made in forecasting the current cost for the consultancy services might have been inaccurate.</p> <p>The Bank Group now proposes an additional UA 511,573 to be allocated to the GWAAMWD project. To date, an amount of UA 10,026.36 (2.14%) of the ADF PPF resources has been disbursed. There has been challenges in recruitment of the consultancy services that has resulted in delay in commencement of planned activities. In this respect, the project closing date was extended from 30 June 2018 to 31 August 2019 and is expected to be extended further to September 2020 once the request for extension of closing date is received from Government.</p> |
| <p><b>Needs Assessment</b></p> | <p>The water needs of Eritrea are almost entirely met from groundwater resources. In the present situation, groundwater development and management is the most viable solution as indicated in country reports. To date, no detailed groundwater assessment has been conducted in the country thus the urgent need for the GWAAMWD project.</p> <p>At estimated population of at least 129,000 people living within the 90 rural communities which the project targets have the lowest access levels to water supply in the country. In its endeavor to attain the Sustainable Development Goals on clean water and sanitation, Eritrea is focused on addressing the low access to water supply in its rural areas, where 65% of the populations lives, by establishing an appropriate and integrated national groundwater resource map to guide exploitation of its water resources.</p>  |



|                                       |  |
|---------------------------------------|--|
| <b>Project Outcomes</b>               | The project will develop groundwater maps for the 90 village communities and identify priority areas where sufficient yield could be expected for sustainable use as source of water supply services. The project will additionally assess the viability of the existing water management system including the tariff structure, the operations and maintenance practices in order to secure sustainable operations of the investment project to be implemented in the ensuing phase. The beneficiaries are the rural population of 90 villages who will ultimately benefit from sustainable water supply for domestic use.  |
| <b>Alignment with Bank Priorities</b> | The project is in line with the Bank's Integrated Water Resources Management Policy (2000) and the Bank Group Ten Year Strategy (TYS) 2013-2022 core operational priorities which include supporting Africa's transformation by promoting sustainable economic growth through investment in infrastructure, while enhancing inclusive growth, community participation and gender parity which will be all addressed by the project. The project will contribute to increasing food security and thus improve the quality of life for the people of Africa and food security and is therefore supported by the Bank's High Fives within the context of the YYS whose goal is to accelerate Africa's development over the next 10 years.   |
| <b>Harmonization</b>                  | Design of the project is harmonized with other partners providing support to water and sanitation service delivery. Criteria for selection of the targeted 90 rural communities comprised requirement for respective communities to: (i) have been prioritized by the government in its Medium Term Plan; (ii) have low water and sanitation coverage; and (iii) have their water and sanitation needs not being addressed by any other development partner.   |
| <b>Bank's Added Value</b>             | The Bank committed to supporting the GOSE in realizing its National Indicative Development Plan (2014 – 2018) objectives and policy issues for the water sector when it approved the initial funding in 2016. Through that support, the Bank has cemented its position as a strategic and preferred partner in the implementation of major strategic infrastructure in the region. On completion of the project, the Bank will have deployed its cumulative experience in the water sector towards enhancing appropriate and integrated national water resource information system in the country.   |
| <b>Knowledge Management</b>           | The project will ensure knowledge transfer through the recruited international engineering consulting firm, and from Bank supervisions and monitoring. The knowledge transfer mechanism is important for building capacity in the country on construction, operation, maintenance and management of groundwater supply systems. The GOSE will manage other similar water supply infrastructure systems in order to meet its targets for increasing water security in line with the Eritrean Water Resources Policy (2004). The consulting firm in consultation with the WRD - MOLWE, will develop a training plan covering all stages of the project including field activities, data collection and analysis, well construction and testing and presentation of results at key milestones. The skills transfer and knowledge building gained through this project will create a base for the implementation of the planned investment project and will also be used for future similar projects expected to be developed for the 90 rural villages. Given climate change impact assessment is an integral component of the consultancy assignment, MOLWE will develop increased capacity and knowledge to respond to and manage climate related impacts, and also increased ability to access climate change related funds. |

## RESULTS BASED LOGICAL FRAMEWORK

**Country and project name: Eritrea - Groundwater Assessment, Aquifer Mapping and Well Development (GWAAMWD) Project**  
**Purpose of the project : Supplementary Funding to the GWAAMWD Project**

| RESULTS CHAIN             |  | PERFORMANCE INDICATORS  |  |   | MEANS OF VERIFICATION  | RISKS/MITIGATION MEASURES   |                        |                      |       |                        |            |            |
|---------------------------|--|---|--|---|--|---|------------------------|----------------------|-------|------------------------|------------|------------|
|                           |  | Indicators  | Baseline   | Target  |  |   |                        |                      |       |                        |            |            |
| IMPACT                    | To contribute to improved quality of life through availability of adequate water supply and increased socio-economic benefits.   | 1. Water demand satisfied   | 58% water coverage as of 2015;   | 1. 100% water demand met by 2035;   | Utility performance report   | Reduced water resources due to climate change and uncoordinated over abstraction: This will be mitigated under the project activities which will include water resources assessments for conservation activities including groundwater recharge.  |                        |                      |       |                        |            |            |
|                           |  | 2. Improvements in quality of life statistics related to water.                   | 16% sanitation coverage as of 2015.  | 2. Quality of life statistics comparable with those of the most developed countries by 2035.  | National statistics reports  |   |                        |                      |       |                        |            |            |
| OUTCOMES                  | Improved access to safe and portable water supply in the targeted rural community villages.  | 1. Water supply coverage  | Baseline to be established (water supply and sanitation)   | Water supply and sanitation coverage increased to 100% in the target localities   | Water services performance report  | Sustainability risk will be mitigated by recommending tariff adjustment tariff and enhanced capacity of the MOLWE –WRD to manage groundwater resources.<br><br>The risk of the project not being feasible is minimal given the availability of groundwater water resources in Eritrea.<br><br>Risk of follow on phases not being implemented - Government to mobilize resources from the Bank and other partners. Furthermore, Completion of this project is expected to build confidence and attract other partners. |                        |                      |       |                        |            |            |
|                           |  | 2. Sanitation coverage<br>3. Improved institutional capacity for service delivery | No year round supply in all of the target rural communities  | Unrestricted water supply all year round  | National statistics reports  |   |                        |                      |       |                        |            |            |
| OUTPUTS                   | Groundwater assessments undertaken   | 1. No. Ground water assessment reports produced and validated                     | No groundwater assessment reports, aquifer maps and production wells.  | Groundwater assessment reports, aquifer maps for 90 villages submitted and approved. Institutional assessment done.   | Progress, disbursement and financial reports from the executing agency                             | Risk of potential project cost overruns – This is mitigated by incorporating contingencies to cover price increases and physical exigencies in the project costing.<br><br>Risk of implementation delay will be mitigated by recruiting a suitably experienced consultancy firm, close supervision by the MOLWE and oversight by Government and Bank’s supervision  |                        |                      |       |                        |            |            |
|                           | Production boreholes developed   | 2. No. of production boreholes drilled and equipped                               | No institutional assessment of the water supply and sanitation situation. Project therefore not ready for implementation | 13 production wells developed and ready for exploitation.<br><br>Completion of consultancy services within 14 months of contract award (forecast December 2020) | Bank supervision mission reports<br>Consultancy progress reports<br>Consultancy completion reports |   |                        |                      |       |                        |            |            |
| KEY ACTIVITIES            | a. Recruitment of consultants<br>b. Preparation of study reports<br>c. Organization of validation workshops<br>d. Project Management   |   |  |   |  |   |                        |                      |       |                        |            |            |
|                           | Costs (UA*)  |   |  |   |  |   |                        |                      |       |                        |            |            |
|                           | <table><tr><td>Source</td><td>Foreign currency costs</td><td>Local currency costs</td><td>Total</td></tr><tr><td>ADF TSF Pillar 1 Grant</td><td>306,666.00</td><td>205,907.00</td><td>511,573.00</td></tr></table> |   |  |   | Source   |   | Foreign currency costs | Local currency costs | Total | ADF TSF Pillar 1 Grant | 306,666.00 | 205,907.00 |
| Source                    | Foreign currency costs   | Local currency costs  | Total  |   |  |   |                        |                      |       |                        |            |            |
| ADF TSF Pillar 1 Grant    | 306,666.00   | 205,907.00  | 511,573.00   |   |  |   |                        |                      |       |                        |            |            |
| * including contingencies |  |   |  |   |  |   |                        |                      |       |                        |            |            |

\* including contingencies

## Revised Project Implementation Schedule

| Activity description                                    | Activity timeline |         |         |         |         |         |         |         |         |         |          |          |          |          |          |
|---|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|
|   | Month 0           | Month 1 | Month 2 | Month 3 | Month 4 | Month 5 | Month 6 | Month 7 | Month 8 | Month 9 | Month 10 | Month 11 | Month 12 | Month 13 | Month 14 |
| Project approval  | ■                 |         |         |         |         |         |         |         |         |         |          |          |          |          |          |
| Grant signature   |                   | ■       |         |         |         |         |         |         |         |         |          |          |          |          |          |
| Finalisation of procurement of consultancy services     | ■                 | ■       | ■       |         |         |         |         |         |         |         |          |          |          |          |          |
| Project management activities                           | ■                 | ■       | ■       | ■       | ■       | ■       | ■       | ■       | ■       | ■       | ■        | ■        | ■        | ■        | ■        |
| Monthly progress reporting                              |                   |         |         | ■       |         | ■       |         | ■       |         | ■       |          | ■        |          | ■        |          |
| Phase 1: Literature review and fieldwork preparation    |                   |         |         |         |         |         |         |         |         |         |          |          |          |          |          |
| Task 1 - Inception meeting                              |                   |         |         |         | ■       |         |         |         |         |         |          |          |          |          |          |
| Task 2 - Data collection and review                     |                   |         | ■       | ■       | ■       |         |         |         |         |         |          |          |          |          |          |
| Task 3 - Reporting (Inception report)                   |                   |         |         |         | ■       |         |         |         |         |         |          |          |          |          |          |
| Phase 2: Field investigation                            |                   |         |         |         |         |         |         |         |         |         |          |          |          |          |          |
| Task 1 - Site specific geological investigation         |                   |         |         | ■       | ■       | ■       |         |         |         |         |          |          |          |          |          |
| Task 2 - Hydrocensus                                    |                   |         |         | ■       | ■       | ■       | ■       |         |         |         |          |          |          |          |          |
| Task 3 - Site specific geophysical investigation        |                   |         |         | ■       | ■       | ■       | ■       |         |         |         |          |          |          |          |          |
| Task 4 - Climate change impact assessment               |                   |         |         |         | ■       | ■       | ■       | ■       |         |         |          |          |          |          |          |
| Task 5 - Water Governance assessment                    |                   |         |         |         | ■       | ■       | ■       | ■       |         |         |          |          |          |          |          |
| Task 6 - Stakeholder workshop                           |                   |         |         |         |         |         |         | ■       |         |         |          |          |          |          |          |
| Phase 3: Development of production wells                |                   |         |         |         |         |         |         |         |         |         |          |          |          |          |          |
| Task 1 -Procurement of contractors for well development |                   |         |         |         |         | ■       | ■       | ■       | ■       | ■       |          |          |          |          |          |
| Task 2 - Drilling and supervision of works              |                   |         |         |         |         |         | ■       | ■       | ■       | ■       | ■        | ■        | ■        |          |          |
| Task 3 - Aquifer testing                                |                   |         |         |         |         |         |         | ■       | ■       | ■       | ■        | ■        | ■        | ■        |          |
| Task 4 - Workshop                                       |                   |         |         |         |         |         |         |         |         |         |          |          |          | ■        |          |
| Task 5 - Reporting (Preliminary report and mapping)     |                   |         |         |         |         |         |         |         |         |         |          |          |          | ■        | ■        |
| Groundater resources mapping and report preparation     |                   |         |         |         |         |         |         |         |         |         |          |          |          | ■        | ■        |
| Stakeholder review                                      |                   |         |         |         |         |         |         |         |         |         |          |          |          |          | ■        |
| Finalization of reporting and mapping                   |                   |         |         |         |         |         |         |         |         |         |          |          |          |          | ■        |
| Funds disbursement                                      |                   |         |         | ■       |         | ■       |         | ■       |         | ■       |          | ■        |          | ■        |          |
| Supervision missions                                    |                   |         |         |         |         | ■       |         |         |         |         |          |          | ■        |          |          |
| Final delivery and project completion reporting         |                   |         |         |         |         |         |         |         |         |         |          |          |          |          |          |

# **REPORT AND RECOMMENDATION OF THE MANAGEMENT OF THE ADB GROUP TO THE BOARD OF DIRECTORS OF ADB AND ADF ON PROPOSED GRANT TO THE STATE OF ERITREA FOR THE SUPPLEMENTARY FUNDING OF THE GROUNDWATER ASSESSMENT, AQUIFER MAPPING AND WELL DEVELOPMENT PROJECT**

Management submits the following Report and Recommendation on proposed grant amounting to UA 511,573.00 from the resources of the TSF Pillar 1 as Supplementary Funding for the Groundwater Assessment, Aquifer Mapping and Well Development project.

## **1. INTRODUCTION**

1.1 The Interim Poverty Reduction Strategy Paper (2004) for Eritrea formulates a comprehensive economic revival program aimed at reinvigorating economic growth and in the same vein a multi-pronged poverty reduction strategy aimed at addressing the underlying causes of poverty in Eritrea. The economic revival program and strategy proposes strategies to ensure that water resources management, development and use can be sustainable, efficient and equitable.

1.2 The National Indicative Development Plan (NIDP) for the State of Eritrea maps the country's projected five-year developmental and economic growth trajectories for the period 2014-2018. The NIDP is a sequel to past transitional phases of rehabilitation and reconstruction of the socio-economic infrastructure of the country, which were destroyed during the thirty-year armed struggle of liberation as well as the border war that erupted in 1998. In the first rehabilitation and reconstruction phase of nation building, the priority tasks were the mitigation and alleviation of the suffering and deprivation wrought on the people by the vagaries of a three decades war and addressing their immediate needs. The NIDP spells out ten (10) objectives and policy issues of water sector. The eighth of which places emphasis on the need to enhance appropriate and integrated national water resource information system.

1.3 The Eritrean Water Resources Policy which was initially drafted in 2004 and redrafted in 2007 provides the overall framework for the water sector and emphasizes that the absence of a comprehensive water resources development and management policy has resulted in adverse situations on several aspects of the development and management of the nation's water resources. According to the Action Plan for Integrated Water Resources Management (2008) in Eritrea, the new draft policy has among others identified the problems of: i) Inadequate knowledge on both the surface and groundwater resource; ii) Unregulated water use practice; iii) Unsustainable and ineffective water resources management iv) Uncoordinated and disintegrated water resources management functions; v) Unavailability of standardized information exchange; vi) Inadequate awareness on the significance of water for social and economic development; vii) Poor knowledge on gender sensitivity to water resources management. In effect the policy developed guidelines on the management, development and use of the nation water resources by categorizing into thematic areas including water resources, assessment, development and protection.

1.4 The activities targeted for funding using the Transition State Facility (TSF) Pillar I Grant resources cover support for Groundwater Resources Assessment, Aquifer Mapping and Well Development (GWAAMWD) for Eritrea and is designed to prepare ground for the investment operation which has been titled the Resilient Water and Sanitation Infrastructure Support Project for Rural Communities (RWSISPRC) to be implemented in the subsequent planning phase.

## **2. INITIAL PROJECT DESCRIPTION**

### **2.1 Project linkages with country strategy and objectives**

2.1.1 The GWAAMWD Project for Eritrea is anchored in Pillar 1 of the Bank Group's Interim Country Strategy Paper 2017–2019 which promotes the country's agriculture transformation for inclusive and sustainable growth. The water needs of Eritrea are almost entirely met from groundwater resources. In the present situation, groundwater development and management is the most viable solution as indicated in country reports. To date, no detailed groundwater assessment has been conducted in the country thus the urgent need for the GWAAMWD project.

2.1.2 The RWSISPRC is in line with the Eritrean Water Vision, as defined in the Action Plan for Integrated Water Resources Management (2008), which recognizes the need to: i) efficiently and effectively use the water endowment, ii) share the resource equitably among users, iii) develop and manage water resources in a coordinated and integrated manner, iv) establish multi stakeholders' platform, v) secure alliances with other sectors and vi) sustain the vital ecosystem. It is also in line with the Bank's Integrated Water Resources Management Policy (2000) and the Bank Group Ten Year Strategy (TYS) 2013-2022 core operational priorities which include supporting Africa's transformation by promoting sustainable economic growth through investment in infrastructure, while enhancing inclusive growth, community participation and gender parity which will be all addressed by the project. Overall, the project will contribute to increasing food security and thus improve the quality of life for the people of Africa and food security and is therefore supported by the Bank's High Fives within the context of the TYS whose goal is to accelerate Africa's development over the next 10 years.

### **2.2 Project objectives**

2.2.1 The overall objective of the GWAAMWD project is to implement preliminary activities prior to actual implementation of the proposed RWSISPRC which is an investment operation. The RWSISPRC is aimed at managing and combating droughts as well as other associated slow on-set disasters through efficient allocation, redistribution, transfer, storage and efficient use of water resources. The investment project will also target development of water resources of the country for economic and social benefits of the people, on equitable and sustainable basis; and contribute to building resilience against climate variability and change.

2.2.2 The specific objectives of implementing the preparatory activities under the project are: i) to establish the available potential of the national water resources and maximize its availability for sustainable use, and ii) to assess the viability of the existing management system including the tariff structure, the operations and maintenance practices in order to ultimately secure sustainable operations of the RWSISPRC.

### **2.3 Project scope**

2.3.1 The scope of the preparatory activities includes identifying consultants to undertake detailed hydrogeological studies and aquifer mapping including geophysical surveys in 90 rural communities. The activities further include identification of priority aquifers and recruitment of a drilling firm(s) to construct production wells, test pump them and conduct water quality tests before capping in preparation for the investment operation (the RWSISPRC). The project will additionally assess the viability of the existing management system including the tariff structure, the operations and maintenance practices in order to secure sustainable operations of the investment project to be implemented in the ensuing phase.

2.3.2 A minimum of ninety (90) village communities are targeted for the aquifer mapping and detailed geophysics necessary for any future drilling firm to be adequately guided to the aquifers. The rural communities will be located in Zobas (Regional Administration) selected on the basis of the following criteria: (i) prioritized by the government in the Medium Term Plan; (ii) with low water and sanitation coverage; and (iii) where the water and sanitation needs are not being addressed by any other development partner. Thirteen (13) priority aquifers will have production wells constructed in preparation for installation of pipe network and reservoirs under the investment operation. The readiness of the 13 production wells will tremendously improve quality at entry for the follow up RWSISPRC.

2.3.3 The 90 village communities targeted have been pre-identified in readiness for endorsement upon commencement of the consultancy assignment and are located within six (6) Zobas meeting the selection criteria, namely: i) Anseba, ii) Debub, iii) Gash Barka, iv) Maekel, v) Northern Red Sea, and vi) Southern Red Sea. The populations living within these communities are estimated to be at least 129,000 people.

## 2.4 Resilience risk analysis

2.4.1 Drawing similarities to many other countries in the Horn of Africa region, Eritrea faces increased climate variability due to climate change. The result is regular and sometimes persistent drought and lack of adequate water resources for human consumption and agriculture. The project seeks to address these critical challenges by ensuring better water security to enable Eritrea attain greater food security, through improved drought resilience, expansion of irrigation agriculture, consequently achieving sustainable and inclusive growth. Key areas of the project linked to building resilience are presented in Table 1.

Table 1: Key areas of the project linked to building of resilience

| Challenge to Resilience                                | Downside risks  | Proposed project interventions to build resilience  |
|--|---|---|
| Environmental and social resilience: water scarcity    | <ul style="list-style-type: none"> <li>• High prevalence of water related diseases leading to poor health, education outcomes and reduced economic productivity.</li> <li>• Long distances between water sources and villages (3–4 km away) leading to lost time.</li> <li>• Reduced quality of life</li> </ul> | <ul style="list-style-type: none"> <li>• Development of production wells in 13 priority villages</li> <li>• Conducting of water quality tests in 13 priority villages.</li> </ul> |
| Institutional capacity: inadequate data on groundwater | <ul style="list-style-type: none"> <li>• Lack of critical decision-making information necessary for planning, monitoring and implement water and food security programmes.</li> </ul>   | <ul style="list-style-type: none"> <li>• Hydrogeological surveys and aquifer mapping in 90 villages</li> </ul>  |

2.4.2 The project will ensure knowledge transfer through the recruited international engineering consulting firm, and from Bank supervisions and monitoring. The knowledge transfer mechanism will cover all the project stages including data collection and analyses, aquifer mapping, hydrogeological investigations, groundwater monitoring, hydrogeological map development, well construction and testing. Furthermore, MOLWE staff will obtain on-the-job training on water governance assessment and climate change impact assessment, the latter which will in turn increase GOSE's ability to access climate change related funds.

## 2.5 Environmental and social impacts

2.5.1 At this stage of exploration studies, the project has been screened and assigned a Category 3 environmental and social rating given that the initial exploratory development of the 13 production wells has low environmental and social impacts. A detailed environmental and social impact assessment shall

however be undertaken following confirmation of the suitability of the test wells for full-scale production through a stand-alone investment project finance to ensure compliance of the well-field development with the Bank's Environmental and Social requirements.

## **2.6 Gender**

2.6.1 This project has been categorized as Category 4 in accordance with the Gender Marker. However, the study will ultimately lead to improved access to safe, clean water, which has a clear gender impact, given the responsibility women face in obtaining water for the household and the significant time wasted and security risks they face in traveling long distances to search for it. The 2007 Water Policy of Eritrea was intended to ensure that women are part of decision-making, management and maintenance of water supply, as well as ensuring gender-inclusive approaches to integrated planning. This project will ensure that stakeholder consultations occur with participation of female and youths and other marginalized groups.

## **2.7 Project implementation status**

2.7.1 Conditions: The African Development Fund (ADF) PPF Advance of an amount of Bank Unit of Accounts (UA) 467,860 was approved on 18 November 2016, and entered into force upon signature on 3 April 2017. The conditions precedent to the first disbursement of the PPF Advance were fulfilled on 9 May 2017.

2.7.2 Project progress: Procurement of the consultancy services for hydrogeological survey, aquifer mapping and supervision of development of production wells is currently at contract negotiation stage. This is the main procurement activity and is on the critical path. The remaining procurement is for contractor(s) for developments of the production wells. To date the overall rate of absorption of project resources under the financing is UA 10,026.36 (or 2.14%) over a period of twenty-four (24) months. The slow disbursement is due to the significant delays in the procurement of the consultancy services. It is expected that the closing date of the project will be extended to September 2020 to enable completion of all outstanding project activities.

2.7.3 The Project Coordination Unit (PCU) under the MOLWE at the national level of the Water Resources Department has been established and comprises the project coordinator who is a hydrogeologist and two focal officers, namely: i) Procurement officer, ii) Administrative and Finance officer.

## **3. PROPOSED SUPPLEMENTARY FUNDING**

### **3.1 Justification for supplementary funding**

3.1.1 The tender for the hydrogeological consultancy services was launched in March 2017. In July 2017, six (6) firms out of the thirty- three (33) firms that expressed interest in the assignment were shortlisted. Only three (3) firms out of the six (6) short listed firms responded by submitting their technical and financial proposals by the set submission deadline of 1700 hours Local Time of 26 August 2017. All the three firms qualified for the financial opening stage of bids and were evaluated and ranked accordingly. The Bank gave a "no objection" to the PCU to proceed to conduct the financial evaluation and the combined technical and financial evaluation of the bids in October 2017. This was followed by negotiation for contract award which has been prolonged due to the funding shortfall. So far, the bid validity has been extended thrice.

3.1.2 The project is facing a financial gap given that the proposals of all the three (3) firms that qualified for the financial evaluation stage of the tender for consultancy services for hydrogeological surveys,

aquifer mapping and supervision of well development exceed the budgetary allocation of UA 156,489 (approximately USD 216,160). The State of Eritrea consequently wrote to the Bank (letter provided in Annex 1) requesting for supplementary funding of an amount of USD 575,617 (approximately UA 415,380) to bridge the financial gap.

3.1.3 The Bank reviewed the request made by the State of Eritrea and observed that the budget estimate of UA 156,489 including contingencies (approximately USD 216,159) for the consultancy services was exceeded by all the three consultancy firms who were recommended to proceed to the financial evaluation stage of the tender. The consultancy services is critical for the completion of the project and is scheduled to be implemented over a period of fourteen (14) months.

3.1.4 The contract negotiation with the best-evaluated bidder at a tender sum of USD 543,166.67 was unsuccessful following their repeated failure to respond to the PCU's requests to sign the contract agreement. The Bank consequently issued a "no objection" to the PCU to terminate the contract negotiation and proceed to negotiate the contract with the second best evaluated bidder at a contract sum of no more than USD 791,777.00.

3.1.5 Re-launching of the selection process cannot be opted as a best choice taking into account considerable time has already elapsed since the previous procurement process was started in March 2017. Additionally, the bid price of the third ranking firm is USD 910,258.00 implying a significant difference of USD 118,481 between the bid prices of the second and third ranking firms. The second best evaluated bidder has also agreed to extend their bid validity period to 30 September 2019 and has additionally confirmed the validity of the tender sum of USD 791,777.00 indicating that some proportion of the fee is however expected to change due to the extended period of negotiation as a result of inflation.

3.1.6 The Bank project preparation mission team held discussions with officials of the Water Resources Department (WRD) of the MOLWE with a view to establish the rationale for the supplementary funding which translates to over thrice the initial budget estimate for the consultancy services. The findings are as follows:

- i) The costing for the consultancy services was based on a unit rate for hydrogeological survey for the 90 village communities and supervision of development of 13 wells but did not factor in the costs for geophysical investigations, aquifer mapping, and data collection for assessment of issues pertaining to water governance and climate change impact within the targeted 90 village communities. The scope of the consultancy assignment as had been agreed with the MOLWE officials at project appraisal was however adequately defined in the project document including the Terms of References for the consultancy services. This omission might have stemmed from the fact that previous groundwater studies undertaken within the country did not always involve geophysical surveys and aquifer mapping and as such, deriving the costs for the consultancy services from historical records led to inaccurate cost information. However, geophysical surveys are important in that geophysical measurements are used to determine the thickness of the underlying formations, their potential as aquifers, and the expected quality of groundwater in these formations. Aquifer maps define the aquifer systems and well fields, establish their respective extent, potential recharge, and flow directions which helps in securing sustainability of the wellfields.
- ii) The technical capacities of the five (5) local firms that participated in the expression of interest for the consultancy assignment has been re-assessed and has been found that the six (6) international firms that had been shortlisted demonstrate adequate technical capacity and previous experience for the assignment as opposed to the local firms. Further, it is acknowledged that Eritrea being a transition state, the perceived and actual difficulties, cost of doing business, logistics and the



diverse locations of the 90 targeted village communities might have translated in the international firms assigning relatively higher mark-ups to cover uncertainties and risks.

- iii) At the time of project preparation, there were no previous examples of similar projects implemented within the country and the cost information that had been provided was not current. The cost estimate for the consultancy services, although based on the available local market information, was adjusted to reflect the current market situation. It is however acknowledged that due to limited information on the sector, some of the assumptions that had been made in forecasting the cost for the consultancy services might have been inaccurate.

3.1.7 In respect of the findings, a review of the budget for the consultancy services has been done. The revised cost estimate for the consultancy assignment is UA 646,000 including a total of 20 per cent price and physical contingencies. The proposed supplementary funding will be used to bridge the funding deficit for the consultancy services and the initial budget allocation for the consultancy services add up to USD 791,777 (approximately UA 571,366.61) and is within range of the revised budget for the consultancy services.

3.1.8 The cost estimates of the other categories of expenditure under the GWAAMWD project including: i) cost of development of 13 production wells ii) Audit iii) Office Operation iv) MOLWE staff fieldwork activities have also been reviewed. The initial cost estimates in the case of the first two expenditure categories have been validated given the availability of local firms with adequate technical capacity to undertake the assignments, as well as the fact that costing has been based on available current market information. Similarly, estimates for the operational costs have not been adjusted as it is expected that there will be minimal changes in the initially planned field and office activities under the project. The proposed supplementary funding of UA 511,573.00 would result in a total project sum of UA 978,540.

3.1.9 In addition, the project complies with the conditions stipulated under Section 4.15 of the Bank Group Policy and Procedures for Supplementary Financing for Bank assisted Projects. In particular, the overall supervision rating of the Project is projected to be “satisfactory”. The GOSE is also making a determined effort towards national development in general and towards the mobilization of internal and external resources towards implementation of the follow on project; Through capacity building initiatives, efforts are being made to ensure that the implementation environment in the country are favorable;

3.1.10 It is also worthy to note that the cost overrun cannot be met by the GOSE. Moreover, the GOSE has not been able to find other financiers and has provided justification for the request for additional Bank Group Financing (Annex I). The Bank project team also confirms that it is not been possible to reduce the total cost of the Project through changes of specifications or scope of work or services without significantly affecting the objective and viability of the Project. However, the Project is deemed technically, commercially and financially viable even with the cost overruns; given no other exogenous constraints; financial, managerial or technical that would hinder the completion of the Project.

3.1.11 *Counterpart funding and co-financing with other development partners:* The GOSE has shown commitment to the implementation of the project and has indicated that they will seek to secure funding from various sources to implement the RWSISPRC and for the other similar projects that will emanate from the groundwater study reports to be generated under the project. The Bank also engaged with other development partners active in the country with a view to secure their commitment to co- finance the follow on investment project which is planned for the ensuing planning period. So far, World Bank has expressed willingness to collaborate with the Bank. Other activities of Development Partners in the countries in recent past include the Rural WASH projects being undertaken by UNICEF in selected rural villages. In addition, World Bank conducted a scoping mission focusing on water based rural resilience and to understand the overall water supply and sanitation sector in the country in February 2019.

## 3.2 Revised project financing and cost structure

3.2.1 The initial total project cost, net of taxes and duties, was estimated at UA 467,860, of which UA 255,080.52 is in foreign currency and UA 212,779.48 in local currency. In order to ensure smooth implementation of the project, this supplementary financing will be used to fully finance the budgetary deficit in the consultancy services. The revised project cost estimate is based on the revised cost estimates for the consultancy services, the cost estimates for the development of 13 production wells still to be tendered for and for the project management activities including the

external audit. The estimates include a 7 per cent price and a 5 per cent physical contingency. The following tables show the revised cost estimates and financing arrangements for the GWAAMWD project.

Table 2: Revised project cost estimates by component

| Item Description  | Unit     | Qty | USD       | Amount in UA equivalents |                   |                   |                   |
|---|----------|-----|-----------|--------------------------|-------------------|-------------------|-------------------|
|   |          |     | Unit cost | Unit cost                | Total cost        | Foreign cost      | Local cost        |
| <b>A. CONSULTANCY SERVICES</b>  |          |     |           |                          |                   |                   |                   |
| Hydrogeological surveys and aquifer mapping including geophysical site location, data collection and analyses | Nos      | 90  | 8,000.00  | 5,773.01                 | 519,570.49        | 311,742.29        | 207,828.20        |
| Supervision of development of production wells (new priority villages)  | Nos      | 13  | 2,000.00  | 1443.25                  | 18,762.27         | 11,257.36         | 7,504.91          |
| <b>Subtotal consultancy</b>   |          |     |           |                          | <b>538,332.76</b> | <b>322,999.65</b> | <b>215,333.10</b> |
| <b>WORKS</b>  |          |     |           |                          |                   |                   |                   |
| Construction of production wells including test pumping/WQ and capping  | Nos      | 13  | 25,000.00 | 18,040.64                | 234,528.35        | 140,717.01        | 93,811.34         |
| <b>Subtotal works</b>   |          |     |           |                          | <b>234,528.35</b> | <b>140,717.01</b> | <b>93,811.34</b>  |
| <b>C. OPERATION COSTS</b>   |          |     |           |                          |                   |                   |                   |
| Office operation  | Lump sum | 1   | 22,017.59 | 15,888.46                | 15,888.46         |                   | 15,888.46         |
| Audit   | Lump sum | 1   | 7,000.00  | 5,051.38                 | 5,051.38          |                   | 5,051.38          |
| GOSE Staff (field work)   | Lump sum | 1   | 30,000.00 | 21,648.77                | 21,648.77         |                   | 21,648.77         |
| <b>Subtotal operation</b>   |          |     |           |                          | <b>42,588.61</b>  |                   | <b>42,588.61</b>  |
| <b>Subtotal all components</b>  |          |     |           |                          | <b>815,449.71</b> | <b>463,716.66</b> | <b>351,733.05</b> |
| Price contingency   |          | 5%  | n/a       | n/a                      | 40,772.49         | 23,185.83         | 17,586.65         |
| Physical contingency  |          | 15% | n/a       | n/a                      | 122,317.80        | 73,390.68         | 48,927.12         |
| <b>Subtotal contingencies</b>   |          |     |           |                          | <b>163,090.29</b> | <b>96,576.51</b>  | <b>66,513.77</b>  |
| <b>Total project cost</b>   |          |     |           |                          | <b>978,540.00</b> |                   |                   |
| <b>Total Government Request</b>   |          |     |           |                          | <b>877,095.00</b> |                   |                   |

Table 3: Costs by categories of expenditures (amounts in UA equivalents)

| No | Categories of expenditures | Amount of the Project Cost in UA |                   |                   |
|----|----------------------------|----------------------------------|-------------------|-------------------|
|    |                            | Foreign exchange                 | Local currency    | Total amount      |
| 1. | Consultancy services       | 322,999.65                       | 215,333.10        | 538,332.76        |
| 2. | Works                      | 140,717.01                       | 93,811.34         | 234,528.35        |
| 3. | Operation costs            | 0                                | 42,588.61         | 42,588.61         |
| 4. | Contingencies              | 96,576.51                        | 66,513.77         | 163,090.29        |
|    | <b>Total</b>               | <b>560,293.17</b>                | <b>418,246.82</b> | <b>978,540.00</b> |

### 3.3 Financing plan

Table 4: Categories of expenditures by source of financing (amounts in UA equivalents)

| No | Categories of expenditures | ADF PPF Advance<br>(Original Financing) |                   | TSF Grant<br>(Supplementary Financing) |                   | Total amount      |
|----|----------------------------|---|-------------------|--|-------------------|-------------------|
|    |                            | Foreign exchange                        | Local currency    | Foreign exchange                       | Local currency    |                   |
| 1. | Consultancy services       | 83,833.46                               | 55,888.97         | 239,166.19                             | 159,444.13        | 538,332.76        |
| 2. | Works                      | 140,717.01                              | 93,811.34         | 0.00                                   | 0.00              | 234,528.35        |
| 3. | Operation costs            | 0.00                                    | 42,588.61         | 0.00                                   | 0.00              | 42,588.61         |
| 4. | Contingencies              | 30,076.71                               | 20,051.14         | 66,499.80                              | 46,462.63         | 163,090.29        |
|    | <b>Total</b>               | <b>254,627.18</b>                       | <b>212,340.06</b> | <b>305,666.00</b>                      | <b>205,906.76</b> | <b>978,540.00</b> |

Table 5: Sources of financing (amounts in UA equivalents)

| Sources of financing                    | Foreign currency costs | Local currency costs | Total costs    | Percentage (%) |
|---|------------------------|----------------------|----------------|----------------|
| ADF PPF Advance<br>(Original Financing) | 254,627.00             | 212,340.00           | 466,967.00     | 47.72%         |
| TSF Grant<br>(Supplementary Financing)  | 305,666.00             | 205,907.00           | 511,573.00     | 52.28%         |
| GOSE                                    | 0.00                   | 0.00                 | 0.00           | 0.00%          |
| <b>Total project cost</b>               | <b>560,293.17</b>      | <b>418,246.82</b>    | <b>978,540</b> | <b>100.00%</b> |

### 3.4 Bank group experience, lessons reflected in project design

3.4.1 As at end of May 2019, the Bank's portfolio in Eritrea comprised seven (7) operations of which six (6) are national projects and one is a multinational project, amounting to a total net commitment of UA 47.48 million. The GWAAMWD project is the only operation in the water supply and sanitation sector in the current portfolio and accounts for about 1% by value of the total net commitment. The performance of the Bank's portfolio in the country is assessed to be satisfactory with an average rating of 3 (on a scale of 1 to 4), and with a cumulative disbursement of 25%. There is no outstanding Project Completion Report and Conditions Precedent to First Disbursement for all ongoing operations in the sector have been fulfilled. Bank interventions in the water and sanitation sector will improve access to clean and safe water and sanitation facilities of agribusiness centers/zones, industrial parks, business centers and underserved households, particularly in underserved rural areas.

3.4.2 For this supplementary financing on an ongoing project, lessons learnt on the project to-date were useful in determining improvements to the implementation process. This is in addition to earlier lessons documented in the initial PPF Proposal.

3.4.3 **Lesson 1** - Lack of project management capacity in project implementing agencies has been the biggest drawback in the implementation of Bank funded projects. In this respect, criteria for the technical evaluation of tenders for the consultancy services included provision of a knowledge transfer program to

the implementing agency. Through the consultancy services, this project will support the MOLWE in building the required capacity through knowledge and skills transfer to be attained from on-the-job experience and from working collaboratively with the experts. The knowledge transfer mechanism will cover all the project stages including data collection and analyses, aquifer mapping, hydrogeological investigations, groundwater monitoring, hydrogeological map development, well construction and testing. Indeed, the international consulting firm has affirmed that capacity building and training is inherent in all their field-based tasks, and that they will strongly encourage participation of local representatives to ensure that knowledge is transferred at each stage of the project. Further, during the project technical launch in March 2018, the PCU was trained on Bank Rules and Procedures for Financial Management, Disbursement and Procurement. However, the inadequate capacity on Bank Disbursement Rules and Practices is still evident given the quality of disbursement applications processed so far and the challenges faced by the PCU in submitting expenditure justifications on funds that are advanced to the special account. Accordingly, a refresher training to the PCU on Bank Disbursement Rules and Procedures is recommended and is scheduled to be held during the quarter 3, 2019 supervision mission.

**3.4.4 Lesson 2** - Identification of future interventions is critical for long-term sustainability of sector programs and strategies. The Bank has actively been incorporating studies and preparations of future interventions into new projects. In line with that thrust, and based on the unique climatic challenges of Eritrea, this project will undertake groundwater potential studies in 90 community villages located within 6 Zobas. 13 priority production wells will be developed in readiness for full-scale production as water abstraction points under the RWSISPRC which is to follow. Availability of groundwater resource maps for the 90 communities will also position GOSE to prepare other similar interventions to address the water challenges for the long term. This approach helps the Bank and the Regional Member Countries to create and maintain healthy pipelines of projects in line with their development thrusts and focus. This further helps with ensuring that projects are properly prepared hence improving quality at entry.

**3.4.5 Lesson 3** - The final lesson pertains to arriving at judicious project cost estimates in situations where information and data on the sector is limited. When the financial proposals for all firms qualifying for the financial opening stage of the tender were found to far exceed the initial budget for the consultancy services, a key consideration for the Bank was to relaunch the tender and prepare a national shortlist of consultancy firms capable of undertaking the assignment at more or less the initial cost estimate. However, upon review, it was found that the cost information that had been used for the budget estimate was inaccurate. This, coupled with the fact that the short-listed international firms had demonstrated stronger experience, including for knowledge transfer, for the assignment than the local firms negated the need for relaunching the tender. A key lesson therefore is that in contexts where information and data on the sector is limited, cost information must be adequately examined and comparisons made to international cost estimates for similar assignments. In such contexts, the technical capacity of shortlisted firms must be guaranteed as a measure for quality assurance of project outputs. Additionally, for purposes of skills transfer, the participating bidders must clearly outline their training plans for the benefit of staff of the project implementing agency at project implementation.

## **3.5 Procurement arrangements**

### **3.5.1 General**

GOSE has not undertaken any procurement reforms so far and is yet to draft a public procurement law. No assessment has therefore been conducted for the country and there is no Country Procurement Assessment Report or National Competitive Bidding (NCB) Assessment Reports prepared so far. In light of the foregoing, all procurement of goods, works under Open Competitive Bidding (OCB) and acquisition of consulting services will be carried out in accordance with the Bank's Procurement Policy

for Operations funded by the Bank Group dated October 2015 and as amended from time to time. Additionally, the relevant Bank Standard Bidding Documents (SBD) and provisions stipulated in the Legal Agreement will be used.

### 3.5.2 Works

Procurement of civil works valued at UA 281,434 will be carried out using OCB (International) using the Bank's SBD. Works to be procured under this method will include construction of production wells including test pumping, water quality testing and well capping.

### 3.5.3 Consulting services

The acquisition of consultancy services for hydrogeological surveys, aquifer mapping including geophysical site location, data collection and analyses, and supervision of development of production wells valued at UA 646,000 is being carried out using the selection procedure based on Quality and Cost Based Selection (QCBS). The Project audit services valued at UA 6,062 will be procured using Least Cost Selection (LCS) method.

### 3.5.4 Project management

Project management will include operating costs, audit and field work costs valued at UA 51,106 in total. These activities will be procured using the Borrower's Procurement System.

Table 6: Summary of procurement arrangements

| Project categories             |   | *UA '000     |                          |             |                   |
|--------------------------------|---|--------------|--------------------------|-------------|-------------------|
|                                |   | Use of BPS   | Use of Bank's procedures |             |                   |
|                                |   |              | QCBS                     | LCS         | OCB International |
| <b>1. Consultancy services</b> |   |              |                          |             |                   |
| 1.1                            | Hydrogeological surveys and aquifer mapping including geophysical site location, data collection and analyses, and supervision of development of production wells (new priority villages) |              | 646.00                   |             |                   |
| <b>2. Works</b>                |   |              |                          |             |                   |
| 2.1                            | Construction of production wells including test pumping, water quality testing and well capping   |              |                          |             | 281.43            |
| <b>3. Project management</b>   |   |              |                          |             |                   |
| 3.1                            | Operation costs   | 19.07        |                          |             |                   |
| 3.2                            | Field work  | 25.98        |                          |             |                   |
| 3.3                            | Audit   |              |                          | 6.06        |                   |
| <b>TOTAL</b>                   |   | <b>45.05</b> | <b>646.00</b>            | <b>6.06</b> | <b>281.43</b>     |

\*Figures in the table are inclusive of price and physical contingencies

### 3.5.5 Prior/Post review

All procurement of goods, works and acquisition of consulting services will be carried out in accordance with the Bank's Procurement Policy for Bank Group Funded Operations dated October 2015 and will be subject to prior review.

### 3.5.6 Procurement Plan

The Recipient, during project preparation and appraisal, developed a detailed Procurement Plan (PP) covering the entire scope of implementation of the project, and which has provided the basis for the procurement arrangements in this project proposal. The PP has been agreed between the Recipient and the Bank and is available at the MOLWE Office, Asmara. It will also be available in the project's database and in the Bank's external website. A simplified PP is attached in this document as Annex II. The detailed PP will be updated by the Borrower annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. Any revisions proposed to the PP shall be submitted to the Bank for its prior no objection. The Borrower shall implement the PP in the manner in which it has been agreed with the Bank.

## 3.6 Revised implementation schedule

3.6.1 The project activities were initially scheduled to be carried out within twelve (12) calendar months after the date of signing the agreement with the actual consultancy period running over six (6) calendar months whereas the well development works to be done over five (5) calendar months. However due to start-up challenges, there were delays in recruitment of the consultant for the hydrogeological survey, aquifer mapping and supervision of well development which necessitated a time extension of fourteen (14) calendar months following expiry of the project closing date on 30 June 2018. The project closing date was consequently extended to 31 August 2019. The PCU has however been advised to seek a further time extension in compliance with the revised programme of activities. Figure 4 presents the revised project implementation schedule.

Table 7: Key monitoring activities for the implementation of procurement contracts under supplementary financing

| <b>Milestone</b>                              | <b>Timeframe</b>                   | <b>Monitoring process/feedback loop</b>                 |
|---|------------------------------------|---|
| Project preparation                           | Quarter 2, 2019                    | Draft project document                                  |
| Approval                                      | Quarter 3, 2019                    | Approved project document                               |
| Signature of Loan Agreement                   | Quarter 4, 2019                    | Signed loan agreement                                   |
| Procurement of consultancy services completed | Quarter 4, 2019                    | Signed contract document                                |
| Stakeholders workshop                         | Quarter 2, 2020                    | Stakeholders workshop report                            |
| Procurement of contractors completed          | Quarter 2, 2020                    | Signed contract documents                               |
| Supervision missions                          | Quarter 4, 2019<br>Quarter 2, 2020 | Supervision and implementation project progress reports |
| Annual progress reporting                     | Quarter 1, 2021                    | Annual progress report                                  |
| Project completion reporting                  | Quarter 1, 2021                    | Project activity completion report                      |

### **3.7 Financial management arrangements**

3.7.1 The Financial Management arrangement under the PPF will apply to this supplementary TSF Grant funding. The Project will make partial use of the Country Systems which shall be augmented by the Bank Rules and Procedures. The Director General (DG) of the Water Directorate, MOLWE will be the accounting officer for the project. The Finance Officer, who is part of the existing PCU and currently executing the FM function under the PPF, will be responsible for the day-to-day FM under this additional funding. The Finance Officer will functionally report to the Head of Finance and Administration in the MOLWE and will administratively report to the Project Manager.

3.7.2 The PCU shall ensure that the accounting, administrative and financial procedures documented in the Finance Disbursement and Finance Code Manual are adhered to, as well as the Bank's FM Policy and Guidelines (2014). The PCU shall maintain adequate internal controls and supporting documentation for all transactions financed under the Project. In light of the small size and nature of the transactions, a manual accounting system, which uses MS-Excel spreadsheets, will be used to capture accounting transactions under the Project. The project will be included in the MOLWE internal audit programs and the internal auditors will conduct regular audits of the processes, procedures and activities.

3.7.3 The Recipient shall prepare interim financial reports (IFR) as required by the Bank. The PCU shall ensure that transactions financed with the TSF Pillar 1 Grant are consolidated and reported together with the PPF transactions. The consolidated IFR will be prepared and transmitted to the Bank no later than forty five (45) Days after the end of each calendar semester (6 months), covering the semester, and will utilize a simplified IFR format. The Project Financial Statements (PFS) will be prepared by the MOLWE in accordance with the International Public Sector Accounting Standards cash basis. In line with the Bank's financial reporting guidelines for small operations, the PFS shall cover the entire period of utilization of the Grant proceeds. The Project financial statements will comprise of the Statement of Financial Assets and Liabilities, Statement of Receipts and Payments, Statement of Cash flows, Statement of Comparative Budget and Actual Amounts and a Summary of significant accounting policies and other explanatory information.

### **3.8 Disbursement arrangements**

3.8.1 Disbursements of the grant shall be made in accordance with the Bank's Disbursement Rules and Procedures. The project shall make use of the direct method since the supplementary financing is solely for bridging the financing gap in the consultancy services contract for hydrogeological surveys, aquifer mapping and supervision of well development. However, the other three (3) disbursement methods of the Bank, namely the Special Account Method, Reimbursement Method and the Reimbursement Guarantee Method, can be used upon request and approval by the Bank.

### **3.9 Audit arrangements**

3.9.1 The Project shall be subject to one independent audit review conducted by a competitively recruited Practitioner, based on the Bank's Standard Terms of Reference to Review Financial Statements of Small Operations and Trust Funds. The review shall be carried out in accordance with the International Standards on Review Engagement (ISRE 2400). The Review Report shall comprise of the Financial Statements and a management letter, complete with management responses and shall be submitted to the Bank no later than six (6) months after Project Completion.

3.9.2 The proposed financial management arrangements for the project do satisfy the minimum requirements based on Bank's FM Implementation Guidelines (2014) and therefore are adequate to

provide, with reasonable assurance, accurate and timely information on the status of the project required by the Bank. The project financial management risk is Moderate.

### 3.10 Risk management

Table 8: Risks and mitigation measures

| <b>Risk</b>   | <b>Risk mitigation measures</b>   |
|---|---|
| Reduced water resources due to climate change and uncoordinated over -abstraction | The project activities will include water resources assessments and recommend conservation activities.  |
| Operational sustainability risk   | Recommending tariff adjustment tariff and enhanced capacity of the MOLWE –WRD to manage groundwater resources.  |
| The risk of the project not being feasible  | This is minimal given the availability of groundwater water resources in Eritrea.   |
| Risk of follow on phases not being implemented                                    | The Bank and the Government will continue to engage with potential co-financiers to mobilize resources for follow on phases. Completion of this project is expected to build confidence and attract other partners. |
| Potential cost overruns   | Project costing incorporate contingencies to cover price increases and physical exigencies.   |
| Risk of implementation delay  | This will be mitigated by recruiting a suitably experienced consultancy firm, close supervision by the MOLWE and oversight by Government and Bank’s supervision   |

## 4. LEGAL AND COMPLIANCE SECTION

The Legal Instrument for the Project financing is TSF Pillar I Grant amount to UA 511,573.00 and the Protocol of Agreement will be signed between the Bank and the Recipient.

### 4.1 Conditions associated with the Bank’s Intervention

4.1.1 *Condition Precedent to Entry into Force:* The Protocol of Agreement shall enter into Force on the date of its signature by the Recipient and the Bank.

4.1.2 *Condition precedent to the First Disbursement:* The obligation of the Bank to make the first disbursement of the TSF Grant Pillar I shall be conditional upon the entry into force of the Protocol of Agreement.

### 4.2 Undertakings

4.2.1 In order to ensure compliance with the provisions of Bank Operational Safeguard 1 of the Integrated Safeguard System, the project shall ensure compliance with the following requirements:

- (i) Not later than six (6) months after entry into force of the Protocol of Agreement, submission of a copy of the abstraction permit/license from the environmental regulator to the Bank.



- (ii) Ensure that the applicable water quality standard for wholesomeness under the Project is in compliance with the World Health Organization standard.
- (iii) The Recipient shall not, and shall cause the Executing Agency and all its contractors, sub-contractors and agents not to commence any works for the exploratory phase or any works on any section under the Project, that may result in any resettlement for the Project Affected Persons without notification to the Bank.

#### **4. RECOMMENDATION**

Management recommends that the Boards of Directors approve the TSF Pillar I Grant of UA 511,573.00 to the State of Eritrea for the Supplementary Funding of the Groundwater Assessment, Aquifer Mapping and Well Development project and subject to the conditions stipulated in this report.

## Annex I: The State of Eritrea's request for supplementary funding

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The State of Eritrea  
Ministry of Finance

دولة إرتريا  
وزارة المالية

Date: 25 June 2018  
Ref. №: MO/CB46/0856/2018

To: - **Mr. Gabriel NEGATU**,  
Director General, Regional Director General East  
African Development Bank (AfDB),  
Khushee Towers, Longonot Road Plot 11, Upper Hill  
P.O Box 4861-000200, Nairobi, Kenya  
Fax: +254 20 271 2938

Subject: **Eritrea:Ground Water Assessment, Aquifer Mapping and Well  
Development Project  
Request for i) additional funding and ii)Extension of Closing Date of  
the Project**

Dear Mr. NEGATU,

With reference to your letter dated 15 May 2018 (Ref. AfDB/ RDGE/LTR/2018/05/046) to our Water Resource Department (WRD) - Ministry of Land, Water & Environment and the recent AfDB's Supervision Mission outcomes & recommendations, the project is facing a financial gap given the proposals of all the three firms that had qualified for financial evaluation stage of the tender exceeded the UA 156,489 (USD\$ 216,160). It is also now not practical that the project to be implemented before the original scheduled closing date June 30, 2018 due to the unsuccessful contract negotiation with the best evaluated bidder.

In view of the above, in order to proceed with contract negotiation with the second best evaluated bidder, at a contract sum of not more than USD 791,777 extending the closing date of the project is vital. As indicated in your letter, the WRD has officially informed the firm Water Survey (Botswana) the negotiation has been terminated as of 12 June 2018 because of their non-responsiveness to sign the contract. The WRD has also communicated the firm WSP Parsons Brinckerhoff – IGS-UMVOTO (South Africa), the second best bidder, whether the tendered price as at August 2017 (i.e. USD\$ 791,777) remains valid and the firm has confirmed the offer is valid (see attached letters).

Hence, we hereby formally request the African Development Bank for additional financing for the consultancy services amounting USD\$ 575,617 and to extend the closing date of the project to fourteen (14) months up to August 31, 2019 in order to implement the preparatory activities under the Project Preparation Facility (PPF).

Thanking you for your usual cooperation,



Sincerely,

*Berhane Habtemariam*  
Berhane Habtemariam  
Minister

cc:

- H.E. Tesfai Gebreselassie  
Minister of Land, Water and Environment  
Asmara

## Annex II: Simplified procurement plan

### Works

| Package description                     | Lot | Estimated Amount UA'000 | Procurement Method | Domestic or Regional Preference | Prior or Post Review | SPN Publication Date | Contract Start Date |
|---|-----|-------------------------|--------------------|---------------------------------|----------------------|----------------------|---------------------|
| Construction of production wells (Lots) |     | 281.43                  | OCB International  | No                              | Prior                | 3-Feb-20             | May 2020            |
| <b>Total</b>                            |     | <b>281.43</b>           |                    |                                 |                      |                      |                     |

### Consulting services

| Description   | Selection Method | Lump sum or Time-Based | Estimated Amount UA'000 | Prior/ Post Review | EoI Publication Date | Contract Start Date | Comments                             |
|---|------------------|------------------------|-------------------------|--------------------|----------------------|---------------------|--------------------------------------|
| Hydrogeological surveys (including geophysical site location), aquifer mapping, data collection and analyses, and supervision of construction of production wells | QCBS             | Lump Sum               | 646.00                  | Prior              | 14-Mar-17            | November 2019       | Contract currently under negotiation |
| Project audit   | LCS              | Lump Sum               | 6.06                    | Post               | 11-Feb-20            | August 2020         | -                                    |
| <b>Total cost</b>   |                  |                        | <b>652.06</b>           |                    |                      |                     |                                      |

## BOARDS OF DIRECTORS

**Resolution N° B/ER/2019/67 – F/ER/2019/66**

Adopted by the Boards of Directors of the Bank and the Fund, on a lapse-of-time basis, on 26 September 2019

**Supplementary Financing: Grant to the State of Eritrea from the resources of the Transition Support Facility, to finance part of the costs of the Groundwater Assessment, Aquifer Mapping and Well Development Project****THE BOARDS OF DIRECTORS,**

**HAVING REGARD** to: (i) Articles 1, 2, 32 and 37 of the Agreement Establishing the African Development Bank (the “Bank”); (ii) Articles 1, 2, 26 and 30 of the Agreement Establishing the African Development Fund (the “Fund” or “ADF”); (iii) the Report on the Fourteenth General Replenishment of the Resources of the Fund (“ADF-14”); (iv) the Operational Guidelines for the Implementation of the Strategy for addressing Fragility and building Resilience in Africa and for the Transition Support Facility (the “TSF Operational Guidelines”); (v) the Bank Group Policy and Procedures for Supplementary Financing; and (vi) the appraisal report contained in Document ADB/BD/WP/2019/204/Approval - ADF/BD/WP/2019/139/Approval (the “Appraisal Report”);

**RECALLING:**

- (i) Resolution N° B/BD/2008/05 - F/BD/2008/03 approved by these Boards on 28 March 2008 establishing the Fragile States Facility;
- (ii) Document ADB/BD/WP/2014/46/Rev.2 - ADF/BD/WP/2014/30/Rev.2 entitled “Addressing Fragility and Building Resilience in Africa: The African Development Bank Group Strategy 2014 – 2019”;
- (iii) Document ADB/BD/WP/2017/175 - ADF/BD/WP/2017/123 as well as its corrigendum entitled “Fourth Cycle Assessment of Eligibility for Countries to the Transition Support Facility (TSF) Supplemental Support Funding (Pillar I) Resources” which confirmed, *inter alia*, the eligibility of the State of Eritrea to receive financing from the TSF Supplemental Support Window (Pillar I); and
- (iv) The advance of an amount not exceeding the equivalent of Four Hundred, Sixty Seven Thousand, Eight Hundred and Sixty Units of Account (UA 467,860) granted to the State of Eritrea on 18 November 2016, from the resources of the ADF Project Preparatory Facility advance (PPF) to finance part of the costs of the Groundwater Assessment, Aquifer Mapping and Well Development Project (the “Project”);

**HAVING CONSIDERED** the recommendations and justifications set out in the Appraisal Report concerning the provision of supplementary financing for the Project;

**DECIDE** as follows:

1. To award to the State of Eritrea (the “Recipient”), from the resources of the TSF Supplemental Support Window (Pillar I), a grant of an amount not exceeding the equivalent of Five Hundred and Eleven Thousand, Five Hundred and Seventy Three Units of Account (UA 511,573 (the “Grant”) as supplementary financing for part of the costs of the Project;
2. To authorize the President to conclude a protocol of agreement amongst the Bank, the Fund and the Recipient (the “Protocol of Agreement”), on the terms and conditions specified in the General Conditions Applicable to Protocols of Agreement for Grants of the African Development Fund, the TSF Operational Guidelines and the Appraisal Report;
3. The President may cancel the Grant if the Protocol of Agreement is not signed within ninety (90) days from the date of approval of the Grant by these Boards; and
4. This Resolution shall become effective on the date above-mentioned.