

# Annex 11

## Monitoring and Evaluation Plans

*For the GCF-FAO Project “Enhancing the resilience of Serbian forests to ensure energy security of the most vulnerable while contributing to their livelihoods and carbon sequestration (FOREST Invest)”*

Data/Source	Collection Tool	Frequency	Indicators	Indicative Budget (USD)	Budgetary inputs
Back-to-the-office reports from Principal forest survey and monitoring coordinator, Forest survey leaders/assistants (DF/GCF)	<i>Field observation visits</i>	<i>Throughout the project implementation</i>	<p>Outcome 1.a: ha of forests included in the forest management plans with increased species composition and changes in structure;</p> <p>Outcome 2.c: Average survival rate per ha (%) of planted seedling;</p> <p>Output 2.1.b: # Public Nurseries upgraded;</p> <p>Output 2.3.a: # of ha of degraded public coppice stands converted into high forest;</p> <p>Output 2.3.b: # ha afforested;</p> <p>Output 3.1.a: # of ha of abandoned and degraded private coppice stands converted into high forests;</p>	715,540	<p><i>Principal forest survey and monitoring coordinator;</i></p> <p><i>Field survey leaders/assistants (GCF);</i></p> <p><i>Field survey leaders/assistants (DF)</i></p>
Analytical report with details from georeferenced database of project	<i>GIS data</i>	<i>Y1 and Y2</i>	Core 3: Value of physical assets made more resilient to the effects of climate change and/or	51,950	<i>International Forest monitoring consultant (incl. Collect Earth)</i>

intervention areas and related monitoring via remote sensing analysis as well as ground visits.			<p>more able to reduce GHG emissions</p> <p>Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice</p> <p>Outcome 1.a: Ha of forests included in the forest management plans with increased species composition and changes in structure;</p> <p>Outcome 2.b: Average increase of biomass growth per hectare in M3</p>		
Baseline survey	<i>Baseline study</i>	Y1	<p>Outcome 1.c: % reduction of fuelwood consumption of HH in pilot areas;</p> <p>Outcome 2.b: Average increase of biomass growth per hectare in M3;</p> <p>Outcome 2.c: Average survival rate per ha (%) of planted seedling;</p> <p>Outcome 3.b: # ha with improved soil quality (Phosphorus, Reactive Carbon, Soil Electrical Conductivity, Soil Nitrate and Soil PH);</p> <p>Outcome 3.c: Average increase of biomass growth per hectare in M3 of converted coppice stands</p>	50,000	<i>Baseline survey</i>
Mid-term survey	<i>Survey/questionnaire</i>	Y3	Core 4: Hectares of natural resources brought under improved low-emission and/or	50,000	<i>Midterm survey</i>

			<p>climate-resilient management practice;</p> <p>Outcome 1.a: Ha of forests included in the forest management plans with increased species composition and changes in structure.;</p> <p>Outcome 1.c: % reduction of fuelwood consumption of HH in pilot areas.;</p> <p>Output 1.1.a. NFM updated and operational.;</p> <p>Output 1.2.a. # of tools and mechanisms in support of carbon finance framework elaborated and submitted for council of minister approval.;</p> <p>Output 1.2.b. # of guidance documents of carbon finance framework elaborated and submitted for council of minister approval;</p> <p>Outcome 2.a. % inability to keep house warm.;</p> <p>Outcome 2.b. Average increase of biomass growth per hectare in M3.;</p> <p>Outcome.2.c. Average survival rate per ha (%) of planted seedling.;</p> <p>Output 2.1.b. # Public Nurseries upgraded.;</p> <p>Output 2.2.a. # of public and private stakeholders with increased capacities</p>		
--	--	--	---	--	--

			<p>trained in climate adaptive silviculture.;</p> <p>Output 2.2.d. # of upgraded national curricula of the faculty of forestry and vocational schools.;</p> <p>Output 2.3.a. # of ha of degraded public coppice stands converted into high forest;</p> <p>Output 2.3.b. # ha afforested.;</p> <p>Output 2.3 c. Km of forest roads rehabilitated and climate proofed</p> <p>Outcome 3.b. # ha with improved soil quality (Phosphorus, Reactive Carbon, Soil Electrical Conductivity, Soil Nitrate and Soil PH).;</p> <p>Outcome 3.c. Average increase of biomass growth per hectare in M3 of converted coppice stands.;</p> <p>Output 3.1.a. # of ha of abandoned and degraded private coppice stands converted into high forests.;</p> <p>Output 3.1 b. Km of forest roads rehabilitated and climate proofed</p> <p>Output 3.1.c. # of ha of shelterbelts established;</p> <p>Output 3.1.d # of ha rehabilitated through agroforestry, SRP;</p> <p>Output 3.2.b. USD loan disbursed to support</p>		
--	--	--	--	--	--

			decarbonization of companies.		
Final survey	<i>Survey/questionnaire</i>	Y6	<p>Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice;</p> <p>Outcome 1.a: Ha of forests included in the forest management plans with increased species composition and changes in structure.;</p> <p>Outcome 1.c: % reduction of fuelwood consumption of HH in pilot areas.;</p> <p>Output 1.1.a. NFM updated and operational.;</p> <p>Output 1.2.a. # of tools and mechanisms in support of carbon finance framework elaborated and submitted for council of minister approval.;</p> <p>Output 1.2.b. # of guidance documents of carbon finance framework elaborated and submitted for council of minister approval;</p> <p>Outcome 2.a. % inability to keep house warm.;</p> <p>Outcome 2.b. Average increase of biomass growth per hectare in M3.;</p> <p>Outcome.2.c. Average survival rate per ha (%) of planted seedling.;</p>	50,000	<i>Final survey</i>

			<p>Output 2.1.b. # Public Nurseries upgraded.;</p> <p>Output 2.2.a. # of public and private stakeholders with increased capacities trained in climate adaptive silviculture.;</p> <p>Output 2.2.d. # of upgraded national curricula of the faculty of forestry and vocational schools.;</p> <p>Output 2.3.a. # of ha of degraded public coppice stands converted into high forest;</p> <p>Output 2.3.b. # ha afforested.;</p> <p>Output 2.3 c. Km of forest roads rehabilitated and climate proofed</p> <p>Outcome 3.b. # ha with improved soil quality (Phosphorus, Reactive Carbon, Soil Electrical Conductivity, Soil Nitrate and Soil PH).;</p> <p>Outcome 3.c. Average increase of biomass growth per hectare in M3 of converted coppice stands.;</p> <p>Output 3.1.a. # of ha of abandoned and degraded private coppice stands converted into high forests;</p> <p>Output 3.1 b. Km of forest roads rehabilitated and climate proofed</p> <p>Output 3.1.c. # of ha of shelterbelts established;</p>		
--	--	--	---	--	--

			Output 3.1.d: # of ha rehabilitated through agroforestry, SRP; Output 3.2.b. USD loan disbursed to support decarbonization of companies.		
Annual outcome surveys	Survey/questionnaire	Y2, Y4, Y5 and Y7	<p>Outcome 1.a. Ha of forests included in the forest management plans with increased species composition and changes in structure;</p> <p>Outcome 1.b. # of national policies and regulatory frameworks integrated with climate adaptive silvicultural approaches;</p> <p>Outcome 1.c. % reduction of fuelwood consumption of HH in pilot areas;</p> <p>Outcome 1.d. # of Academic and training institutions integrate introduced technologies, practices, standards and protocols in their curricula;</p> <p>Outcome 2.a. % inability to keep house warm;</p> <p>Outcome 2.b. Average increase of biomass growth per hectare in M3;</p> <p>Outcome 2.c. Average survival rate per ha (%) of planted seedling;</p> <p>Outcome 2.d. # of Academic and training institutions integrating climate change in curricula;</p>	399,470	Annual outcome surveys; Result Based Monitoring & Reporting Officer - P2 (50%)

			<p>Outcome 3.a. Increase of investments in USD of national finance institution in support to agrifood companies' adaptation and decarbonization strategies;</p> <p>Outcome 3.b. # ha with improved soil quality (Phosphorus, Reactive Carbon, Soil Electrical Conductivity, Soil Nitrate and Soil PH);</p> <p>Outcome 3.c. Average increase of biomass growth per hectare in M3 of converted coppice stands;</p> <p>Outcome 3.d. Total volumes in t of sustainable fuel biomass traded through the biomass trading platform.</p>		
Third Party assessment of GHG emissions reduced, avoided or removed/sequestered	<i>Other (please specify) – assessment report</i>	<i>Y1, Y3 and Y6</i>	Core 1: GHG emissions reduced, avoided or removed/sequestered	<i>45,000</i>	Third Party assessment of GHG emissions reduced, avoided or removed/sequestered
Training attendance sheets and training reports	<i>Other (please specify)</i>	<i>Throughout the project implementation</i>	<p>Core 2: Direct and indirect beneficiaries reached;</p> <p>Output 2.1.a: # of citizens reached by gender;</p> <p>Output 2.3.c: # of public and private operators with increased capacities in the production of climate adaptive forestry seedling;</p> <p>Output 2.3.c. # of trainers capacitated on reforestation and conversion techniques;</p>	<i>370,000</i>	<i>FAO Monitoring and Data Management Specialist; Gender Specialist; FAO Monitoring System</i>



			<p>Output 3.1.d. # of gender inclusive biomass hubs platforms established and /or strengthened;</p> <p>Output 3.1.e. # companies trained on utilization of biomass residues for energy purposes;</p> <p>Output 3.1.f. # of extensionists capacitated on CAS through training.;</p> <p>Output 3.2.a. # of enterprises that benefit from accessing services of the project to develop adaptation and decarbonization strategies.;</p> <p>Output 3.3.a. # of capacitated trainees on climate-related risks.</p>		
Environmental national statistics/ national household surveys/ DF Monitoring Database	<i>Government data/records</i>	<i>Annually</i>	<p>Core 2: Direct and indirect beneficiaries reached;</p> <p>Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice;</p> <p>Outcome 1.a: Ha of forests included in the forest management plans with increased species composition and changes in structure.</p> <p>Outcome 2.b: Average increase of biomass growth per hectare in M3;</p>	209,500	<i>DF Data Analyst, DF Monitoring Team, DF Monitoring System</i>

			<p>Outcome 2.c: Average survival rate per ha (%) of planted seedling.;</p> <p>Output 2.1.b. # Public Nurseries upgraded;</p> <p>Output 2.3.a: # of ha of degraded public coppice stands converted into high forest;</p> <p>Output 2.3.b: # ha afforested.;</p> <p>Output 3.1.a: # of ha of abandoned and degraded private coppice stands converted into high forests;</p> <p>Output 3.1.b. # of ha of shelterbelts established;</p> <p>Output 3.1.c: # of ha rehabilitated through agroforestry, SRP;</p>		
Project report	<i>Other (please specify)</i>	<i>Annually</i>	<p>Outcome 1.d: # of Academic and training institutions integrate introduced technologies, practices, standards and protocols in their curricula;</p> <p>Output 1.1.b: # Guidelines for national decision makers on AFOLU to prevent soil degradation;</p> <p>Output 1.1.c: # Standards for fuelwood finalized and validated;</p> <p>Output 1.1.d: # Guidelines for SRP developed, discussed and validated with stakeholders;</p>	354,470	<i>Project report, International M&amp;E Expert; Result Based Monitoring &amp; Reporting Officer - P2 (50%)</i>

			<p>Output 1.2.b. # of guidance documents of carbon finance framework elaborated and submitted for council of minister approval;</p> <p>Outcome 2.d. # of Academic and training institutions integrating climate change in curricula;</p> <p>Output 2.2.b. # of Communities involved in climate adaptive forest investment and management trainings; Output 2.2.c. # of Guidelines to support climate adaptive silviculture approaches published online;</p> <p>Output 2.3 c. Km of forest roads rehabilitated and climate proofed</p> <p>Output 2.2.d. # of upgraded national curricula of the faculty of forestry and vocational schools;</p> <p>Outcome 3.a. Increase of investments in USD of national finance institution in support to agrifood companies' adaptation and decarbonization strategies;</p> <p>Outcome 3.d. Total volumes in t of sustainable fuel biomass traded through the biomass trading platform;</p>		
--	--	--	--	--	--

			Output 3.1 b. Km of forest roads rehabilitated and climate proofed		
			Output 3.2.a. # of enterprises that benefit from accessing services of the project to develop adaptation and decarbonization strategies.		
Total:				USD 2,295,930	

Evaluation			
Type	Timing	Independent/Self-evaluation	Indicative Budget
Process	Mid-term evaluation	Independent	USD 75,000 <sup>1</sup>
Process	Final evaluation	Independent	USD 100,000 <sup>2</sup>

In its role as Accredited Entity, FAO (specifically the FAO-GCF project supervision team) will oversee and supervise the implementation of this project in accordance with the Accreditation Master Agreement (AMA) signed between FAO and the GCF. As per the GCF Monitoring and Accountability Framework, and in accordance with the AMA, FAO will provide the GCF with an Inception Report, Annual Performance Reports, an independent Mid-term Evaluation report, a Project Closure Report, and an independent Final Evaluation report. FAO will also provide semi-annual and annual Financial Reports throughout project implementation.

FAO has standard M&E procedures that are compliant with the GCF performance measurement framework. FAO will manage and coordinate reporting to the GCF according to its standards and procedures.

The project monitoring will be conducted by a team of M&E experts and Monitoring and Data Management Specialist.

The monitoring and evaluation will take place under the following three levels:

**(1) Project execution level:**

The project will include an implementation of a monitoring system to understand efficacy, targeting and verify its underlying assumptions as well as incorporate elements and lessons emerging from the monitoring systems into the project implementation and planning outcomes.

<sup>1</sup> Covered by AE Fee, carried out by the Independent Office of Evaluation

<sup>2</sup> Covered by AE Fee, carried out by the Independent Office of Evaluation

The Monitoring at this level will be coordinated by the monitoring expert(s) and overseen by the PMU. Data will be stored in a database accessible to the GCF, the counterpart, as well as to FAO. Georeferencing<sup>3</sup> will enhance the monitoring and evaluation of outcomes and assist in making available for the project, its partners and the GCF precise geospatial analysis<sup>4</sup> that will be paramount in assessing impacts and contribution to approved targets at midterm and completion. Additionally, it will improve the project's capacity to provide technical assistance to beneficiaries and monitor advancements and impacts. Georeferenced activities and resulting intervention areas will be also analyzed via remote sensing and photointerpretation techniques so to ensure Results-based M&E and support Result Based Management of the project. Results of the different analysis will be presented annually via a dedicated "Project's Implementation Atlas". Data, supervision reports and conclusions obtained by the above-mentioned process will be presented annually to the GCF as well as to the other stakeholders.

## **(2) Supervision, Support level:**

FAO will support the project team in reviewing and analyzing progress reports and to assess performance against baseline and targets. FAO will also secure, according to its rules and regulations, financial control and midterm evaluation and final evaluation phases via an independent and external evaluation expert.

In accordance with the AMA between FAO and GCF, the FAO Office of Evaluation (OED) will be responsible for the independent interim and final evaluations. The evaluations will be conducted using a question-driven approach, and may include assessments against the criteria of relevance, effectiveness and sustainability, among others. The interim evaluation will be instrumental in contributing – through operational and strategic recommendations – to improve implementation, setting out any necessary corrective measures for the remaining period of the project. The final evaluation will assess the relevance of the intervention, its overall performance, as well as sustainability and scalability of results, differential impacts and lessons learned. The evaluation should also assess the extent to which the intervention has contributed to the Fund's higher-level goal of achieving a paradigm shift in adaptation to climate change in Serbia. The evaluation will draw on mixed-methods, using qualitative methods (e.g. participatory rural appraisal) in combination with counterfactual analysis, depending on the existence of reliable control group data from the project's baseline and endline surveys. In addition to primary data collected by the evaluators and secondary national and subnational statistics, both interim and final evaluations will draw on the monitoring reports and activities prepared by project staff. Careful attention will be paid to the disaggregation of data, results and outcomes by gender, considering different level of vulnerability of project beneficiaries.

## **(3) Strategic level:**

---

<sup>3</sup> Georeferencing will ensure a unique relation between project's activities and geographical coordinates collected by the project. This will allow the project and the country to ensure clear identification of activities and beneficiaries in the precise context defined during project identification and design. Georeferencing will allow the project to profit from the vast geospatial data set available for the Country and will support involved institutions in sharing and mainstreaming geospatial data. Having georeferenced investments as well as soft activities (i.e. trainings, capacity development<sup>3</sup>) will allow the project to answer indicators with objective elements of evaluation. The use of such approach will not require special technologies, equipment or advanced IT skills. Basic software are available under license (i.e. ArcGis/ESRI) or in open source (i.e. QGIS) and most of the currently available smart phones/tables, regardless of their operative systems, can execute most of the processes required to ensure georeferencing and data management. Additionally, FAO will provide dedicated training to PMU, M&E unit and project's partners/stakeholders during the start-up phase of the project.

<sup>4</sup> The M&E unit will monitor activities and processes thanks to a series of remote sensing and photointerpretation analysis that have been made accessible to the country via the FAO developed application such as Earth Map and SEPAL.. The application will allow the project to factor in climate change variables as well as socio-economic and environmental data into the planning and decision making process. The integration of 'geo-spatial' elements will allow stakeholders to overlay different classes of data such as climate trends, hydrography, erosion, flood risks, land cover, land use, distribution of population and livelihoods that are a non-negligible part of an evidence based and informed decision making process. Finally, the process will contribute in enhancing national and regional data collection activities that will support the understanding of Climate Change impacts at local level.

Annual results and related analysis, jointly prepared by FAO and project team will provide the base for each annual planning exercise. This will be presented to the steering committee in order to support its strategic role and to secure transparency and result based strategy development.

The project will include a midterm evaluation and a final evaluation. This will be conducted with the OED Unit in FAO in accordance with FAO and GCF rules.

**Formal Evaluation by Accredited Entity (interim and final)**

To provide an external viewpoint on the progress of the Project and the achievement of its objectives, the FAO Office of Evaluation (OED) will conduct two project evaluations, an interim evaluation and a final evaluation. Costs related to the interim and final evaluation will be covered by the AE fee of the project.

In line with the AMA, the FAO Office of Evaluation (OED) will be in charge of the interim and final evaluation of the project. The evaluations will be conducted using a question driven and according to the GCF evaluation criteria. The interim evaluation will be instrumental in contributing – through operational and strategic recommendations – to improve implementation, setting out any necessary corrective measures for the remaining period of the project. The final evaluations will assess the relevance of the intervention, its overall performance, as well as the sustainability and scaling up of the results obtained, coherence in climate finance delivery with other multilateral agencies, gender equity, innovativeness in results areas and the lessons learned. The evaluation should also assess the extent to which the intervention has contributed to the Fund’s higher-level goal of achieving a paradigm shift in adaptation to climate change in the country. The evaluations will be based on a rigorous evaluation methodology drawing on the most suitable evaluation methods and tools. In addition to the primary data collected by evaluators and the secondary national data available, the interim and final evaluations will be based on monitoring activities and reports prepared by project staff, including surveys to be implemented at baseline, interim and project completion. Careful attention will be paid to the disaggregation of data, results and outcomes by gender.