



## **Terms of Reference**

### **Greenhouse Gas Inventory Facilitator**

#### **Under the UNEP-GEF Project:**

**“Zambia: Enabling Activities for the Preparation of the Initial Biennial Transparency Report (BTR1) and Fourth National Communication (NC4) to the United Nations Framework Convention on Climate Change (UNFCCC)”**

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## **1.0 BACKGROUND TO THE PROJECT**

Zambia is Party to the United Nations Framework Convention on Climate Change (UNFCCC). As such, the Government of the Republic of Zambia signed and ratified the Paris Agreement on 4<sup>th</sup> November 2016 and subsequently submitted its Nationally Determined Contribution (NDC) as a national climate action plan to combat Climate change in the same year.

The Enhanced Transparency Framework (ETF) for action and support to Article 13 of the Paris Agreement under the convention requires that each Party provides a national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases (GHGs). Zambia being Party to the UNFCCC and the Paris Agreement is in the process of preparing its Initial Biennial Transparency Report (BTR1) and will also submit an updated National GHG inventory report for the period 2017 to 2022. The preparation of the National inventory report of anthropogenic emissions by sources and removals by sinks of Greenhouse gases (GHGs) for Zambia's BTR1 and fourth National Communication (NC4) for the period 2017 to 2022 shall be facilitated by the GHG Inventory Facilitator.

## **2.0 NATIONAL GHG INVENTORY REPORT**

### **2.1 Objective of the National GHG Inventory Report**

The objective of the National GHG Inventory Report is to determine Zambia's emission levels for the period 2017 to 2022 and recalculate emissions for the period 1990 to 2016 using the IPCC 2006, 2019 Refinements to the 2016 IPCC guidelines and Fifth Assessment Report (AR5).

### **2.2 Scope of Work**

The GHG Inventory Facilitator shall be responsible to deliver a National Inventory for the period 2017 to 2022, an Inventory report and a summary report for Chapter 1 of Zambia's BTR1/NC4 in line with Project Implementation Plan and the Modalities, Procedures and Guidelines under the Enhanced Transparency Framework. The Facilitator will spearhead the preparation of the National GHG Inventory and will work closely with the GHG Inventory Coordinating Agency and the GHG Technical Working Group comprising experts from sector lead institutions for the AFOLU, Energy, Waste and Industrial Processes sectors and other data providers. He/she will work under the supervision of the BTR1/NC4 National Project Coordinator.

### **2.3 Specific Tasks**

The Specific tasks to be undertaken include:

- a) To provide technical backstopping on the overall implementation of Chapter 1 of the BTR1/NC4 report;
- b) To coordinate with ZEMA and the GHG Technical Working Group experts, to implement activities under Chapter 1;
- c) Assess the national circumstances, institutional arrangements, and legal framework related to GHG Inventories;
- d) Develop training manuals, presentations and as well as a Quality Assurance and Quality Control (QA/QC) Protocol for GHG inventory preparation (data collection, compilation and integration);
- e) Provide and conduct in-country capacity building for the GHG Technical Working Group experts on the new IPCC methodological approaches using the IPCC 2006 guidelines, 2019 Refinements to the 2016 IPCC guidelines, 2003 good practice guidelines including

Modalities, Procedures and Guidelines of the Enhanced Transparency Framework to enhance transparency in reporting of GHG emissions sources and sinks in the Energy, Industrial Processes and Product Use, Agriculture, Forestry and other Land use and Waste sectors;

- f) Facilitate the collection of GHG activity data for all sectors and data for developing emission factors for key categories;
- g) Recalculations may be carried out for previous inventory based on higher tier methodologies and refined activity and emission factor data;
- h) Selection of emission factors to be utilized. Determine the application of Tier1, 2 or 3 for the sector as appropriate (following the IPCC guidelines);
- i) Facilitate development of a QA/QC plan for GHG inventory, working with the GHG Technical Working Group experts;
- j) Provide routine and consistent checks to identify errors and omissions to ensure accuracy, data integrity, correctness and completeness in the GHG Inventory estimates and document all quality control processes;
- k) Facilitate workshops, during the entire GHG inventory development process and together with the Technical Working Group Experts prepare data documentation sheets and Inventory estimations, and common reporting tables using appropriate tools and techniques to present and document all results;
- l) Prepare a summary report on each workshop;
- m) Determine data gaps and future needs;
- n) Identify areas of improvement in the GHG Inventory preparatory process for respective sectors;
- o) Facilitate the development of the GHG Improvement Plan;
- p) Facilitate the preparation of the National GHG Inventory report for the period 2017 to 2022;
- q) Facilitate the preparation of Common reporting tables for the electronic reporting of the information in the national inventory reports of anthropogenic emissions by sources and removals by sinks of GHGs;
- r) Facilitate stakeholder validation of the National GHG Inventory report and incorporation of comments from the validation workshop;
- s) Facilitate incorporation of comments from the Quality Assurance Expert;
- t) Prepare quarterly project preparation progress reports in the areas concerned and present them to the National Project Coordinator;
- u) Compile a National Inventory Report;
- v) Compile a summary/ chapter of the National Inventory Report and integrate it into the BTR1;

- w) Calculate the level of uncertainty associated with the inventory data for each considered sector;
- x) Generate research ideas from gaps identified for improvement and develop Concept Notes for funding
- y) Identify areas where technical support would be needed;
- z) Document and archive the GHG inventory data of the various sectors; and
- aa) Facilitate the preparation and training of the GHG Technical Working Group for the Technical Expert Review.

## **2.4 Methodology**

The methodology for developing the National GHG inventory will be based on the Intergovernmental Panel on Climate Change (IPCC) 2006 Guidelines, 2019 refinement to the 2016 IPCC guidelines, the IPCC 2003 Good Practice Guidelines, the 2006 IPCC Software and Emission Factor Database and any other guidelines necessary subject to approval from ZEMA.

## **2.5 Knowledge Transfer**

The facilitator will take measures to build capacity in respective sectors by working closely with assigned persons.

## **2.6 Duration of the assignment**

The assignment will be undertaken for 2 months (60 days) spread over the period of 1 year.

## **2.7 Client**

The Client for the assignment is the Zambia Environmental Management Agency (ZEMA). The facilitator will report to the Project Coordinator of the project “Enabling Activities for the Preparation of Initial Biennial Transparency Report (BTR1) and Fourth National Communication (NC4) to the United Nations Framework Convention on Climate Change (UNFCCC)” on all matters relating to the assignment.

## **2.8 Deliverables**

The facilitator is required to provide the following deliverables:

- a) Training materials;
- b) Workshop reports;
- c) Quality Control/Quality Assurance Plan;
- d) National GHG Inventory report;
- e) National GHG Inventory summary report;
- f) Common Reporting Tables; and
- g) National GHG Improvement Plan.

## **2.9 Key Competencies of the Facilitator**

The GHG Facilitator must have the following academic qualification relevant skills and experience:

- a) A MSc degree in Environmental Science, Engineering, Climate Change and other related fields; a PhD is an added advantage;
- b) Have at least Seven (7) years of professional experience in the field of GHG Emission accounting;
- c) Demonstrated experience in GHG emission accounting, preparation of national communications and biennial update reports is an added advantage;
- d) Demonstrable knowledge of 2006 IPCC Guidelines, 2019 Refinements to the 2016 IPCC guidelines, 2003 good practice guidelines including Modalities, Procedures and Guidelines of the Enhanced Transparency Framework;
- e) Have good knowledge of issues related to climate change, climate change mitigation and sustainable development issues and other related topics;
- f) Have a good knowledge and understanding of various instruments for implementing the Convention on Climate Change and climate negotiations on the Enhanced Transparency Framework;
- g) Excellent knowledge of the climate change policy and processes;
- h) Good knowledge of policies, strategies, programs, in key sectors of development of Country;
- i) Good computer skills and knowledge (Microsoft Office Excel, Microsoft Office Word, Microsoft Office PowerPoint), database management is an added advantage;
- j) Have a good aptitude in the fields of collection, processing and synthesis of data and information;

- k) Have a sense of organization and coordination of teamwork and facilitation of workshops;
- l) Have a good capacity for analysis, synthesis and report writing; and
- m) Strong interpersonal and communication skills.

### **2.10 Some reference materials**

Reference materials that could be used include the following:

- a) The National Policy on Climate Change;
- b) The Seventh and Eight National Development Plans;
- c) Vision 2030 and any other development instruments;
- d) Sectoral Policies, Plans and Programmes;
- e) The Third National Communication;
- f) The project document on “Enabling Activities for the Preparation of Initial Biennial Transparency Report (BTR1) and Fourth National Communication (NC4) to the United Nations Framework Convention on Climate Change (UNFCCC)”; and
- g) The National Adaptation Programme of Action on Climate Change.