



**Adaptation Programme and Financing Mechanism (AP&FM)
For the Pilot Programme for Climate Resilience Jamaica
(JA-L1048/ JA-G1002)**

**Terms of Reference
Consultant Engineer**

1.0 Background

The Government of Jamaica (GOJ) has secured funding from the Climate Investment Fund (CIF) through the Inter-American Development Bank (IDB) to the tune of US\$ 17.896M; to finance the project entitled Adaptation Programme and Financing Mechanism (APFM) for the Pilot Programme for Climate Resilience (PPCR) Jamaica (JA-L1048/JA-G1002). This project was approved in December 2014.

The overall objective of the project is to increase Jamaica's resilience to climate change, through enhancing adaptive capacity across priority sectors. Specifically, the project is to

- (i) Mainstream climate change into development planning;
- (ii) Provide information on novel approaches, including climate financing, to overcome the challenges of climate change; and
- (iii) Disseminate lessons learned from adaptation interventions

The Ministry of Economic Growth and Job Creation (MEGJC), acting as Executing Agency for the Adaptation Programme and Financing Mechanism (AP&FM) Project for the Pilot Programme for Climate Resilience (PPCR) Jamaica, has established a Project Executing Unit (PEU) with office located at 16a Half-Way-Tree Road in Kingston. The PEU is responsible for the overall fiduciary, administrative, financial management and technical functions (including planning, coordination, supervision, staffing, procurement, monitoring and evaluation) in the implementation of the APFM for PPCR Jamaica.

The PEU will be contracting a construction firm to build 1800 check dams in the Upper Rio Minho Watershed Area on farm holdings, residences and public lands as control measures to provide effective water dispersal, soil conservation and flood mitigation. In this regard, the MEGJC through the PEU, is desirous of contracting a **Consultant Engineer** to select appropriate sites for the check dams.

2.0 Objective of the Assignment

The objective of this assignment is to provide engineering services for the identification of appropriate sites for the construction of one thousand eight hundred (18000 small check dams in the Upper Rio Minho Watershed Area; to suggest appropriate design solutions for each site; and to provide inspection services during the first six months of the construction phase.

3.0 Scope of Work and Activities

The Consultant Engineer will:

1. Consult with the Rural Agricultural Development Authority (RADA) to ascertain the geographical areas of farm holdings with the greatest needs for soil conservation and flood water protection;
2. Consult with the Clarendon Municipal Authority to ascertain the needs of residences, public lands and public infrastructure for climate change adaptation measures such as check dams.
3. Carry out a strategic environmental assessment of the Upper Rio Minho Watershed Area to determine how check dams could assist in general protection of the natural environment; and in particular, in better storm water management, diverting water run-off into any existing surface water storage area, and protecting existing water sources.
4. Preparing at least three design options for small check dam (**no larger than 3metre³**) to be made from
 - Solely mortar and steel or
 - A mixture of mortar and steel and natural materials (such as wood, stones, bagged sand) and/or appropriate waste materials (such as used tyres).
5. Identify the sites for the construction of 1800 check dams, indicating the appropriate design option and construction materials that are most suited to alleviate the level of climate risk for each identified site.
6. Record and Present findings to the RADA, the Municipal Authority and MEGJC/PEU each month;
7. Provide technical support during the tender process for the construction firm;
8. Following contract award to the construction firm, provide inspection services including materials testing, for the first six months of the construction phase.

4.0 Characteristics of the Contract

Type of Contract: Individual Consultant

Commencement Date: The date of the Contract

Contract Duration: One year

Place of Work: Upper Rio Minho Watershed Area

Level of Effort: Full-Time

Qualifications and Experience:

The Consultant Engineer must have:

- Master's degree in Structural Engineering;
- At least 5 years' experience in environmental impact assessment;
- Knowledge of Climate Change impacts and Climate Change Adaptation measures;
- At least 5 years' experience working with soil and/or water conservation systems and flood control;
- At least 5 years' experience working with rural communities; and,
- Flexibility with working hours - ability to work evening and weekends, if necessary.

5.0 Contract Management, Logistics, Timing and Other Requirements

5.1 Responsible Body: The Contracting Authority (CA) is the MEGJC.

5.2 Contract Management: The Project Manager, APFM Project is responsible for the implementation matters related to this Contract.

6.0 Deliverables

The Consultant Engineer is required to provide the following deliverables:

- 6.1** Consultation Report outlining findings from meetings with RADA and the Municipal Authority; and findings on strategic environmental assessment. *[Due 1 month after commencement date]*
- 6.2** At least three design options for small check dam (**no larger than 3metre³**) to be made from
 1. Solely mortar and steel or
 2. A mixture of mortar and steel and natural materials (such as wood, stones, bagged sand) and/or appropriate waste materials (such as used tyres) *[Due 1 month after commencement date]*
- 6.3** Monthly Reports outlining the sites for at least two hundred (200) check dams; including the criteria for selection and the general design option and type of construction materials proposed for each site. *[Due end of each month - starting second month after commencement date]*
- 6.4** At least six monthly inspection reports during the construction phase.

7.0 Monitoring and Evaluation

The activity will be monitored and evaluated by the PEU.