The Regional Environmental Centre for the Caucasus (REC Caucasus) announces a tender for Data compiler and Processor (Waste Sector) within the GEF-funded project "Georgia's Integrated Transparency Framework for Implementation of the Paris Agreement"

TERMS OF REFERENCE

For the Collection of Detailed Activity Data for the Waste Sector Subcategories and Data for Emission Factors.

REC Caucasus is executing the project "Georgia's integrated transparency framework for implementation of the Paris agreement", which aims to meet the enhanced transparency framework (ETF) requirements under the Paris agreement.

Overall objective of the project is to propose actions that will allow the country to use more detailed level of emissions calculation to better track the trend of emissions changes in the sector and to check the level of measurement, reporting and verification.

Project Title:	Georgia's Integrated Transparency Framework for Implementation of the Paris Agreement
REC Caucasus Project ID:	024RECC/G/UNEP
Contract type:	Consultancy Service Contract
Position:	Data compiler and Processor (Waste Sector)
Starting Date:	26 June, 2023
Duration:	2 months (26 June, 2022 – 6 September, 2023)
Duty Station:	Tbilisi, Georgia

1. PROJECT BACKGROUND

ToR is concluded for implementation of the GEF-financed Project (2019-2023) "Georgia's Integrated Transparency Framework for Implementation of the Paris Agreement".

The Paris Agreement, adopted at the 21st Conference of Parties (CoP) in December 2015, sets out a global action plan that puts the world on track to avoid dangerous climate change by limiting global warming to well below 2°C. The Agreement refers to 'Nationally Determined Contributions' (NDCs) that each individual country should make to achieve the worldwide goal set of reducing anthropogenic emissions of greenhouse gases. As part of this Agreement, all countries agreed to an Enhanced Transparency Framework (ETF) for action and support (Article 13), with built-in flexibility which considers Parties' different capacities and builds upon collective experience. For Georgia there is a need to set up new transparency governance structures, develop and implement MRV procedures, and update, implement, and integrate new data and information flows with pre-defined periodicity. Two parallel ongoing climate activities at the central and local levels in the country need to be aligned under the Domestic Enhanced Transparency Framework. The clear, comparable, accountable and flexible MRV system should integrate mitigation strategies, measures and their effect into the national level. A key condition for successful implementation of the Paris Agreement's transparency requirements is the provision requiring adequate and sustainable financial support and capacity building to enable

developing countries to significantly strengthen their efforts to build robust domestic and regulatory processes. For the above purposes, the GEF-funded Project "Georgia's Integrated Transparency Framework for Implementation of the Paris Agreement" is planned to be implemented in Georgia.

The overall objective of the project is to meet the ETF requirements under the Paris Agreement.

Project Components:

1. Strengthening vertical integration in Georgia for transparency-related activities;
2. Georgia's National Greenhouse Gas (GHG) Inventory system and HFC data management system are aligned with the ETF;
3. Climate Change Mitigation in Georgia's transparency system.

Outset situation

Regarding complementarities with the NCs and BURs, the MEAP has announced that the country has moved to the 2006 IPCC Guidelines during the preparation of its BUR2 to estimate emissions from the energy, IPPU, agriculture and waste sectors. However, the NCs and BURs project team was only able to address the tier 1 methods in most cases.

For the waste sector, the latest National GHG Inventory (NGHGI) (submitted in 2021, with 2017 as the reporting year) covers only two categories Solid Waste Disposal on Land (4A) and the Wastewater Treatment (4D), and the tier 1 has been used to estimate the emissions regardless the 4A being a key source category, its activity data mostly following the default assumptions. The use of general, simpler GHG estimation methods with default values give figures a high uncertainty and vague profile. For meeting the ETF requirements, it is necessary to improve the accuracy, completeness, comparability, consistency and transparency (TACCC) of the GHG inventory.

The data management system for waste sector relevant for GHG inventory is fragmented and allocated in different operators in the field.

The aim of the second component of the CBIT project is for the country to use an improved National GHG inventory system, with a data management system on waste and operationalizing higher-tier methods both for national and sub-national levels and enhancing QC/QA process.

Since the latest National Inventory Report (6th NIR), the waste sector has undergone a substantial reform regarding the waste management: new larger modern landfills, with leachate treatment system and landfill gas control system planned to construct (in Qvemo Kartli and Samegrelo Zemo Svaneti regions are in stage of starting construction) and all old, out-of-standard existing landfills will be closed step by step in line with construction of new ones. New practices of recycling and composting have been started; data collection system has been established in Solid Waste Management Company and studies on municipal waste composition have been conducted.

Regardless some delay due to COVID-19 pandemic, the actual state of affairs in the sector provide the opportunity to improve the reporting of the sector through better access to the activity data (AD) and use of country-specific emission factors (EF), enabling to proceed to higher tier methods of estimation, as well as through adding new subcategories. These improvements together with the enhancement of QA/QC will lower the uncertainties of the estimates and improve TACCC of the GHG inventory.

Hence the CBIT project will estimate the country-specific emission factors (EF) by studying and analysing the landfills in Georgia, collect the comprehensive activity data

and proceed to the higher tier First Order Decay (FOD) method, recommended by the 2006 IPCC Guidelines for estimation of the emissions from the category 4A. Methane recovery and recycling as new practices in solid waste treatment will also be reflected in calculations, based on the activity data, already available.

For the WWT (4D) category the estimates will be also improved based on better and more complete activity data and using a country-specific emission factor (EF) for methane emissions. The Project will explore the possibility of using a new protein consumption country-specific value in estimation of N2O emissions from the WWT category.

The Project will enable to add new source categories of composting (under 4B) and incineration of clinical waste (under 4C1) and open burning (4C2) through collecting the corresponding activity data available.

2. OBJECTIVE AND SCOPE OF THE ASSIGNMENT

Specific Objective of the Assignment

RECC engages **Data compiler and Processor (Waste Sector)** for (1) collection of detailed activity data (AD) for the waste sector subcategories outlined by the 2006 IPCC Guidelines (4A, 4B, 4C and 4D) and taking place in the country, such as annual amounts of landfilled municipal solid waste (MSW), for at least 5 sites of landfills (for 4A. Solid Waste Disposal), annual amount of wastewater for all WWTPs (4D. Wastewater Treatment and Discharge), composts (4B) and recycled fractions of the MSW, for the latest years since the last inventory year 2017, (2) collection and analysis of the compositions of the Municipal Solid Waste resulted from the corresponding studies conducted for a few sample landfills (including seasonal compositions), (3) collection of information on management practices set in all operational landfills, information on numbers and degrees of operation (closed, fully operational with and w/o methane recovery, under construction) of present landfills; (4) collection of the information on number and status of operation of WWT plants (WWTPs); (5) Collection of information on biochemical oxygen demand (BOD) measurements from at least 5 WWTPs; (6) collection of annual data on methane recovery from landfills and WWTPs, if any; (7) information/data on hazardous waste (pathways of different types of hazardous waste), AD for open burning and incineration (clinical waste) (4C).

Planned activities are as follows:

The following work steps are needed within the assignment:

Step 1. Collect detailed activity data for the waste sector subcategories, outlined by the 2006 IPCC Guideline and taking place actually in the country for all recent years (2017-2022) **[Project Activity: 2.2.4]**;

This task includes:

- Identification of all landfill sites and owner entities of all landfill sites in Georgia;
- Collection of the data on annual amounts (time-series for 2017-2022) of landfilled municipal solid waste (MSW), for all actual landfills countrywide;
- Collection and analysis of the MSW composition study results and their applicability to each Georgian landfills.
- Analysis of the status and degree of operation and management practices for all the landfills in Georgia for identification of proper parameters and emission factors (EF) based on them;

- Collection of activity data – annual amounts of solid waste for composting (4B) and recycling (fractions of the MSW that were not landfilled);
- Collection of information on methane recovery from landfills and WWTPs, and annual data of these amounts where available (if any);
- Identification of the status (built and fully operational (with or/and methane recovery), being constructed, planned) and degree of operation of all WWTPs in Georgia;
- Collection of activity data – annual amounts of wastewater (inlet) for all WWTPs (time-series for 2017-2022);
- Collection of information on biological oxygen demand (BOD) measurements from at least 5 WWTPs;

Step 2. Develop a methodology for and description of the process of gathering detailed activity data for all the source-categories of actual GHG emissions taking place in Georgia, including the newly added ones, and indicating the sources of information **[Project Activity: 2.2.5];**

Step 3. Support in identification of emission factors (EF) for all source-categories, with country- and facility-specific values where available **[Project Activity: 2.2.6];**

This task includes:

- If necessary, provide values of measurement and/or estimates from laboratories and studies for the estimation of facility-specific emission factors to at least 5 selected sites for waste sector source-categories 4A (solid waste disposal) and 4B (wastewater treatment);
- Assist the waste sector expert 2 to identify proper emission factors (EF) and parameters for the category of Solid Waste Disposal (4A) based on the characteristics of each landfill (management practices, composition, etc. identified in the Step 1);
- Assist the waste sector expert 2 to provide estimation of facility-specific emission factors (EF) for CH4 (BOD[1]) for WWT plants where possible, and adjust a country-specific EF identified (under the LT LEDS) based on Tbilisi (Gardabani) and Batumi WWTP, using newly available data;
- Support the waste sector expert 2 to adjust the coefficient *protein consumption per capita* used for N2O emission from WW, used in the NGHGI so far or explore the possibility of obtaining a new country-specific estimate.
- Support the waste sector expert 2 to explore the possibility of estimating facility-specific emission factors (EF) for composting (4B), open burning and incineration (clinical waste) (4C1 and 4C2);

Step 4. Establish and operationalize a data management system (which encompasses developing procedures and guidelines for GHG inventory data management), including modelling for the absent data, for all source categories from the waste sector (to be further used at the national level) **[Project Activity: 2.2.7];**

This task includes:

- Preparation of procedures and guidelines for GHG inventory data management system.

[1] Biochemical Oxygen Demand.

Step 5. Provide one week on-job training on the waste sector data management system to at least 5 private sector businesses and 5 central government staff representatives **[Project Activity: 2.2.7];**

This task includes:

- Preparing training materials and presentation for the one week on-job training on the waste sector data management system to at least 5 private sector enterprises and 5 central government staff representatives;
- Hosting and moderating the one week on-job training on the waste sector data management system to at least 5 private sector and 5 central government staff representatives.

3. QUALIFICATIONS AND EXPERIENCE

- Master's degree in Exact and Natural Sciences, or a related field;
- Seven years of working experience;
- Five years of working experience in waste management;
- Experience of working on GHG inventory *(will be an asset)*;
- Knowledge of Georgia's waste management system, legislature and practices;
- Good analytical skills, ability to express ideas clearly and concisely both orally and in writing;
- Ability to plan and manage tasks independently;
- Good interpersonal and communication skills;
- Fully experienced with computer software and other office equipment.

4. WORKING AND REPORTING LANGUAGES

Working and reporting language shall be **English and/or Georgian**.

5. SPECIAL REQUIREMENTS REGARDING REPORTING FORMAT

All reports shall be produced in the following format:

Alignment:	Justified
Font:	Arial for English / Sylfaen for Georgian
Font Size:	11
Lane Spacing:	single
Spacing before:	0'
Spacing after:	0'
At:	0

6. AWARD CRITERIA

Evaluation will be made in accordance with the quality/price based selection method per REC Caucasus procedures and rules. The best value for money will be established by weighing technical quality against price on an 80/20 basis.

When evaluating technical offer of a candidate, a score out of a maximum 100 points could be received by the offer in accordance with the technical evaluation grid (setting out the technical criteria, sub-criteria and weightings) laid down in this Terms of Reference (see below).

Only offer that achieved a score of 75 or more shall be declared 'technically accepted'.

The quality of a technical offer will be evaluated in accordance with the award criteria and the associated weighting as detailed in the following evaluation grid of this Terms of Reference:

TECHNICAL EVALUATION GRID

Ref. Number: 024RECC/G/UNEP-2023-SRV-57-BL110417

Collection of Detailed Activity Data for the Waste Sector Subcategories and Data for Emission Factors

Georgia's integrated transparency framework for implementation of the Paris agreement

EVALUATION GRID	**Maximum**
Organisation and Methodology	
(Max 30 points)	
Implementation Approach for R1	5
Implementation Approach for R2	5
Implementation Approach for R3	5
Implementation Approach for R4	5
Implementation Approach for R5	5
Reporting Timetable	5
Total score for Organisation and methodology	**30**
Expert	
(Max 70 points)	
Qualifications and skills	
Master's degree in Exact and Natural Sciences, or a related field	10
General professional experience	
Seven years of working experience	10
Specific professional experience	
Five years of working experience in waste management	15
Experience of working on GHG inventory (will be an asset)	5
Knowledge of Georgia's waste management system, legislature and practices	20
Specific Qualifications and skills	
Good analytical skills, ability to express ideas clearly and concisely both orally and in writing; *Ability to plan and manage tasks independently;* *Good interpersonal and communication skills;* *Fully experienced with computer software and other office equipment*	10
Total score for Expert	**70**
Overall total score	**100**