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**Project Title:** Enabling the Implementation of Georgia's Forest Sector Reform (ECO.Georgia)

**Project/Activity Number:** 20.2275.4-002.00/C1A5

**Title of the assignment:** Sampling of forest soils, including on-site description and subsequent entering of data into the unified database

## 1. 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 June 2028.

## 2. Description of the Assignment

### 2.1. Context

GIZ has been supporting the Ministry of Environmental Protection and Agriculture (MEPA), mainly via its Biodiversity and Forestry Department (BFD), the National Forestry Agency (NFA), Department of the Environmental Supervision and Rural development Agency (RDA), as well as EIEC as implementing partners in different directions dealing with the forest sector reform, with strong focus on introduction of close-to-nature Sustainable Forest Management into forestry practice.

As part of the commitment under the United Nations Framework Convention on Climate Change (UNFCCC), the government of Georgia ensures regular reporting of climate-change-related issues in the form of national communications and biennial update reports. Concerning Land Use, Land-Use Changes and Forestry (LULUCF), forests are considered to have a net carbon sequestration capacity, as the annual growth of aboveground biomass (mainly in form of wood) is considered to outweigh the loss due to timber and firewood harvesting.

At the moment, as a consequence of lacking data, Georgia is only able to report on a Tier 1 basis to UNFCCC, i.e. working with default values from similar European forest ecosystems, but The National Forest Inventory (NFI) and the Forest Management Inventories (FMI) of Georgia, carried out in the last years have generated the necessary basis of the existing aboveground forest biomass stocks and increments for a reporting scheme on a Tier 2 or even Tier 3 basis.

Only little data are available of the belowground biomass and the nutrient and carbon stocks of Georgian forests. A soil assessment of 17 natural forest ecosystems was conducted between 2019 and 2021 in the frame of GIZ ECOserve project and the process is to be continued including additional – managed – forest sites to enrich the data basis and allow for comparisons between more natural and more heavily affected sites.

Applying a consistent methodology is key for soundness of gathered data and conclusions drawn. Accordingly, the soil assessments of managed forests' soils have to be carried out by professionals with profound knowledge of soil science and practical field experience of soil assessment and with close consideration of the developed methodology.

### 2.2. Objective(s) of the assignment and work packages/tasks

The objectives of the assignment are to provide technical support of the project in terms of **assessing up to 18 forest sites**. The assessment is to be done for those variables displayed in Annex 1 and 2, according to the provided methodology (Annex 3) and using the provided sheets (Annex 1 and 2, to be provided in MS excel format after contract commencement). Each sampling site has to be described through the establishment, examination, documentation and sample-taking of 9 profiles. The sites are located in Kakheti, Guria, Samtskhe-Javakheti, and Mtskheta-Mtianeti. The detailed overview of sites to be sampled is found in Annex 4. **Minor adjustments of the spatial distribution of sampling sites might be needed based on aspects of accessibility, suitability and**

### other characteristics of the sites.

In particular, the consultants shall fulfil the following tasks:

1. Attend an extensive kick-off workshop (foreseen for 6-10 March 2023) for acquiring an advanced background in general soil science, in the World Reference Base for Soil Resources (WRB), including its Field Guide and Layer Designations, and in the handling of its Soil Description Sheet and for reflecting on the ideal implementation of this work package, together with international experts being contracted by GIZ.
2. Assess up to 18 forest sites with 9 profiles each according to the provided methodology. The assessment includes the establishment of soil profiles, description and documentation of soil horizons and other characteristics in the field, taking soil samples from the profiles and proper packaging, labelling and transportation of the samples to GIZ Georgia or a Georgian laboratory (to be chosen by GIZ via a separate tender process), and entering of field data into a database provided by GIZ.
3. Regularly exchange with the international backstopping experts and GIZ (to the extent necessary) on plausibility of the observations, further planning of field activities, methodological clarification needs and the progress status.

### 2.3. Outputs/deliverables

Expected outputs are:

1. Output 1: Jointly elaborated implementation plan as the result of the kick-off workshop with international backstoppers and ECO.Georgia representatives
2. Output 2: Submitted soil samples of 10 assessed forest sites
3. Output 3: Submitted soil samples of the remaining forest sites
4. Output 4: Submitted updated soil data base including all data entries from the assessed forest sites

#### a. Schedule and timeframe

	Deadline	Number of experts	Number of days per expert
<ul style="list-style-type: none"> <li>• Output 1</li> <li>• Output 2</li> <li>• Output 3</li> <li>• Output 4</li> </ul>	31 March 2023 31 August 2023 30 November 2023 31 December 2023	NA	NA
Team leader		1	155
Team member		3	149
Travel expenses		Number of experts	Number of days/nights per experts
Per-diem allowance in country of assignment		4	144
Overnight allowance in country of assignment		4	126
Travel costs (train, private vehicle)			See Annex 4
<b>Note:</b> <i>If restrictions are introduced to combat coronavirus/COVID-19 (restrictions on air travel and travel in general, entry restrictions, quarantine measures, etc.), GIZ and the</i>			

*contractor are obliged to make adjustments to their contractual services to reflect the changed circumstances on the basis of good faith; this may involve changes to the service delivery period, the services to be delivered and, if necessary, to the remuneration.*

## 5. Company and Experts' profile

### Company - Required competences and experience

- At least 1 year experience in nature-related field studies
- The company must have the appropriate vehicles for the transportation in the forest
- The company must have the appropriate equipment for carrying out the works according to the methodology
- The company must have experience with international cooperation and provide evidence for being familiar with soil assessments according to WRB

### Title of expert - Required competences and experience

#### Team leader

- Education: university qualification (master's) in natural sciences
- Professional experience: Minimum 3 years working experience, of which minimum 1 year working experience in managerial position and minimum 1 year working experience in field studies related to soil, forests, or a related field
- Language skills: business fluency in English

#### Team members (3 professionals)

- Education: university qualification (first degree) in natural sciences
- Professional experience: Minimum 1 year working experience in field studies related to soil, forests, or a related field
- Language skills: business fluency in English

## 6. Timing and duration

From 1 March 2023 to 29 February 2024 (inclusive contract administration)

## 7. Place of assignment

Georgia

## 8. Reporting

- Reports are to be prepared according to the GIZ template to be provided by the project.
- All documents shall be delivered electronically (text files) in English and in Georgian.
- The consultant shall report to Jan Staubach and Lasha Dzadzamia (advisors of ECO.Georgia).
- The consultant is expected to coordinate very closely with the international backstopping consultants as well as with the laboratory to be identified and contracted for soil sample analysis.

## 9. Other provisions

1. Travel expenses will be included in the contract and shall be included in the financial offer.
2. All the tools necessary for the field works have to be provided by the contractor
3. The field team's transportation, accommodation and related aspects are in the sole responsibility of the contractor.
4. The contractor must agree with project representatives in advance in case of adjustments of the implementation plan, especially in case of foreseeing any change with regards to the sampling sites.
5. Advance payment for prefinancing of travel expenses can be requested by the consultant. Amount of the advance payment will be agreed upon contract conclusion.
6. Interim payment can be initiated upon submitting of outputs 1 and 2 and written confirmation from the GIZ.
7. Final payment will be effected after acceptance of the updated database Output 3 and 4.

### 7.2. Tender Procedure

The technical evaluation will take place in accordance with the assessment grid. As the grid indicated, the tenderer shall make a technical proposal. Technical proposal should consist of the following parts:

- Experience of the Company (Portfolio of the company)
- Qualification of proposed staff (CV which includes references of executed projects.)

## 10. Annexes

- I. WRB 4<sup>th</sup> Edition, Annex 4, General data and Surface characteristics, 3 pages
- II. WRB 4<sup>th</sup> Edition, Annex 4, Layer descriptions, 9 pages
- III. World Reference Base for Soil Resources, 4<sup>th</sup> Edition, Annex 1 and 3, 66 pages
- IV. Sampling Site Locations