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

Project/Activity Number: 20.2275.4-002.00/C1A1

Title of the assignment: Economic Expertise for the Development of the Forest Model Toolbox (under FIMS)

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 Sustainable Development Goal (SDG) SDG 15 (Protect, restore and promote sustainable use of terrestrial ecosystems) of the 2030 Agenda of the UN (United Nations), 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.

Background

Forest-related developments in Georgia. In December 2013, the National Forest Concept has been approved by the parliament as political framework for the Reform of the Forest Sector. Based on relevant statements and commitments in international agreements relevant for the forest sector and recognised by Georgia, five main principles have been agreed for the future forest management: (1) Principle of sustainable management of forest, (2) Precautionary principle to maintain protective functions of forest and their ecological balance, (3) “All forests are local”, (4) Separation of policy, management and supervision functions, and Forestry as an integral part of the sustainable development of the country.

As a part of the Forest Sector Reform, a new Forest Code was approved by the Parliament of Georgia in May 2020. As required by the revised Forest Code, the physical and institutional set-up of a **Forest Information and Monitoring System (FIMS)** as a centralised digital infrastructure for all forest-related information of Georgia has been initiated. The FIMS is required to provide, analyse and utilize data for the various stakeholders in the forest sector, enabling sustainable management, transparent supervision, monitoring, evaluation and reporting. The FIMS shall be extended with several modules, addressing e.g., forest incident monitoring and contain the interpretation, visualization and reporting of the results of the first National Forest Inventory (NFI, first results to be presented in November/December 2021) These Terms of Reference aim to support the further development and successful implementation of the FIMS.

In the following graph the FIMS related modules are presented in an overview. The graph contains a system of IDs for each module, some of the bigger modules are divided into sub-modules representing a specific bundle of features to provide support for a defined business process.

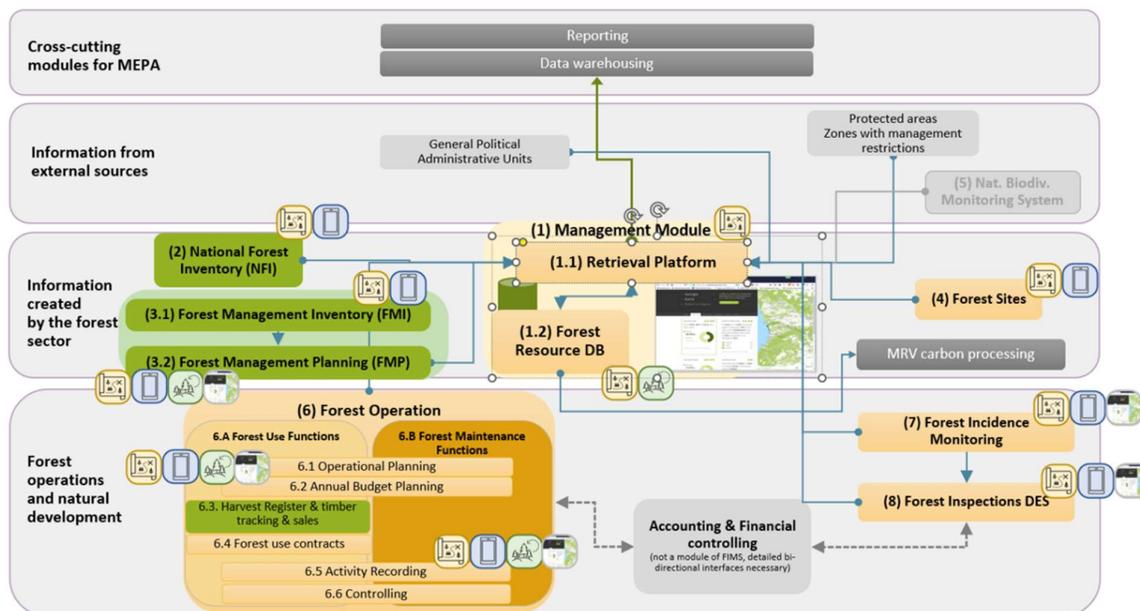


Figure 1: Current overview over the FIMS modules

(the symbols at each module represent (from left to right) the need for some FIMS tools: WebGIS / Spatial DB (yellow); a Mobile App (blue); (3.3) Forest Modelling Toolbox (green); (1.1) Retrieval platform features

Forest Model toolbox

The Forest Model toolbox plays a central role, both for the project and as a future planning and controlling instrument and integral component of the FIMS.

Different draft versions based on the first version developed during the GCF project development have been used to analyze FMI data. The tool had been further discussed for planning purposes of MEPA and NFA during the last 2 years, and all project partners concluded that the Forest Model toolbox shall be developed with high priority during 2024.

The development of the Forest Model Toolbox must be directly connected with the development of the central FIMS module of the (1.2) Forest Resource Database. The database must be seen as the central repository allowing the simulation of a future forest structure and to inform about the planned measures influencing this future structure.

2. Description of the assignment

2.1. Objectives of the assignment and work packages/tasks

The contractor is responsible for providing the following services:

Task 1: Forest Model Toolbox concept

- In cooperation with Unique Landuse GmbH, update and improve the Forest Model Toolbox factsheet to develop a module concept (WORD doc, Excel templates)
- Expert days assigned: 2 days

Task 2: Development of an improved baseline for the forests and forest management using the NFI data in cooperation with Unique, an international forestry expert, the GIZ team and the FIMS technical working group.

In particular, the forest economist shall focus on the following inputs:

- Technical work procedures tool: List of typical technical work procedures combined with: Tables or functions for costs per unit for all kind of measures; tables and functions defining performance of work per output unit (m³/h skidding, m³/h felling and delimiting etc.); Tables of material inputs per work procedure (oak seedlings / ha etc.).
- Forest product tool: Assortment tables or functions allowing to calculate assortments based on tree species, height and DBH and an estimate of quality classes of each assortment. Table of prices per assortment – including features to update it from timber sales statistics.
- Adaptation of the economic evaluation tool: Link to new forest simulator, the Technical Work Procedure tool, the Forest Product tool. Update cost and performance data (with support of MEPA, APA, NFA etc.)
- Expert days assigned: 7 working days

Task 3: Development of the Forest Model Toolbox as FIMS module in connection with the (1.2) Forest Resource Database

- In cooperation with the FIMS TWG and Unique, the forest economist shall support definition of the requirements for the Forest Model Toolbox in connection with the

development of the (1.2) Forest Resource Database by MEPA IT and support MEPA IT to implement it.

- Expert days assigned: 10 days

Task 4: Support the institutional and legal integration of FIMS in cooperation with Unique and the FIMS technical working group.

- Support the awareness raising and capacity development for stakeholders directly involved in the operation of FIMS modules with the emphasis on economic issues like cost and revenue plans and records, financial controlling processes and the FIMS integration with accounting systems at MEPA and the at the forest management institutions. Thus, supporting the smooth integration and operationalization of FIMS into institutional frameworks.
- Expert days assigned: 12 days

Task 5: General project coordination and communication tasks

- Regular involvement in FIMS-TWG meetings
- Coordination meetings with GIZ and Unique's expert team
- Expert days assigned: 8 days

A flexible remuneration budget shall be reserved for unplanned activities, participation in workshops or events, related to the Forest Model Toolbox to be mutually agreed between the project and the consultant.

2.2. Output(s)/deliverable(s)

The main output of the assignment are the forest economy contributions to the Forest Model toolbox. In addition, the consultant shall prepare quarterly work reports (max. 2-3 pages) summarizing his/her contributions under the tasks listed above.

2.3. Schedule and timeframes for deliverables

Outputs / Deliverables	Deadline	Number of working days (WD)
Task 1: Forest Model Toolbox concept	After 1 month	Up to 2 WD
Task 2: Contributions to tools	After 2 months	Up to 10 WD
Task 3: Development of the toolbox	After 8 months	Up to 10 WD
Task 4: Support of institutionalization of FIMS	After 12 months	Up to 12 WD
Task 5: Coordination & cooperation meetings	After 18 months	Up to 8 WD
Travel cost (accommodation full board, transportation)		Up to 5 WD
Other costs	Sum	Purpose
Flexible remuneration	GEL 5,000	For unforeseen activities or costs (e.g. travel, extra tasks, workshop participation) to be approved by the project before using.

3. Concept

In the tender, the tenderer shall include a brief technical concept how economic modelling (with which methods) shall be used to support the FIMS Forest Model toolbox (max. 3 pages) with a workplan.

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

- (1.1) Concept (technical approach / methodological procedures)
 - a. interpretation of the objective
 - b. implementation methods

4. Expert profile

The tenderer should be suited to filling the position described, on the basis of their CV, the range of tasks involved and the required qualifications.

The CV of the consultant meeting the requirements below must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4

pages each. They must clearly show the position and job the proposed person held in the reference project and for how long.

CV should contain:

General qualification / experience (2.1.1):

- Education / training: Master's Degree or equivalent in economics
- Professional experience: 5 years of practical experience with economic modelling

Specific qualification (2.1.2): educational background in economic modelling

- Specific professional experience:
 - work proof of forest economic modelling from the past 3 years
 - analytical work on Georgia's forest sector economy

Language skills (2.1.3): Excellent business language skills in English and Georgian.

5. Timing and duration

Contract terms are envisaged to be from **May 2024** to **November 2025** covering up to 42 working days (plus, if requested, additional days under the flexible remuneration budget).

6. Place of assignment

Georgia

7. Reporting

- Quarterly working reports are to be prepared according to the GIZ template to be provided by the ECO.Georgia project.
- All documents shall be delivered electronically (text files) in English;
- The contractor shall report to Head of Component 1.
- The contractor is expected to coordinate very closely with ECO.Georgia's GIZ team for general and ToR-related questions.
- The contractor shall keep a time sheet (8 hours = 1 working day)

8. Other provisions

8.1. Budgeting and payment

Payment can be effected as follows:

- Interim payment can be effected after provision of outputs/deliverables related to tasks 1-3 and provision of timesheets.
- Final payment can be effected after provision of outputs/deliverables related to tasks 4-5 and provision of timesheets.

8.2. Inputs of GIZ or other actors

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

- Data of GIZ-supported forest-related inventories (e.g. NFI, FMI if needed)
- **Requirements on the format of the bid**

8.3 Requirements on the format of the financial bid

Please calculate your price bid in line with the costing requirements. The specifications for pricing are defined in the attached price schedule which is required to be used for the preparation of the financial offer.