

Terms of reference (ToR) for the procurement of services below the EU threshold

INTERNAL

Analysis of Soil Characteristics	Project number/ cost centre: 20.2275.4-002.00 / 0105
---	---

0.	List of abbreviations	2
1.	Context.....	3
2.	Description of the assignment	4
2.2	Objectives of the assignment and tasks to be performed by the contractor	4
2.3	List of Analyses to be conducted*	5
2.4	Milestones to be achieved and timeframe	6
3.	Concept.....	6
	Technical-methodological concept	6
4.	Company's profile	6
5.	Timing and duration.....	7
6.	Place of assignment.....	7
7.	Costing requirements	Error! Bookmark not defined.
8.	Inputs of GIZ or other actors.....	7
9.	Requirements on the format of the tender	7
10.	Other Provisions.....	7
11.	Annexes	8

0. List of abbreviations

AG	Commissioning party
AN	Contractor
AVB	General Terms and Conditions of Contract for supplying services and work
BMZ	German Federal Ministry for Economic Cooperation and Development
DES	Department of Environmental Supervision
EIEC	Environmental Information and Education Center
FIMS	Forest Information and Monitoring System
FK	Expert
FKT	Expert days
KZFK	Short-term expert
GCF	Green Climate Fund
MRV	Monitoring, Reporting and Verification
MEPA	Ministry of Environmental Protection and Agriculture of Georgia
NFA	National Forestry Agency
NFI	National Forest Inventory
RDA	Rural Development Agency
SDC	Swiss Development Cooperation
SFM	Sustainable Forest Management
ToRs	Terms of reference
WRB	World Reference Base for Soil Resources

1. Context

Brief information on the project

Climate change impacts and the demand for fuelwood from rural population put significant pressure on Georgia's forests: up to 90% of rural households (1.43 million people) rely on fuelwood for their energy needs. The problem is exacerbated by the fact that households use obsolete technologies, such as traditional stoves with a lifetime of two years and an efficiency of 35% or less. Fuelwood demand exceeds sustainable harvesting levels, considering reduced productivity of many forests in the country because of extensive forest degradation. This forest degradation leads to a loss of carbon absorption capacity which is projected to decrease by five times between 1990 and 2030.

In order to address this negative development, the project "Enabling the Implementation of Georgia's Forest Sector Reform - ECO.Georgia" supports the Government of Georgia to implement its transformational forest sector reform agenda to put the entire nation's forests under the framework for sustainable forest management (SFM). It will do so by supporting the establishment of a nation-wide SFM system (Component 1) and in parallel promoting market development for energy efficient appliances and alternative fuels (Component 2) to address the main driver of forest degradation. The project will safeguard the reform implementation by diversifying livelihood opportunities and strengthening local self-governance in forest adjoining rural communities (Component 3).

The project is funded by the Green Climate Fund (GCF), the German Federal Ministry for Economic Cooperation and Development (BMZ), and the Swiss Development Cooperation (SDC) with GIZ being the project's accredited entity. The German contribution is part of the wider German support in the priority area "Environmental policy, conservation and sustainable use of natural resources in the South Caucasus", which aims at the sustainable use of natural resources, biodiversity conservation and climate protection, particularly for the benefit of the rural population. Similarly, both the share of renewables in the energy composition as well as the energy efficiency levels will increase.

Especially rural households using firewood as their source of heating energy will benefit from improved air quality and reduced fuelwood demand through eased access to energy efficient stoves. Forest-related small and medium-sized enterprises and their employees will receive support to improve economic efficiency and environmental sustainability of their business activities. Additionally, staff members of relevant public institutions (National Forestry Agency NFA, Department of Environmental Supervision DES, Environmental Information and Education Center EIEC, Rural Development Agency RDA, municipalities) will receive direct support through human capacity development measures and grant finance.

ECO.Georgia primarily contributes to achieving the SDG 15 (Protect, restore and promote sustainable use of terrestrial ecosystems) of the 2030 Agenda of the UN, but also to achieving SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all), SDG 13 (Take urgent action to combat climate change and its impacts), SDG 1 (End poverty in all its forms everywhere), and SDG 5 (Achieve gender equality and empower all women and girls).

The duration of ECO.Georgia is from April 2021 until March 2029. Due to the direct relationship to the forest MRV system, this service package belongs to Component 1, Activity 5, Sub-Activity 1 (Improvement of monitoring, and measurement, reporting and verification systems for the forest sector).

2. Description of the assignment

2.1 Context

As activities under Component 1 of ECO.Georgia, the partner institutions shall be supported with the further development of a national Forest Information and Monitoring System (FIMS) as well as the development of a forest-related system for Monitoring, Reporting and Verification (MRV) and capacities shall be created and improved to sustainably embed these systems technically, institutionally, and legally. Besides the forest-MRV becoming the one centralised system for Georgia's national and international reporting obligations in the forest sector, it shall also serve for assessing and reporting on the impacts of the ECO.Georgia-project.

For FIMS and the forest MRV, carbon stocks as well as their developments over time via sequestration and emissions are crucial. Data related to the above-ground biomass and carbon stocks will be available from the National Forest Inventory (NFI) and other sources. So far, however, there is no data available with regards to below-ground biomass and carbon stocks in Georgia's forests. To close this gap, a nation-wide forest soil inventory has been initiated under the ECOserve-programme, with the aim to assess soil characteristics of the countries' forests. Due to various reasons – most importantly the pandemic – this undertaking could not be completed before the Georgian component of ECOserve ended in November 2021 and is therefore continued under ECO.Georgia.

The continuation of the field works (including the collection of soil samples) as well as international backstopping for the continued soil inventory are contracted separately. In addition, scientific analyses of the collected samples and provision of the analysis results via a unified database are needed. The tendered service package shall cover this part of the overall process and ensure the provision of robust data on Georgian forest soils. The contracted field teams describe **up to 16 sites** based on the creation and examination of 9 soil profiles per site. Per profile, samples of each soil horizon (ca. 5 per profile) will be taken by the field teams to be analysed by the contractor.

2.2 Objectives of the assignment and tasks to be performed by the contractor

The contractor is responsible for providing the following services:

- 1) Adequate storage and preparation of received soil samples for their analyses and until GIZ's acceptance of the services carried out under this contract
- 2) Organisation and conduction of physical and chemical soil analyses as described in the present terms of reference for up to **136** soil profiles from up to **16** sites
- 3) Provision of analysis results via table format (MS Excel) or a data base (MS Access) provided by the contracting party
- 4) Provision of samples upon request for the purpose of quality control via an independent laboratory in Germany (logistics, analysis and comparison covered by another contract on international backstopping)
- 5) General regular exchange with the field teams and international backstoppers for harmonisation of the procedures, anticipation of number of samples to be expected from the field works, and feedback on samples' quantity and quality, their packaging, labelling, and potential other relevant aspects
- 6) The contractor provides equipment and supplies (consumables) and assumes the associated operating and administrative costs.

- 7) The contractor reports regularly to GIZ in accordance with the current AVB of the *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*.

2.3 List of Analyses to be conducted*

	Analyses
1	pH-value Water (pH water)
2	pH-value Potassium chloride (pH KCl)
3	Total Carbon content (C _{tot}), Analysis via Auto-Analyzer <u>preferred**</u>
4	Total carbonate content (CaCO ₃ , C _{carb})
5	<i>Results from 3-4 =></i> Total organic carbon content (C _{org} = C _{tot} -C _{carb})
6	Nitrogen content (N _t); Analysis via Auto-Analyzer <u>preferred**</u>
7	Mass after drying (Dry mass)
8	Available Phosphorus content <u>according to</u> the Mehlich-3-Method (P Mehlich 3)
9	Calcium exchange capacity (Ca exch) in ammonium acetate
10	Magnesium exchange capacity (Mg exch) in ammonium acetate
11	Potassium exchange capacity (K exch) in ammonium acetate
12	Extractable Aluminium (Al exch) in potassium chloride
13	Bulk density (samples provided from volumetric sampling with cylinders)
14	Texture according to particle size classes (to be pre-treated with H ₂ O ₂)
	- Coarse sand (630 - 2000 µm)
	- Medium sand (200 to < 630 µm)
	- Fine sand (63 to < 200 µm)
	- Silt (2 to < 63 µm)
	- Clay (<2 µm)
	*Maximum sample sizes for the analysis (where relevant) shall be determined by the contractor.
	**For analyses of carbon and nitrogen, the use of an auto-analyser is given preference over alternative methods such as Walkley-Black and Kjeldahl.

Because of the fact that this study is the continuation of the previous soil study and the soil samples and results of analysis conducted within this cooperation project are to complement the previous study results, it is crucial the same methodology is applied for analyzing the soils samples. The methodology that was used for the previous study and shall be applied for this study is part of the tender documentation (see attached documents).

2.4 Milestones to be achieved and timeframe

Certain milestones, as laid out in the table below, are to be achieved during the contract term:

N	Milestones/process steps/partial services	Deadline/place/person responsible
1	A kick-off meeting	no later than two weeks after the contract signing
2	Submitted analysis results of soil samples from 8 sites	Within 5 months after concluding the contract
3	Submitted analysis results of soil samples from the remaining sites	Within 9 months after concluding the contract
4	Clarification of deviating datasets, the cause of deviation and implications on the data robustness	Within 11 months after concluding the contract

3. Concept

Note: The numbers in parentheses correspond to the lines of the technical assessment grid.

Technical-methodological concept

In the tender, the tenderer is required to show *how* the **objectives** defined in Chapter 2 (Tasks to be performed) are to be achieved (Assessment Grid: 2.1), if applicable under consideration of further method-related requirements (technical-methodological concept).

The technical proposal will be evaluated in accordance with the assessment grid which consists of followings:

(2.1) Concept

- a. interpretation of the objective /assignment (2.1)
- b. strategy for the implementation reflecting other alternatives (2.1)
- c. cooperation during the implementation (stakeholders in the implementation, reference projects etc.) (2.1)
- d. a work plan in a visual form (2.1)

The tenderer is required to present the actors relevant for the services for which it is responsible and describe the **cooperation** with them.

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule that describes how the services according to Chapter 2 (Tasks to be performed by the contractor) are to be provided. This shall specifically name and briefly describe the **analysis methods** to be applied for the variables to be examined.

4. Company's profile

Company - Required competences and experience (Assessment Grid: 1.1):

- a) Years of operation - 3 Years (1.1)
- b) Proof of execution of related laboratory analysis within the last two years (1.1)

5. Timing and duration

Period of assignment: December 2025 – January 2027

6. Place of assignment

Georgia

7. Inputs of GIZ or other actors

GIZ and/or other actors are expected to make the following available:

- Data base or Excel File prepared for entering the analysis results
- Logistics of soil samples from the forest to the laboratory

8. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToR. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English (language).

The complete tender must not exceed 10 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

Please calculate your price bid based exactly on the aforementioned costing requirements. In the contract the contractor has no claim to fully exhaust the budgets. The number of samples and the budget amount shall be agreed in the contract as 'up to' amounts. The specifications for pricing are defined in the price schedule.

9. Other Provisions

9.1 Budgeting and payment

Payments will be effected in two installments:

- Interim payment will be effected after submission of analyses results for soil samples from 8 forest soil sampling sites.
- final payment will be effected after submission of analyses results for the all remaining, clarification of deviating datasets, the cause of deviation and implications on the data robustness.

- 9.2** The Contract price shall not include VAT. According to the article 71 of the Order No 996 of the Minister of Finance of Georgia of 31 December 2010 on Tax Administration, International Agreement on Technical Cooperation between Government of Georgia and Federal Republic of Germany executed on 19 December 2008 and International Agreement on Technical Cooperation between Government of Georgia and Federal Republic of Germany executed on 11 May 1998, GIZ and projects under the project “Support of Social and Economic Development of Georgia” are exempt from VAT tax and GIZ procures goods/services exclusive of VAT (issuing “0” VAT rate), using off-setting right. The relevant status may be checked at the web-page <https://rs.ge/TaxPrivileges>

Payment will be made via bank transfer.

10. Annexes

Annex 1 - A list of methods to be used for soil sample analysis.