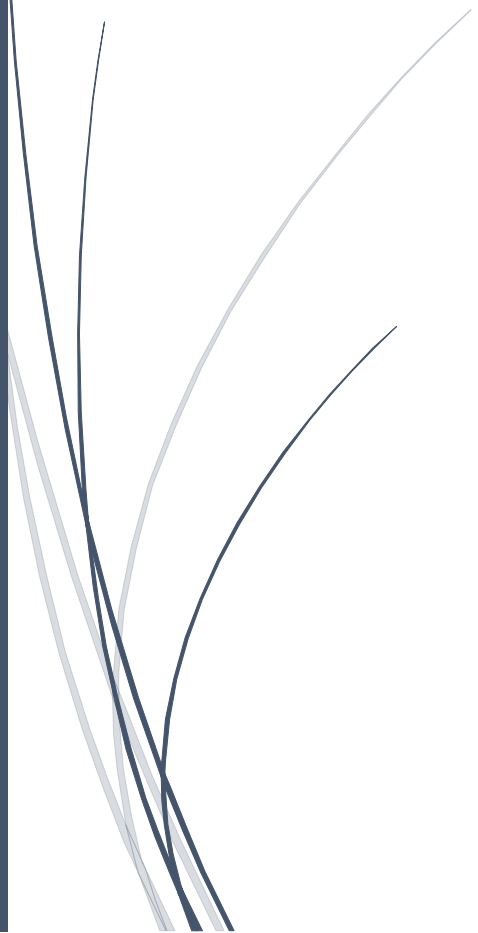




28 – 30 November 2018
Tbilisi, Georgia

Criteria and Indicators for Sustainable Forest Management for Georgia

Report of the second national
workshop



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List of Abbreviations

APA	Agency of Protected Areas
CENN	Caucasian Environmental NGO Network
C&I	Criteria and Indicators
DES	Department of Environmental Supervision
FAO	Food and Agriculture Organization of the United Nations
FE	Forest Europe (Ministerial Conference on the Protection of Forests in Europe)
FIMS	Forest Information and Monitoring System
FLUIDS	Forest and Land Use Information and Decision Support
FPD	Forest Policy Division
GCS	Global Cores Set (of forest-related indicators)
GDP	Gross Domestic Product
GFW	Global Forest Watch
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
HCV	High Conservation Value
IUCN	International Union for Conservation of Nature
LEPL	Legal Entity of Public Law
MEPA	Ministry of Environmental Protection and Agriculture
NEAP	National Environmental Action Plan
NFA	National Forestry Agency
NFC	National Forest Concept
NFI	National Forest Inventory
NFP	National Forest Program
NGO	Non-Governmental Organization
NWFPs	Non-wood forest products
PA	Protected Areas
SDGs	Sustainable Development Goals
SFM	Sustainable Forest Management
ToS	Team of Specialists
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFF	United Nations Forum on Forests
WB	World Bank
WRI	World Resource Institute

1. Introduction

The report gives an overview of the outcomes of the 2nd national coaching workshop on the development of “Criteria and Indicators for Sustainable Forest Management”, which was held in 28 – 30 November 2018 in Georgia. Further, it outlines the development process of the national C&I set, and explains the efforts made during the workshop, including formulating the next steps ahead.

This national coaching workshop was part of the UNEC/FAO, UNDA project designed to strengthen the national capacity of five countries in the Caucasus and Central Asia (Armenia, Georgia, Kazakhstan, Kyrgyzstan and Uzbekistan) to develop **national criteria and indicators (C&I) for sustainable forest management (SFM)**. The project builds upon existing processes and expertise in participating countries addressing country specific needs and provides knowledge, capacity-building, training materials and advisory services for defining the scope and relevance of the information that is needed for the implementation of sustainable forest management at national level to support evidence-based policy making. The duration of the project is from June 2016 until December 2019.

Criteria and indicators can be used for monitoring the status and trends in the forest sector at a national level and eventually monitoring progress towards the Sustainable Development Goals (SDGs).

National criteria and indicators for sustainable forest management will serve as a tool to communicate the relevance and importance of forests to other environmental sectors, economy as well as society at national, regional and international levels.

The key project stakeholders are experts from national forest management and law enforcement institutions, forest related ministries, research institutes and NGOs. In addition, the key partners include other international organizations or initiatives already operating in the countries.

1.1. Development process of C&I in Georgia

In Georgia, the need and potential of C&I for SFM was recognized as being a useful tool to measure progress made towards achieving the national goals of SFM. Also, the development of C&I is seen as a way of engaging a wide range of stakeholders in the forest sector reform, so that a variety of interests are reflected and more inclusive forest sector decision making process is developed. The process for the development of national C&I for SFM in Georgia began in 2014 and this project aims to build on this work to support Georgia in strengthening the process and outcome, assisting it to develop a comprehensive, effective and feasible national set of C&I for SFM. In the beginning, the process was supported by the GIZ IbiS project through an invited expert from Germany. Several workshops and consultation meetings took place since then with the participation of national and international specialists. During several workshops in 2017 and 2018, some also under the UNECE/FAO, UNDA project, the ecological, economic and social principles were further specified by developing related criteria and indicators. In addition, a list of detailed management-based criteria and indicators has been elaborated through several workshops and field visits by an expert group to support the planning, implementation and monitoring of ecosystem-based forest management.

The 1st national coaching workshop under the UNECE/FAO, UNDA project was organized by the UNECE/FAO team on 29 November – 1 December 2017, where, already developed documents were used as a basis for the workshop. The participants were divided into groups (Social-economic; Ecological; Forest Governance) and worked in groups, in order to: categorize relevant existing documents in Georgia to feed

into C&I; identify relevant stakeholders and map them according to their roles and functions, including the SWOT analysis of forest management from the perspectives of governance, private sector enterprises and forest dependent communities. The 1st national coaching workshop was also supported with background information and guidelines, followed by additional group work for revising and further developing the national set of C&I for SFM. The workshop was followed by a regional workshop held in 20 – 22 February 2018 in Tbilisi where the project countries had an opportunity to share outputs and further improve the set of C&I for SFM through group work exercises and with the involvement of the UNECE/FAO Team of Specialists on Monitoring Sustainable Forest Management. The set of relevant recommendations were elaborated through the close consultations between the national experts and team of international specialists, specifically on possible modification of some criteria and identification of indicators that could be covered through national data sources. As the recent forest management level inventories (and 10 years forest management plans elaborated based on these results) only cover up to 13% of the whole forest area, Georgia still needs to get complete information on forests from the planned National Forest Inventory (NFI). Almost 90% of the indicators developed under the ecological principle could be monitored with data gathered through the NFI. Besides, the national set of C&I must address and enable reporting on the new forest code. In the new forest code, a new type of forest categorisation is applied (e.g. protected forest; protective forest; resort and recreational forests; forests for commercial use).

2. Structure of the Workshop

The workshop brought together 36 national and international experts from different organizations to discuss, exchange experiences, map out the needs as well as to formulate recommendations for the future work on C&I for SFM for Georgia. The workshop languages were English and Georgian (with interpretation). It was organized with the kind support of UNDP Georgia.

The participating group of experts worked three days with use of various methods, including presentations and group work exercises. The workshop was facilitated by Ms. Nato Kirvalidze. The workshop took place 28 - 30 November 2018. All related documentation is available at: <https://www.unece.org/index.php?id=50162>

The workshop was organized under the UNECE/FAO and UNDA 2016 – 2019 capacity-building project “Accountability Systems for Sustainable Forest Management in the Caucasus and Central Asia”. More information about the project framing this workshop is available at: <http://www.unece.org/forests/areas-of-work/capacity-building/unda2016-2019.html>

The second national workshop was designed to review the draft C&I for SFM set, which was developed over the recent years. It provided an opportunity for country representatives to share the outcomes of local consultations and work in detail on the set to develop methods for data collection, a management system and plan the institutionalization of the national C&I set.

The structure of the seminar was built on 6 interlinked sessions that cover the following issues:

1. PRELIMINARIES. Recap the background, definitions, purpose, processes, benefits and challenges with C&I for SFM.
2. SHARING AND CRITICAL REVIEW. Review the development process of C&I for SFM in Georgia.
3. COHERENCY. Remove gaps and improve coherency of the national C&I set focussing on legal, policy and institutional frameworks.

4. SCREENING AND PRIORITISATION. Screen, prioritise and adjust indicators focussing on legal, policy and institutional frameworks.
5. FACTSHEET DEVELOPMENT and elaboration of methodology of data collection. Discuss presentation on data collection and methodologies and presentation on Forest Europe Factsheets and reporting. Clarify the necessary input for the development of factsheets based on one indicator per principle and reference to collecting data for the indicator set.
6. PLANNING. Discuss the main steps towards the finalization of the C&I set and identify support needs.

3. Recap of the background, definitions, purpose, processes, benefits and challenges with C&I for SFM

The morning session of day 1 started with opening remarks by the host country representatives: Ms. Natia Iordanishvili, deputy head of National Forest Agency and Ms. Lika Giorgadze, deputy head of Biodiversity and Forestry Department of the Ministry of Environmental Protection and Agriculture, followed by Ms. Theresa Loeffler, project manager, UNECE/FAO Joint Forestry and Timber Section. The session continued with presentations:

1. Recap of the project and FRA reporting

Ms. Roksolana Shelest, consultant, UNECE/FAO Joint Forestry and Timber Section presented the project overview, sequence of its implementation and overall key areas of work under UNECE/FAO Joint Forestry and Timber Section, followed by a description of the actions implemented for the Global Forest Resource Assessment improvement, including how data collection through the new Global Cores Set (GCS), using the new web platform should help in measuring progress on the SDGs on forest related indicators under Goal 15 (indicators 15.1.1 and 15.2.1).

2. Preliminary, workshop objectives, agenda, rules and norms

Workshop objectives, general rules and norms as well as methodologies was presented by Ms. Nato Kirvalidze, regional consultant of the project and workshop facilitator. She explained the tasks of each group in detail and guided the participants in their allocation into relevant working group. She provided guidance and detailed instructions through visualized presentations at a daily basis for the workshop participants.

3. Basics on Criteria and Indicators for Sustainable Forest Management

Mr. Mati Valgepea, invited expert from the Estonian Ministry of Environment made a comprehensive presentation on the pillars, definitions, purpose and benefits related with C&I for SFM. He gave information on qualitative and quantitative indicators, their features and means of verification, the data flow pyramid, including explaining the C&I as tools to operationalize SFM. He also provided the information on the benefits of using C&I as a tool for forest policy.

4. National process for developing the C&I for SFM

Ms. Natia Tskhovrebadze, chief specialist at Forest Policy Division presented the information on the process and outcomes of ongoing national process of developing C&I for SFM. She gave an overview on key principles and the set of criteria and indicators developed during the process.

5. Data sources and information management processes for SFM C&I

Mr. Andrzej Talarczyk, chief information officer at the Bureau for Forest Management and Geodesy of Poland, provided a presentation illustrating the SFM evolution during the recent decades based on the national and international forest related principles followed with sharing information on the experience of the Forest Data Bank development and existing business processes related to legal standards of forest monitoring, including the data analysis, publication and reporting.

6. National sets of C&I for SFM – adequate presentation of the related information

Ms. Stefanie Linser, invited expert from University of Natural Resources and Life Sciences, Vienna (BOKU), explained the five steps from initiation to report on SFM: national memorandum of understanding; participatory stakeholder process to develop a set of C&I for SFM; monitoring of the respective data and information; reporting of the collected data and information and assessment of SFM based on the available data and information. She also reviewed the existing background documentation, methods, standards, existing terms and definitions under Forest Europe C&I, including providing explanations on how developing and indicator fact sheet supports the way of thinking through the requirements for and elements of an effective indicator and its subsequent use, followed with detailed descriptions of fact sheets and their practical use. She also provided good examples of Austria’s practice on how the set of national C&I is related to goals and targets of Austria’s national forest strategy. In her second presentation, Ms. Linser provided the study results on “How and Why C&I have Changed SFM in the Past 25 Years”. She described the study methods, including the information on common achievements of regional and international C&I processes followed with success factors for C&I implementation.

4. Outcomes of group work on coherency and prioritisation

Firstly, the group work mainly focused on removal of gaps and coherency improvement, followed an exercise to screen, prioritise and adjust indicators focussing on legal, policy and institutional frameworks. The exercises also included a critical review of the national C&I set to avoid or at least minimize overlaps between social-economic and ecological aspects. The results of the group work exercises included the reformulation of the identified indicators for improving the practicality of the C&I set and the development of relevant factsheets and methodology for data collection.

Result of Group 1. (Ecological)

Existing indicator	Modified indicator or other recommendations to enable indicator to pass through the screening	Please justify the modifications
2.2. Planted forest area	Proportion and area of natural and planted forest	Corresponds to FE 4.3. – “Area of forest and other wooded land by class of naturalness”
5.5.2. Share of wood – based energy in total primary energy consumption	Need to be moved under economic principle	Total energy balance is administered by the Ministry of Economy
1.2.1. Forest area within legally established PA including the Emerald Network ¹	They should be separated, as the whole Emerald Network system is	At the same time, the separation gives easier way of data collection.

¹ The Emerald network is a network of nature protection areas to conserve wild flora and fauna and their natural habitats of Europe, launched in 1989 by the Council of Europe as part of its work under the Convention on the Conservation of European Wildlife and Natural

	not legally established yet. Alternative indicators: a) Forest area within the legally established PA b) Protected forests c) Protected forests inside the Emerald Network	
2.8. Frequency of habitat trees	Alternatives: a) Area of habitat trees in ha b) Proportion of habitat trees in %	Indicator should be measurable

Result of Group 2. (Economic)

Existing indicator	Modified indicator or other recommendations to enable indicator to pass through the screening	Please justify the modifications
6.1.1. Volume of harvested wood from authorised cutting classified by tree species and quality	Increment and felling classified by tree species and quality	1. Better corresponds to FE 3.1 & 3.2 2. Data is also collected on illegally felled trees and their quantities 3. Data on legal harvest is accounted anyway.
9.3. Damage induced to the forest ecosystem by unsustainable commercial use of NWFPs (low, medium, high)	Alternatives: 1. Income from non-wood forest products 2. Quantity and market value of non-wood goods 3. Regulation on NWFP utilization (qualitative)	Alternative indicators correspond much better to FE indicators. Besides, firstly, there should be an existing regulation on NWFP in the country, besides, a mechanism for legal utilization, including the quotas to be set by the forest management bodies.

Result of Group 3. (Social)

Existing indicator	Modified indicator or other recommendations to enable indicator to pass through the screening	Please justify the modifications
11.1. Employees in the forest sector on different levels (central,	Alternatives: 1. Forest sector workforce	11.1. – this indicator corresponds to FE 6.5 and it is better to simplify and shorten the wording, because each

regional, district) classified by gender and occupational category	2. People employed in the forest sector (gender aggregated)	indicator will have their description/full text after all.
11.3. Fatal and non-fatal occupational accidents and occupational diseases classified by type of work and seriousness of accidents	Alternative: Occupational safety and health	Wording is too long. It is better to adjust the full text/description of the indicator. 11.3. – this indicator corresponds to FE 6.6.
15. Income opportunities for rural population living in the vicinity of forest areas are created	Can be reassigned under the economic principle	Clarification with economists needed.

Result of Group 4. (Legal, policy and institutional framework)

Existing indicator	Modified indicator or other recommendations to enable indicator to pass through the screening	Please justify the modifications
19.1. National policy (Forest Concept) supporting SFM is approved by Parliament of Georgia	19.1 National Forest Policy (National Forest Concept)	Shorten the wording.
19.2. Forest Sector Strategy based on National Forest Concept considered in the National Environmental Action Program and approved by the Government of Georgia	19.2 Forest Sector Strategy and action plan or related	Shorten the wording.
19.3. National principles of SFM considered in the Forest Code, to be approved by the Parliament	19.3 SFM principles considered in forest related legislation	Shorten wording
19.5. Efficient institution for development and monitoring of the political, strategic and legal framework for the forest sector & 19.6. Efficient institutions for the sustainable management of Georgian forests & 19.7. Efficient institutions for the supervision of forest management and trade of wood and non-wood forest products	19.5. Effective independent institutions responsible for forest policy, management and supervision/law-enforcement	Combine three indicators into one (modify wording).
20.1. Legally approved scientifically sound national forest monitoring and reporting process (Georgian National Forest Inventory)	20.1. Comprehensive information on forests <u>Alternative:</u> National Forest Inventory	Simplify and modify wording.
20.2. Legally approved methodology for forest management-based inventory/taxation for the elaboration of 10-year	20.2. Standardized and updated forest information <u>Alternative:</u> Legal Forest Management Plans	Simplify and modify wording.

management plans for individual forest districts		
21.3. Web-based publicly access to forest information and monitoring results	21.3 National web-based forest and land use information system	Simplify and modify wording
21.1. Effective system of issuing public information about SFM in Georgia	21.1. National publications on SFM in Georgia on a yearly basis	Simplify and modify wording to have a more precise indicator.

5. Outcomes of group work on factsheets elaboration and methodology of data collection

During this exercise, the working groups elaborated on and clarified how information would be gathered, managed and used around specific indicators in order to help developing of full information system around indicators that could be implemented and institutionalised. The exercise was followed by the panel assessment with criteria covering the following aspects: *is the rationale clearly formulated? Is the indicator linked to the policy target or does it have a threshold? Are the institutional roles clearly defined?*

Result of Group 1. (Ecological)

Criterion No.2: The natural biodiversity of the forests in Georgia is maintained and enhanced	
Indicator: 2.3. Tree species composition/diversity	Short name of the indicator: Diversity of tree species Full text of the indicator: Area of forest classified by number of tree species occurring
<p>Rationale: What will be the purpose of generating information on this indicator be? How will this information be used to advance SFM?</p> <p>This indicator provides information on forest significance as the diversity of other forest species (e.g. herbs, insects, fungi) strongly depend on the diversity of tree species, including their structure and age classes. In general, multi-tree-species forests are more diverse than one-tree-species forests.</p> <p>The indicator is also in relation with the following:</p> <ul style="list-style-type: none"> 1.1.1. Total Forest Area 1.1.2. Forest area as proportion of total land area 1.1.4. Forest area available for wood supply 1.2.1. Forest area within legally established protected areas (including Emerald sites) 1.2.2. Primary Forest 2.1. Naturally regenerated forest area 2.4. Distribution of endemic tree species 2.6. Distribution of endangered tree species/red list tree species 	

2.7. Structure of forest stands classified according to number of layers (vertical structure) and stem distribution (horizontal structure)

Data sources and data provider:

- National Forest Agency
- Agency of Protected Areas
- Akhmeta Municipality (forest/protected landscape management unit)
- Adjara Forest Agency
- Tbilisi municipality
- Forest and Land Use Atlas (<https://atlas.mepa.gov.ge/>)
- Ilia state university
- NGOs.

Measurement unit and frequency of measurement required:

- Number of tree species;
- Area (ha)
- Volume - m³
- Density;
- Regeneration capacity - volume/ha

Reporting notes (e.g. separate figures to be reported on):

- Volume/ha
- Changes in dominant species distribution/tendency
- Forest productivity/site class (Bonitet)

Policy targets and/or thresholds for this indicator (might also be time specific):

- Assessment every 10 years;
- If necessary, conduct monitoring in shorter time intervals.

Institutional roles and responsibilities: *Which institutions will collect, manage and use data? Try to build from and on what exists:*

- National Forest Agency (Implementation);
- Agency of Protected Areas (Implementation);
- Ministry of Environmental Protection and Agriculture – Biodiversity and Forestry Department (Responsible for data access for public; Data analysis; Reporting; Forest and Land Use Information Atlas - <https://atlas.mepa.gov.ge/>)

Related definitions available in the Forest Europe glossary:

- Diversity of tree species - Area of forest and other wooded land, classified by number of tree species occurring;
- Regeneration - Total forest area by stand origin and area of annual forest regeneration and expansion;
- Naturalness - Area of forest and other wooded land by class of natural-ness;
- Threatened forest species - Number of threatened forest species, classified according to IUCN Red List categories in relation to total number of forest species;
- Growing stock - Growing stock on forest and other wooded land, classified by forest type and availability for wood supply

Terms that still need to be defined:

Challenges regarding data availability and reporting on this indicator:

Data collection without forest inventory is a challenge. Besides, data is always precise when forest inventories are conducted.

Recommendations to address these challenges:

- Regular forest inventories and developing management plans;
- Opportunities for comprehensive data analysis;
- Detailed accountability based on forest use information.

Result of Group 2. (Economical)

Criterion No.8: The contribution of the forest sector to the Georgian economy	
<p>Indicator: 8.1. Contribution of the forest sector to the GDP classified by:</p> <ul style="list-style-type: none"> • Wood products • Non-Wood Forest Products (NWFP) • Marketed Services 	<p>Short name of the indicator:</p> <p>GDP of forestry sector</p> <p>Full text of the indicator:</p> <p>Contribution of forestry and manufacturing of wood and paper products to GDP, including the NWFP</p>
<p>Rationale: What will be the purpose of generating information on this indicator be? How will this information be used to advance SFM?</p> <p>This indicator supports the assessment of how SFM is working in Georgia, national decision-making in the Economy and Forest sector and how it contributes to the overall sustainable development. The contribution of forestry and manufacturing of wood products to macro-economy.</p>	
<p>Data sources and data provider:</p> <ul style="list-style-type: none"> • All forest management bodies: <ul style="list-style-type: none"> ○ National Forest Agency ○ Agency of Protected Areas ○ Akhmeta Municipality (forest/protected landscape management unit) ○ Adjara Forest Agency ○ Tbilisi municipality • Ministry of Finance; • Ministry of Economy and Sustainable Development; • Geostat; 	
<p>Measurement unit and frequency of measurement required:</p> <ul style="list-style-type: none"> • GEL/Year; • %/Year; • Area (ha) 	
<p>Reporting notes (e.g. separate figures to be reported on):</p> <ul style="list-style-type: none"> • Volume/ha • Changes in dominant species distribution/tendency • Forest productivity/site class (Bonitet) 	
<p>Policy targets and/or thresholds for this indicator (might also be time specific):</p> <p>Policy targets and/or thresholds for this indicator (might also be time specific): Forest Concept of Georgia, DCFTA - article 233.</p>	
<p>Institutional roles and responsibilities: <i>Which institutions will collect, manage and use data? Try to build from and on what exists:</i></p> <p>Data manager: GEOSTAT; MEPA; Forest management bodies; Ministry of Finance;</p> <p>Data users: Set of Ministries; NGOs; Academia; Private sector; National/international reporting.</p>	

<p>Related definitions available in the Forest Europe glossary:</p> <ul style="list-style-type: none"> • Contribution of forest sector to GDP – Contribution of forestry and manufacturing of wood and paper products to GDP • Net revenue – net revenue of forest enterprises • Investments in forests and forestry – Total public and private investments in forests and forestry • Wood consumption – Consumption per head of wood and products derived from wood; • Wood energy – Share of wood energy in total primary energy supply, classified by origin of wood; • Trade in wood – Imports and exports of wood and products derived from wood; • Roundwood – Quantity and market value of roundwood; • Non-wood goods – Quantity and market value of non-wood goods from forest and other wooded land • Services – Value of marketed services on forest and other wooded land 	<p>Terms that still need to be defined:</p>
<p>Challenges regarding data availability and reporting on this indicator:</p> <p>Forest Sector contribution is not accounted separately. Therefore, it is not possible right now to measure this indicator. In 2014, the contribution to GDP was 8%, but this was calculated including Agriculture.</p>	
<p>Recommendations to address these challenges:</p> <p>At the initial stage – estimate the gross benefit. Differentiate forest sector and arrange capacities to calculate and measure this indicator.</p>	

Result of Group 3. (Social)

<p>Criterion No.15: Income opportunities for rural population living in the vicinity of forest areas are created</p>	
<p>Indicator: 15.3. Income opportunities in the tourism sector for rural population living in the vicinity of forest areas (low, medium, high)</p>	<p>Short name of the indicator: Tourism development</p> <p>Full text of the indicator: The use of forests for recreation and tourism development to create income opportunities for rural population living in the vicinity of forests</p>
<p>Rationale: What will be the purpose of generating information on this indicator be? How will this information be used to advance SFM?</p> <p>This indicator will help better assess the social-economic condition of local people. Besides, the use of forests for recreation and tourism development will create alternative income opportunities and will reduce dependence on timber resources.</p>	
<p>Data sources and data provider:</p> <ul style="list-style-type: none"> • Local governments; • Tourism department of Ministry of Economy; • Agency of Protected Areas; • National Forest Agency; • Adjara Forest Agency 	

<ul style="list-style-type: none"> • Research organizations. 	
Measurement unit and frequency of measurement required: Qualitative: <ul style="list-style-type: none"> • Improvement of general living conditions of rural communities; • Qualitative and quantitative improvement of forests; • Use of forest resources only by locals. 	
Reporting notes (e.g. separate figures to be reported on):	
Policy targets and/or thresholds for this indicator (might also be time specific): <ul style="list-style-type: none"> • Mobilize private investments; • Sharing best practice experiences of other countries. 	
Institutional roles and responsibilities: <i>Which institutions will collect, manage and use data? Try to build from and on what exists:</i> <ul style="list-style-type: none"> • Local governments; • National Forest Agency (Implementation); • Agency of Protected Areas (Implementation); • Private sector; • Universities. 	
Related definitions available in the Forest Europe glossary: <ul style="list-style-type: none"> • Recreation in forests – The use of forests and other wooded land for recreation in terms of right of access, provision of facilities and intensity of use • Non-wood goods – Quantity and market value of non-wood goods from forest and other wooded land • Services – Value of marketed services on forest and other wooded land • Forest sector workforce – Number of people employed and labor input in the forest sector, classified by gender and age group, education and job characteristics; 	Terms that still need to be defined: Definition of local population – who are dependent to forests and products or services provided by forests (timber & non-wood)
Challenges regarding data availability and reporting on this indicator: <ul style="list-style-type: none"> • Not existing standardized form of reporting on the issues described above; • Access to relevant information; • Lacking will and resources. 	
Recommendations to address these challenges: <ul style="list-style-type: none"> • Political will need to be supported for relevant strategy development; • Cooperation between the forest management bodies and local governments should be strengthened. 	

6. Outcomes of group work on gap analysis of the national legal framework to improve consistency with the indicator set

The working group was formed for further addressing additional needs for C&I set, in order to identify any inconsistencies, gaps or areas that need revision in the legal framework. The team had to list areas (non-exhaustive) that should be considered/modified in the legislation through justifying the inconsistencies or gaps, followed with providing practical recommendations to deal with these inconsistencies.

Results of Group 1. Check the revised C&I set and identify any inconsistencies, gaps or areas that need revision in the legal framework.

Areas that should be considered/modified in the legislation in the future	Justification on what the inconsistency or gap is/why it is a problem	Recommendation on practical adjustments or enhancements to deal with inconsistency or gap
Contribution of Georgia's forests in global carbon cycle is increased	It is considered under the National Environmental Action Plan, but still there is no existing regulatory act addressing this aspect.	Relevant regulatory act has to be developed.
Sustainable commercial use of NWFP	The restrictions are only reflected by the administrative code by the time being.	It is necessary to have an improved regulatory scheme to implement sustainable commercial use of NWFP.
Working conditions in the forest sector are "decent", ensuring gender equality and provision of occupational safety and health	The relevant occupational safety norms are not considered in the Forest Use regulatory act.	Forest sector occupational safety norms have to be elaborated and adopted.
The rural population living in the vicinity of forests has access to grazing areas close to their settlements as long as forest ecosystems are not damaged	Non-organized grazing causes severe forest ecosystem damage. This issue lacks improved regulation at a legislative level.	Proper regulatory acts should be developed inside the forestry sector.

7. Terms that still need to be defined which occur in the indicator set

The working group participants had to undertake an exercise to identify terms incorporated in the draft set of national C&I for SFM, which are not clearly defined. They identified key phrases used and referred to the sources that could support the clarification of the terms.

Results of Group 2. Highlight the terms that need clear definitions and check if they are already defined in Georgian legislation or under Forest Europe definitions (if existing) or not.

Identify as many key words or phrases as you can used in the C&I set that require clear definition	Indicate in which document we can find the definition if possible
Forest	Draft forest code; FE – 1.1.
Habitat tree Note: Full text development is needed.	There is no exact term for “habitat tree” in Georgian language. Georgian ecological books, also the CBD and NATURA 2000/Emerald Network literature can be used to develop proper definition/full text for the indicator.
Endemic species	Law on biodiversity of Georgia; Botanical and ecological literature could be used as reference.
Commercial forest	This indicator can be modified according to new draft forest code, or modify in line with: e.g., annual wood supply classified by forest type, or, quality and quantity of annual wood supply classified by forest categories.
Resort and recreational forest	New draft forest code; FE C&I for SFM.
Forest carbon	Country national report supported by UNDP; FE C&I for SFM (1.4.)

8. Final set of national criteria and indicator for SFM

Criterion	Indicator	Measurement units	Data sources
Ecological Principle			
1. The area covered by forest in Georgia is maintained.	1.1. Total forest area	Ha	Forest cover map. (Sentinel 2, 10m resolution). In combination with a visual pre-assessment of the plots using international forest definitions
	1.2. Forest area as proportion of total land area	% of total area of Georgia	
	1.3. Forest area annual net change rate	Forest area (ha) lost. Forest area (ha) gained.	Info from Forest Management Bodies; Better: FIMS a) from Central Forest Register; b) from FIMS Forest activity records; from FIMS Incident recording module using RS based forest loss and gain detection
	1.4. Forest area available for wood supply	ha, % of total forest area	Forest categories 2.9.3.1 (GIS info) From FIMS: Forest Function Mapping/Zoning Module; step by step improved during each Forest Management Plan
	1.5. Forest area within legally established protected areas (including Emerald sites)		FIMS and Forest Atlas/portal
	1.6. Primary forest area = Forest area undisturbed by man		FMP/FIMS/Portal
	1.7. Protective forest area		
	1.8. Recreation forest area		
	1.9. Proportion of forest area under long-term forest management plans		
2. The natural biodiversity of the forests in Georgia is maintained and enhanced	2.1. Naturally regenerated forest area	ha, % of total forest area	FMP/FIMS/Portal
	2.2. Planted forest area		
	2.3. Tree species composition/diversity	NFI/FMP/FIMS/Portal	
	2.4. Abundance/frequency of endemic tree species		
	2.5. Abundance/frequency of introduced tree species and share of invasive tree species		
	2.6. Abundance/frequency of endangered tree species/red list tree species		

Criterion	Indicator	Measurement units	Data sources
	2.7. Structure of forest stands classified according to number of layers (vertical structure) and stem distribution (horizontal structure)	Ha per class of layers (1, 2, multiple) Ha per class according to stem distribution	NFI/FMP/FIMS/Portal
	2.8 Abundance/frequency of habitat trees	m ³ /ha % of growing stock	
	2.9 Standing dead wood	m ³ /ha and decay class	
	2.10. Lying dead wood		
	2.11. Area/proportion of old-grown forest	ha, % of total forest area	
3. The vitality of the forests in Georgia is maintained and enhanced ensuring the protective functions of the forest	3.1. Regeneration capacity of forest stands classified by different tree species, height classes, damage and health	Per ha	NFI/FMP/FIMS/Portal
	3.2. Forest damage by abiotic, biotic and anthropogenic causes classified by different tree species, causes and severity of damage	% of total forest area Ha	
	3.3. Forest land degradation classified by driver and severity of degradation	Area (ha) of degraded forest	
4. The productivity of Georgia's forest is enhanced	4.1. Standing volume of wood classified by tree species compared with standing volume of the respective natural forest type	m ³ /ha % of standing volume of respective natural forest type	NFI/FMP/FIMS/Portal
	4.2. Increment of timber classified by tree species compared with increment in the respective natural forest type	m ³ /ha % of increment of respective natural forest type	
	4.3. Age class distribution in even-aged forest stands classified by tree species	ha/tree species and age class	
	4.4. Diameter distribution in even-aged and uneven-aged forests classified by tree species	ha/tree species and diameter class	
5. The contribution of Georgia's forests to the carbon cycles is enhanced	5.1. Carbon stock in forest biomass above ground	T/ha	NFI/FMP/FIMS/Portal
	5.2. Carbon stock in forest biomass below ground		NFI/FIMS/Portal
	5.3. Carbon stock in litter		
	5.4. Carbon stock in dead wood (lying dead wood, standing dead wood, stumps)		
	5.5. Carbon stock in soil		
	5.6. Carbon stock in harvested wood products		

Criterion	Indicator	Measurement units	Data sources
	5.6. Share of wood-based energy in total primary energy consumption	%	Ministry of Economy. FIMS/Portal
Economic Principle			
6. The productive function of Georgia's forests is maintained on a sustainable level	6.1. Volume of harvested wood from authorised cutting classified by tree species and quality	m ³ /tree species and quality	FIMS/Portal
	6.2. Volume of wood damaged by abiotic and biotic factors		
	6.3. Volume of illegally harvested wood classified by tree species and quality		
	6.4. Total volume of legally and illegally harvested wood and wood from unplanned incidents compared with increment (see indicator 4.2) classified by tree species	% of increment	
	6.5. Value of roundwood (including fuel wood) legally and illegally obtained from Georgia's forests	Per tree species and year: GEL/m ³ /diff qualities	
	6.6. Consumption of wood (including fuelwood) and products derived from wood	m ³ roundwood equivalent m ³ / household	
	6.7. Imports and exports of wood (including fuel wood) and products derived from wood	m ³ roundwood equivalent for diff. products	Ministry of economy/Revenue service/ Portal
7. The processing of timber in Georgia is promoted	7.1. Number, territorial distribution and operating capacity of secondary wood processing facilities (e.g. carpentries, enterprises)	N/m ³ % of secondary wood processing facilities in rural areas	MoF/ Public Registry/Portal
8. The contribution of the forest sector to the Georgian economy is increased on a sustainable basis and acknowledged	8.1. Contribution of the forest sector to the GDP classified by: <ul style="list-style-type: none"> – Wood products – Non-Wood Forest Products (NWFP) – Marketed Services (see indicator 10.1) 	GEL/ year %/ year	FIMS/Portal/Ministry of economy/revenue service
	8.2. State budget allocated for forestry sector State institutions	GEL/ ha /year	MoF/MEPA/FIMS/Portal
	8.3. State budget allocated for forest management bodies classified by: total budget, % of budget for road construction and maintenance, % of budget for employees)	GEL/ha /year %	
	8.3. Share of State budget allocated for the forest sector (8.2.1 + 8.2.2) in total state budget	%	

Criterion	Indicator	Measurement units	Data sources
	8.4. Donor support of forest sector		
	8.5. Net revenue of public forest management bodies (e.g. NFA, Ajara Forest Agency, APA, Akhmeta municipality, etc.)	GEL/year	MEPA/FIMS/Portal
	8.6. Damage induced by illegal use of forest	GEL Qualitative	
9. The commercial collection of NWFP is promoted on a sustainable level	9.1. Quantity and market value of non-wood forest products	Per NWFP and year: – Amount of raw material in m ³ , tonnes, or another appropriate unit – GEL/unit	MEPA/FIMS/Portal
	9.2. Quantity of marketed non-wood forest products compared with identified sustainable amounts specified in the license contract	% of legally allowed amount	MoF/MEPA/Portal
10. Services provided by Georgian forests are enhanced without compromising the protective functions of the forest	10.1. Value of marketed services of forest	GEL/year	MEPA/Portal
Social Principle			
11. Working conditions in the forest sector are “decent”	11.1. Employees in the forest sector on different levels (central, regional, district) classified by gender and position	N/% per age class N/% per sex N/% per occupational category	MEPA/Portal GEOSTAT Private companies
	11.2. Compliance of salary with average salary of similar positions in other sectors	%	
	11.3. Fatal and non-fatal occupational accidents and occupational diseases classified by type of work and seriousness of accidents	N total accidents % accidents/class % injuries/class	
12. Job applications from people living in the vicinity of the forest areas are prioritized in case of similar qualification	12.1. Employees of Forest Management Body on forest district level originating from villages in the vicinity of the forest	% from total number of employees on district level	
13. Staff employed in the forest sector has adequate qualification	13.1. Qualification of employees based on the requirements of specific positions	% of employees with required certificates	
	13.2. On-the-job-training for employees of forest management and supervisory bodies as well as private	N of trainings N of trained staff	

Criterion	Indicator	Measurement units	Data sources
	companies and license holders to gain the required certificates classified by subjects		
14. Forest education is improved	14.1. Students studying forestry or forest related topics at universities (bachelor, master, PhD) and at Vocational Education Training colleges	N of graduated students	Ministry of Education Universities VET colleges
	14.2. Education within State forest sector institutions	N of internships/ traineeships	MEPA/Portal Management bodies
	14.3. Access to forestry education for rural population	Qualitative	Ministry of Education
15. Income opportunities for rural population living in the vicinity of forest areas are created	15.1. NWFP utilisation licenses for rural population living in the vicinity of forests classified by individual Non-Wood Forest Products	N of license holders Location and size of license areas Quantity of NWFPs per license	MEPA/Portal Management bodies
	15.2. Wood supply for legal sawmills and carpentries in the vicinity of forest areas classified by tree species and wood qualities	m ³ % of total harvested wood	MEPA/Portal
	15.3. Income opportunities in the tourism sector for rural population living in the vicinity of forest areas (low, medium, high)	Qualitative	MEPA/Portal Municipalities Ministry of Economy
16. Everybody's access to forests is ensured as long as forest ecosystems are not damaged.	16.1. Facilities e.g. picnic areas, camp sides, hiking trails, etc.	N	MEPA/Portal
	16.2. Damage induced by recreational use (e.g. garbage around picnic areas, fire, soil erosion) (non, little, medium, high)	Qualitative	
	16.3. Damage induced by unsustainable non-commercial NWFP use (low, medium, high)		
17. The rural population living in the vicinity of forests has access to grazing areas close to their settlements as long as forest ecosystems are not damaged	17.1. Forest areas used for grazing classified by legal and illegal use	Ha	
	17.2. Average distance between 'grazing areas for common use' and 'settlements' classified by legal and illegal use	m or km	
18. Stakeholders have a right to participate in planning and decision-making pertaining forest management	18.1. Meetings with stakeholders	Number	MEPA/Portal Municipalities
	18.2. feedbacks by stakeholders		
	18.3. Feedback from stakeholders considered in final management plan	Qualitative	
	18.4. Consultation council in municipalities		
	18.5. Availability of draft important decisions of public		

Criterion	Indicator	Measurement units	Data sources
	interest for comments from stakeholders		
19. Publicity to the relevant forest sector related information is ensured	19.1. Effective system of issuing public information about SFM in Georgia		MEPA/Portal
	19.2. All the decisions made are published through sources, which are accessible for all interested stakeholders		
20. Mechanism to secure stakeholder participation in the development and implementation of forest related policies, strategies and legal regulations is enhanced	20. Status of the National Forest Program (NFP) process		
21. National policies, strategies, legislation, regulations and institutions are strengthened to encourage SFM	21.1. National policy (Forest Concept) supporting SFM is approved by Parliament of Georgia		
	21.2. National principles, criteria and indicators of SFM considered in the legal and sub-legal acts		
	21.3. Institutional framework of forest sector		
	21.4. Efficient traceability system for wood products		
22. Separation of policy, management and supervision functions is ensured	22.1. Functions of policy, management and supervision institutions	Qualitative	MEPA
23. National and subnational forest assessment processes are in place	23.1. Legally approved scientifically sound national forest monitoring and reporting process (Georgian National Forest Inventory)		
	23.2. Legally approved methodology for forest management-based inventory/taxation for the elaboration of 10-year management plans for individual forest districts		

9. Next steps and identification of further support needs

The workshop participants reviewed and discussed the ongoing and planned activities in the forest sector that support further development of the national set of C&I for SFM. The Ministry of Environmental Protection and Agriculture actively works with partners (GIZ, WRI, UNEP, UNECE, FAO, UNDP and national NGOs) towards developing capacity related to forest information and monitoring system that include the following key components:

- the National Forest Inventory;
- software modules for forest management planning;
- the web-based “Forest and Land Use Information and Decision Support” system, (shortly the Forest and Land Use Atlas - <https://atlas.mepa.gov.ge>);
- GIS Portal (<https://gis.mepa.gov.ge>) and
- the Open Data Portal (<http://data.mepa.gov.ge>),

in order to enable data accessibility and provide nationally adjusted dashboards and tools for reporting and types of spatial analysis needed for evidence-based decision-making processes. Besides, the new draft Forest Code was developed and submitted to the Parliament, it is expected to be adopted in 2019. The new Forest Code is based on the principles of SFM and strongly supports the implementation of nationally agreed C&I for SFM.

As the follow up and use of capacity-building opportunities provided by the UNDA project, the participants of 2nd national coaching workshop expressed their interest in the further elaboration of the factsheets (explanatory notes) for the developed set of national C&I for SFM, related data collection methodologies and in benefitting from the support of international experts in this process.

Annex I. Agenda of the 2nd national workshop "Criteria and Indicators of Sustainable Forest Management for Georgia"

	Wednesday 28 November	Thursday 29 November	Friday 30 November
M O R N I N G	<p>Start sharp at 10.00</p> <p>I. Preliminaries</p> <p>1.1 (In-official) Welcome and opening remarks by</p> <ul style="list-style-type: none"> ○ Ms. Natia Tskhovrebadze, Ministry of Environmental Protection and Agriculture of Georgia ○ Ms. Theresa Loeffler, UNECE/FAO. <p>1.2 (Optional) Recap of the project and FRA reporting. Presentation Ms. Roksolana Shelest, UNECE/FAO.</p> <p>1.3 Participant introductions, workshop objectives, agenda, rules and norms. Presentation Ms. Nato Kirvalidze (facilitator).</p>	<p>Registration at 8.45</p> <p>Start sharp at 9.00</p> <p>Recap from previous day</p> <p>I.I Preliminaries</p> <p>1.1 (Official) Welcome and opening remarks by</p> <ul style="list-style-type: none"> ○ Ms. Liana Giorgadze, Deputy Head of the Biodiversity and Forestry Department, Ministry of Environmental Protection and Agriculture of Georgia ○ Ms. Theresa Loeffler, UNECE/FAO. <p>1.3 Participant introductions, workshop objectives, agenda, rules and norms. Presentation Ms. Nato Kirvalidze (facilitator).</p> <p>1.4 Recap of the background, definitions, purpose, processes, benefits and challenges with C&I for SFM. Mr. Mati Valgepea, Q&A.</p>	<p>Start sharp at 9.00</p> <p>Recap from previous day</p> <p>V. (continued) Factsheets and elaboration of methodology of data collection</p> <p>5.5 Development of factsheets. <i>Group work and presentation.</i></p> <p>5.6 Gap analysis of the national legal framework in order to be consistent with the C&I set and possibly adjust it. <i>Exercise.</i></p>
	<p>Break 11.00</p>	<p>Break 10.30 - 11.00</p>	<p>Break 10.30 - 11.00</p>
S E S S I O N	<p>II. Coherency, Screening and prioritising indicators</p> <p>2.1 Familiarization and improving coherency of the national C&I set focusing on the legal, policy and institutional framework. <i>Group work and presentation.</i></p>	<p>IV. Sharing - critical review of national C&I set</p> <p>4.1 Presentation of the process of national C&I development and the draft C&I set. Ms. Natia Tskhovrebadze, Ministry of Environmental Protection and Agriculture of Georgia, <i>presentation and peer review.</i></p> <p>4.2 Familiarization and improving coherency, screening and prioritisation of the national C&I set focusing on the legal, policy and institutional framework. <i>Group work and presentation.</i></p>	<p>5.7 Identification of terms in the C&I set that will need definitions. <i>Group work and presentation.</i></p>
	<p>Lunch 12.30 - 13.30</p>	<p>Lunch 12.30 - 13.30</p>	<p>Lunch 12.30 - 13.30</p>
A F T E R N O O N	<p>III. Screening and prioritising indicators</p> <p>3.1 Using a decision tree method, screening, prioritising and adjusting indicators. <i>Group work and presentation.</i></p>	<p>V. Factsheets and elaboration of methodology of data collection</p> <p>5.1 Presentation on data collection and methodologies – example Poland. Mr. Andrzej Talarczyk, Q&A.</p> <p>5.2 Presentation on Forest Europe Factsheets and reporting. Ms. Stefanie Linser, Q&A.</p>	<p>VI. Wrap up and planning next steps</p> <p>6.1 Finalising the process plan for the next steps in the C&I set development and institutionalisation. <i>Group exercise.</i></p>
	<p>Close at 15.30 with coffee/tea</p>	<p>Break 15.00 - 15.30</p>	<p>Break 15.00 - 15.30</p>
		<p>5.3. Factsheets and plans on how to collect information for the indicator set. <i>Group work.</i></p> <p>Meeting of recap lessons team.</p>	<p>6.2 Evaluation and closing remarks.</p>
		<p>Close 17.30</p>	<p>Close 17.30</p>

Annex II. List of participants



2nd national Workshop - Criteria and Indicators for Sustainable Forest Management for Georgia

Start Date: Wednesday, November 28, 2018

End Date: Friday, November 30, 2018

Participants: 36

Last Name	First Name	Title	Organization
Abuladze	Jumber	Mr.	Forest Agency of Adjara Autonomous Republic
Aleksidze	Gigia	Mr.	Global Forest Watch, World Resources Institute
Amonashvili	Ana	Ms.	Telavi State University
Balarjishvili	Ekaterine	Ms.	National Forest Agency
Batsiashvili	Mariami	Ms.	Telavi State University
Berechikidze	Giorgi	Mr.	National Forest Agency
Chiburdanidze	Koba	Mr.	Ministry of Environmental Protection and Agriculture of Georgia
Chitishvili	Vakhtang	Mr.	Caucasian Environmental NGO Network (CENN)
Drössler	Lars	Mr.	Iliia State University
Fischer	Antje		Ministry of Environmental Protection and Agriculture of Georgia
Fähser	Lutz	Mr.	Deutsche Gesellschaft für Internationale Zusammenarbeit - GIZ, Ibis Programm
Giorgadze	Liana	Ms.	Ministry of Environmental Protection and Agriculture of Georgia
Iordanishvili	Natia	Mrs.	National Forestry Agency
Kapanadze	Iakob	Mr.	National Forestry Agency
Kavtaradze	Giorgi	Mr.	Agricultural University of Georgia, V. Gulisashvili Forest Institute

Kirvalidze	Nato	Ms.	Regional Coordinator under the UNDA, UNECE/FAO project
Kirvalidze	Mariami	Ms.	Telavi State University
Kukunashvili	Tengiz	Mr.	Telavi State University (Kakheti region)
Linser	Stefanie	Dr.	European Forest Institute, Forest Policy Research Network, c/o University of Natural Resources and Life Sciences, Vienna (BOKU)
Loeffler	Theresa	Ms.	UNECE/FAO Forestry and Timber Section
Marsagishvili	Nika	Mr.	Forester
Melkadze	Ekaterine	Ms.	Deutsche Gesellschaft für Internationale Zusammenarbeit GIZ
Mgebrishvili	Vano	Mr.	GFW project
Mikaberidze	Avtandil	Mr.	Agency of Protected Areas
Mosidze	Merab	Mr.	Ministry of Environment Protection and Agriculture of Georgia
Nakashidze	Jemal	Mr.	"Environmental Protection Division of Adjara Autonomous Republic "
Nozadze	Salome	Ms.	Ministry of Environmental Protection and Agriculture of Georgia
Shelest	Roksolana	Ms.	UNECE/FAO Forestry and Timber Section
Sisvadze	Irakli	Mr.	National Forest Agency
Sujashvili	Marina	Ms.	Department of Forest Inventory & Reproduction, National Forestry Agency
Sukhitashvili	Kakhaber	Mr.	Regional Center of Sustainable Development and CENN coordinator Kakheti
Talarczyk	Andrzej	Dr.	Bureau for Forest Management and Geodesy
Tevzadze	Mariam	Ms.	U.S. Forest Service
Tsiklauri	Khatuna	Ms.	Agency of Protected Areas
Tskhovrebadze	Natia	Ms.	Ministry of Environmental Protection and Agriculture of Georgia
Valgepea	Mati	Mr.	Estonian Environment Agency

