Criteria and Indicators for Sustainable Forest Management for Kyrgyzstan

Report of the Second National Inception Workshop "Criteria and Indicators for Sustainable Forest Management for Kyrgyzstan"

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List of Abbreviations

C&I – Criteria and Indicators

DGKR - The Decree of the Government of the Kyrgyz Republic

ES - Ecosystem services

FSC – Forest Stewardship Council

GDP - Gross Domestic Product

GEF - Global Environment Facility

GKR - The Government of the Kyrgyz Republic

HCV - High conservation values

JFM - Joint forest management

KAFLU - Kyrgyz Association of Forest and Land Users

LGB - Local government bodies

NAP - National Action Plan

NAS - National Academy of Sciences

NFI - National Forest Inventory

NLA - Normative legal acts

NWFP - Non-wood forest products

PFM - Public Forest Management

SAEPF - State Agency for Environmental Protection and Forestry

SFF - State Forest Fund

SFM - Sustainable Forest Management

SPNT - Specially Protected Natural Territories

UNFF – United Nations Forum on Forests

1. Introduction

This report gives an overview of the outcomes of the second national workshop on "Criteria and Indicators for Sustainable Forest Management for Kyrgyzstan", held in Bishkek in 25-26 April 2018 and local preparatory consultation seminars held by the Kyrgyz project team in March 2018.

Forest resources of Kyrgyzstan (forest fund accounting)

Forests in the Kyrgyz Republic are one of the most important types of natural resources and play an important role in developing the economy, improving the environment, and improving the well-being of the people. In Kyrgyzstan, 40.4% of the territory is land unsuitable for the growth of forests (water, rocks, glaciers); 59.6% of land used in agriculture and forestry (arable land, orchards, pastures); forests occupy 5.6% of the total area of the republic.

Despite the insignificant forest cover of the republic, the forests of the republic perform important ecological, economic and social-recreational functions. They have a favorable effect on the climate, atmosphere, hydrological regime of rivers and other water bodies, protect the soil from wind and water erosion. Trees that grow on the slopes of mountains prevent the formation of mudflows, landslides, avalanches and regulate the flow of water in rivers.

In the mountains of the Tien Shan, the rivers of Central Asia-Chu, Naryn, Syr-Darya, Sary-Zhaz, Talas and Kara-Unkur originate, providing not only Kyrgyzstan, but also Uzbekistan and Kazakhstan with water. Forests of Kyrgyzstan at the same time act as a global environmental factor and acquire interstate water regulatory importance.

Forests are a repository of the gene pool of animal and plant species. The main forest-forming species are the Tien-Shan spruce, Semenov fir, archa tree, walnut, Turkestan maple, apple tree, birch, poplar, pistachio, almonds. Walnut and sea buckthorn are under special protection of the state.

Due to the importance of the protective function and the small number of plantations, the main felling is not practiced in them. Forests of Kyrgyzstan only partially satisfy the need of the national economy in timber. Forest mountain landscapes, which are the objects of tourism, serve health goals, satisfy the cultural and aesthetic demands of the population, have a great recreational potential, whose importance in the country's economy will only grow with time.

The role of non-timber forest products for the realization of the economic potential of the State Forest Fund increases. In 2015, the Kyrgyz Republic joined the Eurasian Economic Union (EAEC), which expanded the regional market, including Russia and Kazakhstan, with high export potential for agricultural and forest products. At present, it is necessary to find a reasonable balance between the economic and environmental objectives of the forestry sector.

With a view to effective forest management, the Government of the Kyrgyz Republic has implemented a number of reforms in the forestry sector, including the transfer of production functions in the forest fund lands. One of the directions of the ongoing reforms was the introduction of a system of joint forest management (JFM), where forest users (SFM site tenants) manage forests on the basis of an agreement between three parties: Leshozes, Ail Okmoty and tenants. Despite the great work carried out by the Government to promote the system of joint forest management, institutional mechanisms were not enough for its effective implementation.

In order to improve the forestry and related legislation, taking into account the goals and objectives of the forest sector reform in Kyrgyzstan, work is under way on:

- development of a new version of the Forest Code of the Kyrgyz Republic;
- development of the Concept for the Development of the Forestry Sector until 2040 and the National Action Plan for Forestry Development;

The new edition of the Regulation "On the procedure for the provision of lease and use of forest fund plots" was developed and approved by the Resolution of the Government of the Kyrgyz Republic dated 10.04.2018 No. 192.

The Perspective Plan of SAEPF was developed with the objectives and indicators of the state of natural objects for the period 2017-2020. Based on the developed criteria and indicators, the dynamic of changes in the state of the environment should be monitored, the assessment of which will provide the basis for timely action and the formation of an effective environmental management policy.

Background information on the process of development of C&I in Kyrgyzstan

Kyrgyzstan is one of five project countries which receive support to develop a national criteria and indicator set for sustainable forest management through the capacity-building project "Accountability Systems for Sustainable Forest Management in the Caucasus and Central Asia". The project was launched in Armenia in 2016, where the Kyrgyz project team outlined their targets and timeline under the project. The first national workshop[1] was held in March 2017 and resulted in a draft national criteria and indicator set for SFM.

This first draft national C&I for SFM set was developed to monitor the sustainable management of the state forest fund, specially protected natural areas and hunting grounds. The set contained 41 indicators under 6 criteria. This draft set of criteria and indicators was presented by the Kyrgyz project team at a regional interim workshop in in February 2018, Tbilisi, Georgia.

Recommendations received through expert evaluation and peer-review during the regional interim workshop was considered at the second national workshop in Kyrgyzstan (April 2018).

During the preparatory work for the 2nd national workshop, local consultation seminars were held in the Jalal-Abad oblast (Kyzyl-Unkur, Arstanbap-Ata Leshozes), with the participation of Leshozes and forest users. Recommendations obtained from the local consultation seminars (a detailed report can be found in Annex I of this report) were considered in the national workshop.

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[1] More detailed information about the first national workshop is available at:
https://www.unece.org/index.php?id=45222#/

2. Report of the 2nd National Workshop C&I for SFM for Kyrgyzstan

The National Workshop on "Criteria and Indicators for Sustainable Forest Management for Kyrgyzstan" was held 25-26 April 2018 in Bishkek, Kyrgyzstan. This was the second national workshop for Kyrgyzstan of the UNECE/FAO, UNDA project «Accountability Systems for Sustainable Forest Management for the Caucasus and Central Asia». The first workshop was held in March 2017 and resulted in a draft national C&I for SFM set.

The workshop brought together 33 national experts from different organizations to discuss, exchange experiences, map out the needs as well as to formulate recommendations for the future work on Criteria and Indicators for Sustainable Forest Management for Kyrgyzstan. The workshop languages were English and Russian (with interpretation). It was organized with the kind support of UNDP Kyrgyzstan.

The participating group of experts worked two days in the plenary and in working groups. The workshop was facilitated by Mr. Peter O'Hara and Ms. Nato Kirvalidze.

More information (program, presentations, news release, photographs) about the workshop is available here: http://www.unece.org/index.php?id=48055

More information about the entire 3-year project framing this workshop is available here:

http://www.unece.org/forests/areas-of-work/capacity-building/unda2016-2019.html

2.1 Workshop objectives

The objectives of the 2nd National Workshop "Criteria and Indicators of Sustainable Forest Management for Kyrgyzstan" were:

A.   SHARE AND CRITICALLY REVIEW. To collectively share and review progress, challenges and lessons with regards to process and outcomes of C&I development in Kyrgyzstan; identify key problems/concerns and provide concrete recommendations for enhancement.

B.   IMPROVING COHERENCE AND FORMULATION OF INDICATORS. Removing overlaps, improving formulation.

C.   SCREENING AND DEVELOPING HOW TO MEASURE INDICATORS. Identifying measurement units, methods for data collection, management and use.

D.   PLAN. To recommend the main steps towards the finalization of the C&I set and identify support needs.

2.2 Presentations

The main characteristics of effective C&I sets and their implementation were presented together with the generally accepted definitions of sustainable forest management. The concept includes three pillars: environmental, economic and socio-cultural. C&I can be applied at the global, regional, national, local (at the forestry level). In national C&I set, the goal must be agreed or derived from the national vision or policy objectives for SFM. (Presented by Peter O'Hara - International Consultant)

In the presentation "Sustainable management in the walnut forests of Kyrgyzstan" Gulnaz Jalilova presented the results of her research on the management of walnut forests in southern Kyrgyzstan in 2012. Research, biophysical, socio-economic and political, took place on the territory

of four forestry enterprises - Arstanbap, Kaba, Kara-Alma, Ortok with the organization of formal and informal expert meetings with local stakeholders. Based on the results of this work, seven criteria and 45 indicators were developed. The UNFF common thematic elements were adopted as criteria for this criteria and indicator set.

Criteria:

- ❖ C1. Maintenance of forest ecosystems
- ❖ C2. Conservation of forest biodiversity
- ❖ C3. Strengthening the health and vitality of forests
- ❖ C4. Production functions of forests
- ❖ C5. Protective functions of forests
- ❖ C6. Socio-economic functions and conditions
- ❖ C7. Legal and Institutional Framework

Conclusions from the research:

- The C&I development process helped support decision making in terms of increasing transparency, participation and balance of stakeholder forces
- A multi-criteria approach was useful in evaluating SFM strategies
- Involvement of local people in the decision-making process and stimulation of their participation in forest management
- Political will and commitment are necessary to participate in multi-stakeholder processes
- Improvement of overall efficiency of forest management, especially socio-economic aspects is needed
- There is a need to establish C&I at the national level, as well as develop C&I at the local level, in particular for sustainable management of walnut and juniper forests.

In the presentation "Criteria and indicators of sustainable forest management in Kyrgyzstan" (presenters Aitkul Burkhanov, Nasyr Kanatbekov, Sayraigul Tazhibaeva - Kyrgyz Association of Forest and Land Users) information was presented on forest certification according to international Forest Stewardship Council (FSC) standards and principles, criteria and indicators.

FSC certification is voluntary acknowledgment by the companies of conformity of forest management and the supply chain to the international sustainability requirements of this system. It addresses:

- The implementation of responsible forest management;
- The marketing of products originating from responsibly managed forests;
- Assistance in the creation of an environmentally sensitive market while reducing the level of corruption.

10 principles of FSC Certification:

Principle 1. Compliance with laws and FSC Principles (8 criteria, 26 indicators)

Principle 2. Tenure and use rights and responsibilities (6 criteria, 30 indicators)

Principle 3. Rights of indigenous peoples (0)

Principle 4. Community relations and worker's rights (8 criteria, 24 indicators)

Principle 5. Benefits from the forest (5 criteria, 18 indicators)

Principle 6. Environmental Impact (10 criteria, 41 indicators)

Principle 7. Management plan (6 criteria, 23 indicators)

Principle 8. Monitoring and assessment (5 criteria, 14 indicators)

Principle 9. High conservation values of forests (4 criteria, 12 indicators)

Principle 10. Plantations (12 criteria, 40 indicators)

The Kyrgyz Association of Forest and Land Users (KAFLU), which is the main cooperation partner for FSC proposed to include the following indicators in the national C&I set:

Criterion 1:   - Forest area outside the State Forest Fund (SFF) territory;

Criterion 3:   - High conservation values;

                 - Infrastructure regulation;

Criterion 5:   - Rights of workers and working conditions;

Criterion 6:   - Conflicts and disputes on the ownership or use of forest management;

                 - Anticorruption policy

Remarks on national level indicator formulation were presented by Mr. Kit Prins. Sets of criteria and indicators should be useful for forest policy and management practice. All three levels-international, national, level of forest management-should be independent, but linked in coordination, definitions, measurement methods, scope, and wording. Several important indicators should be present at all levels.

Criteria and indicators should:

-        Reflect the consensus of stakeholders;

-        Be useful to politicians;

-        (Indicators) should indicate the level of achievement of the criterion, and not simply show a status of a reported value;

-        Be measurable in practice.

In the presentation on the process of developing a national C&I set by Ms. Seydeeva, an overview of the actions taken in the country for the development of C&I was presented, beginning with the first regional seminar in Armenia in November 2016. Information on the first National Workshop in Kyrgyzstan, held in March 2017, is available at http://www.unece.org/index.php?id=45222#/

An updated set of C&I was developed, considering the comments and proposals received at the second regional workshop in Tbilisi, Georgia and on the basis of the results obtained during local consultation seminars in the forestry districts of the Jalal-Abad region (see Annex I on outcomes of the local consultation seminars).

Major gaps and problems identified at the Regional Interim Workshop in Tbilisi, February 2018, which were considered in the local consultation seminars:

- Some indicators are repeated;
- It is necessary to formulate criteria and indicators more clearly, it is better to reformulate the criteria as a "goal";
- Indicators difficult to measure, confused with criteria;
- There are no important indicators that are consistent with the priorities of the forest policy, it is necessary to develop additional indicators of national importance;
- Low availability data collection, particularly for non-timber forest products from residents and the market;
- When developing indicators, consider the cost-effectiveness of the data collection process;
- Supplement with indicators reflecting the relationship between forest management authorities and forest users.

3. Outcomes of group work on coherency, formulation and specificity

General recommendations of workshop participants during the group work on formulation and consistency:

- formulate more concrete indicators for politicians;
- some indicators, for example, ecosystem services, divided by paragraphs, specified;
- use clear and precise methods;
- reformulate indicators that are difficult to implement;
- add ecological education;
- strengthen the role of forest users;
- increase constancy, feasibility;
- Indicators should be more coherent and consistent;
- Indicators should be more focused on the development of the private sector;
- use a simple language, accessible to the understanding of politicians and a wide range of the public.

Group 1 Results for Criteria 1 and 2

[Changes from the draft C&I set are highlighted and new proposals underlined in red]

Criterion 1 Maintenance of the forest ecosystems and forest resources conditions

1.1. The dynamic of change in the share of the forest covered area of all categories of land.

1.2. The proportion of ~~old-growth~~ perennial plantations from the total forest area.

1.3. The share of the utilized forests from the total area of forests, forests designated for utilization ~~including forests of SPNT~~ (for recreation, tourism or forestry activities).

1.4. The areas of forest lands transferred to leasehold use, ~~from forest lands~~, including those covered by forests and the number of forest users.

1.5. Dynamic of changes in the areas of forest pastures for every 5 years.

1.6. (~~Age structure of forests.~~) Resilient afforested or restored areas to the total area of forests (for Leshozes based on forest inventory materials).

1.7. Distribution of forests by types and types of forest.

1.8. (~~Total area of forests susceptible to diseases and pests (annually based on the results of the forest survey)~~

. 1.8 The area of forests affected by climatic and anthropogenic factors.

~~1.10. (Area of degraded forests).~~

. 1.9. Area of settlements as a share of the total area of the state forest fund and SPNT[2].

Criterion 2 Conservation and maintenance of forest biodiversity

2.1. Dynamic of forest area change in specially protected natural areas, SFF and area designated for creation of SPNT.

~~2.2. Areas of forests designated for the establishment of SPNT.~~

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[2] Specially Protected Natural Territories

~~2.3.~~ 2.2. The share of forests of particularly valuable tree and shrub species from the total forest area.

2.4. 2.3. The costs of scientific research ~~in the forestry sector~~ in the conservation of biodiversity.

~~2.5. (Environmental Education and Education).~~ (refers to Criterion 4).

~~2.5.~~ 2.4. The area of forest territories intended to preserve or maintain the genetic diversity of forests (including nurseries, arboretums, plantations of particularly valuable species, seed banks, etc.).

~~2.6. Share of forests allocated to hunting coals.~~

~~2.7. Number of forest sanctuaries.~~

~~2.9.~~ 2.5. The amount of funding allocated for biotechnical activities.

~~2.10. Use of wildlife resources on the territory of the SFF.~~

~~2.11~~. 2.6. Total area of forests susceptible to diseases and pests (annually based on the results of the forest survey).

Group 2 Results for Criteria 3 and 4

[Changes from the draft C&I set are highlighted and new proposals underlined in red]

Criterion 3 Conservation and increase of forest productivity

3.1. Share of forests covered by forest management and forest management planning (annually)

3.2. Stocks of wood by species.

3.3. Average annual growth and volume of cut wood from all cuttings

3.4. Volumes of use of non-timber forest products, including wild medicinal plants, fruit products, mushrooms, honey, technical raw materials and game (annually).

3.4 Annual volume of afforestation and reforestation

3.5. The volume of industrial plantations of different directions

3.6. The amount of pasture use.

3.7. Number of forest management plans.

Criterion 4 Increasing the socio-economic importance of forests

4.1. The share of forestry in the gross national product.

4.2. The volume of investments directed to the forest industry.

4.3. The number of people permanently residing on the territory of the forest fund.

4.4. Number of workplaces open at forestry enterprises

4.5. The population that receives income from the forest.

4.6. The amount of budgetary allocations directed to the forest industry.

4.7. Development of alternative sources of income for the local population.

4.8. The area of certified forests according to international standards.

Criterion 6 - improvement of social status of forestry workers [proposed to be added]

6.1. Average salaries of forestry workers

Group 3 Results for Criteria 5

[Changes from the draft C&I set are highlighted and new proposals underlined in red]

Criterion 5 Political, legislative and institutional framework for sustainable forest management

5.1. National forest policy and legislative framework.

5.2. Improvement of the organizational structure of SAEPF and its subordinate organizations.

5.3. Financial and economic instruments in the field of sustainable forest management.

5.3.a Payments for ecosystem services

5.4. Collaboration with Scientific Institutions for Sustainable Forest Management

5.4. Development of research and implementation of scientific developments and technologies.

5.4.a Data for the assessment of ecosystem services for forests (may be a criterion for biodiversity)

5.5. Development of human resources.

5.5.a Increased skills and knowledge

5.6. Participation of stakeholders in the development and implementation of forest policy.

5.7. International cooperation in the field of forest relations.

5.8. Monitoring, evaluation and reporting on the management and development of the forest sector.

5.9. Dissemination of information on forestry

4. Screening and developing methods for measuring indicators

4.1 Use the decision tree method, screening, prioritizing and adjusting indicators.

Three groups worked to identify priorities for the three main features:

1. Relevance;
2. Specificity;
3. Availability of methods and information.

Comments on the results of group work:

Criterion 2-there is no consistency;

Indicator 3.4- Low data availability and poorly feasible data collection;

Indicator 4.2-Doubtful indicator, what will be the reliability;

Indicator 4.4-The number of jobs in the forest sector could be good or bad;

Indicator 4.7-Should this indicator be maintained, an important issue, but it raises doubts about feasibility;

Criterion 5-incommensurate and inaccurate, needs a complete revision;

The indicator 5.5 is not quite correct and it is not clearly formulated.

4.2 How to collect, manage and use information on sets of indicators

Principles of forest management in Poland, best practices, problems and recommendations for Kyrgyzstan were presented by Mr. Andrzej Talarczyk. Poland aimed at moving from production to multifunctional sustainable forest management. Selected indicators were presented in the annual report on the state of forests and a list of information resources. Mr. Talarczyk shared the experience of Poland in the collection and use of information and the institutionalization of C&I systems.

4.3 Reformulation of indicators, collection, management and use of information - Development an Indicator Fact Sheet

During group work some exemplary factsheets were developed for selected indicators. It is recommended to develop a similar factsheet for each indicator to avoid confusion and be clear about formulation of the indicator, the methodology of data collection and the responsible data provider.

Three examples of an indicator fact sheet

Criterion, final result: Criterion 2 Conservation and maintenance of forest biodiversity	
Indicator number 2.1	A reformulated, more specific and measurable indicator. Full text: Dynamic of change in all types of land on the lands of the SFA and SPNA
Rationale: *What is the goal of generating information on this indicator? How will this information be used to promote sustainable forest management?* 1. Identify the current situation 2. With the data on hand, through good planning in the present, to a brighter future	
Sources of data and methods that you will use to obtain data: Inventory / data obtained directly from the field and directly leading field activities	
Unit of measurement and frequency of required measurements: Annual changes in accounting records (in% and in ha). Making changes depends on the functions /	
Targets / or thresholds can also be related to specific time frames: Forestry and local government once in 10 years / state park 15 years / state reserve 15 /	
Executable institutional roles and responsibilities: Which institutions will collect, manage and use the data? Try to build from and to what exists: Leskhoz, Gosregister, National Statistical Committee, Giprozem.	
Main problems: Improvement of the material and technical base / weak human resources / social situation	
Recommendations for solving problems: Improvement of the material and technical base / increase of human resources / improvement of social position / introduction and use of newest software	

Criterion, final result: The share of forestry in the gross national product	
Indicator number 4.1.	A reformulated, more specific and measurable indicator. Full text: The profit (added value) of forestry (eco-tourism, trade in non-wood forest products, trade in wood forest products)

Rationale: *What is the goal of generating information on this indicator? How will this information be used to promote sustainable forest management?*
Attract attention to the forest sector, improve image, so that the State and investors notice

Sources of data and methods that you will use to obtain data:
Leskhozes, statistics, customs, national accounts

Unit of measurement and frequency of required measurements:
State institutions together with leaseholders will fill out a form
Annual, in the currency, a percentage comparison of progress

Targets / or thresholds can also be related to specific time frames:
Obstacle - mountainous country, climatic conditions, unreliable information from forest users (inaccurate information about production, lower than in reality)

Executable institutional roles and responsibilities: Which institutions will collect, manage and use the data? Try to build from and to what exists:
Leskhozes, statistics, customs

Main problems: unreliable information, climatic changes, unstable

Recommendations for solving problems:
Providing low-interest loans to support small and medium-sized businesses (6-7%, currently it is 17-30%).

Criterion, final result: Political, legislative and institutional framework for sustainable forest management	
Indicator number 5.1.	A reformulated, more specific and measurable indicator. Full text: National forest policy for sustainable forest management

Rationale: *What is the goal of generating information on this indicator? How will this information be used to promote sustainable forest management?*
Ecological goals - conservation of forests and increase of forest area of the republic to 6%
Social - reduction of poverty of the population living in forest areas to 10%
Economic objectives - to increase the contribution of forestry to GDP to 1%

Sources of data and methods that you will use to obtain data:
Ecological objectives - national forest inventory, forest management, forest fund accounting, research, restoration of forest resources (afforestation, reforestation), improvement of the legislative framework
Social - lease relations, public forest management, scientific research, accounting of forest resources of forest management, improvement of the legislative framework
Economic goals - economic evaluation of ecosystem services, introduction of a system of environmental and economic accounting (forest accounts), processing of wood and non-wood forest products, certification of forest management and forest products, improvement of the legislative framework

Unit of measurement and frequency of required measurements:
Ecological objectives - areas, number of forest management projects, the number of scientific recommendations introduced, development, transition to forest-covered areas, the number of laws and normative legal acts
Social goals - the number of leaseholders, the area leased, etc.
Economic objectives - the amount of money received from payments for ecosystem services, statistics of forest accounts of the National Statistical Committee, the number of workshops for processing wood forest products and non-wood forest products, areas that have certification, etc.

Targets / or thresholds can also be related to specific time frames:
Action plan for 5 years, monitoring, evaluation of the implementation of the Action Plan every five years

Executable institutional roles and responsibilities: Which institutions will collect, manage and use the data? Try to build from and to what exists:
State Agency for Environmental Protection and Forestry, National Statistical Committee, National Academy of Sciences

Main problems:
Continuity of policy implementation, monitoring of forest policy implementation

Recommendations for solving problems:
Political will, development of mechanisms for responsibility for implementing policies, disseminating information

5. Full list of C&I that were developed during the workshop

Criterion 1 *Maintenance of the forest ecosystems and forest resources conditions*	1.1. The dynamic of change in the share of the forest covered area of all categories of land. 1.2. The proportion of perennial plantations from the total forest area. 1.3. The share of exploited forests in the total area of forests, forests designated for utilization (recreation, tourism, forestry activities). 1.4. The areas of forest lands transferred to leasehold use, including those covered by forests and the number of forest users. 1.5. Dynamic of change in the areas of forest pastures for every 5 years. 1.6. Resilient afforested or restored areas to the total area of forests (for Leshozes based on forest inventory materials). 1.7. Distribution of forests by species and types of forest. 1.8. The area of forests affected by climatic and anthropogenic factors. 1.9. Area of settlements as a share of the total area of the state forest fund and SPNT.
Criterion 2 *Conservation and maintenance of forest biodiversity*	2.1. Dynamic of change in forest area in specially protected natural areas, SFF and area designated for creation of SPNT. 2.2. The share of forests of particularly valuable tree and shrub species in the total forest area. 2.3. The costs of scientific research in the conservation of biodiversity. 2.4. The area of forest territories intended to preserve or maintain the genetic diversity of forests (including nurseries, arboretums, plantations of particularly valuable species, seed banks, etc.). 2.5. The amount of funding allocated for biotechnical activities. 2.6. Total area of forests affected by diseases and pests (annually based on the results of the forest survey).
Criterion 3 *Conservation and increase of forest productivity*	3.1. Share of forests covered by forest management and forest management planning (annually). 3.2. Stocks of wood by species. 3.3. Average annual growth and volume of cut wood from all cuttings. 3.4. Volumes of use of non-timber forest products, including wild medicinal plants, fruit products, mushrooms, honey, technical raw materials and game (annually). 3.5. Annual volume of afforestation and reforestation. 3.6. The volume of industrial plantations of different directions. 3.7. The amount of pasture use. 3.8. Number of forest management plans.

Criterion 4 *Increasing the socio-economic importance of forests*	4.1. The share of forestry in the gross national product. 4.2. The volume of investments directed to the forest industry. 4.3. The number of people permanently residing on the territory of the forest fund. 4.4. Number of workplaces open at forestry enterprises 4.5. The population that receives income from the forest. 4.6. The amount of budgetary allocations directed to the forest industry. 4.7. Development of alternative sources of income for the local population. 4.8. The area of certified forests according to international standards.
Criterion 5 *Political, legislative and institutional framework for sustainable forest management*	5.1. National forest policy and legislative framework. 5.2. Improvement of the organizational structure of SAEPF and its subordinate organizations. 5.3. Financial and economic instruments in the field of sustainable forest management. 5.3.1. Payments for ecosystem services 5.4. Collaboration with scientific institutions for Sustainable Forest Management 5.5. Development of research and implementation of scientific developments and technologies. 5.5.1. Data for the assessment of ecosystem services for forests (may be a criterion for biodiversity) 5.6. Development of human resources. 5.6.1. Increased skills and knowledge 5.7. Participation of stakeholders in the development and implementation of forest policy. 5.8. International cooperation in the field of forestry 5.9. Monitoring, evaluation and reporting on the management and development of the forest sector. 5.10. Dissemination of information on forestry
[proposed to be added – the indicators still need to be further developed] *Criterion 6 - improvement of social status of forestry workers*	6.1. Average salaries of forestry workers 6.2. Social benefits 6.3. Improvement of infrastructure

6. Next Steps and Identification of Support Needs

Updated process plan for further development

Stage in an effective project development process	Activities and Results	Who should participate?	The timeframe (it should be until the second half of 2019)	Identify any support needs for the project (see the slide support project that should be considered)
Finalization of the National C&I Set on the basis of the results and recommendations of the second National Workshop	Discussion in the working group	SAEPF, National Statistical Committee, KAFLU, Forest Institute	Until the end of July 2018	_____
Presentation of the updated C&I kit to international consultants to verify compliance with international criteria	Consultations	Working group, international consultants	August 2018	Consulting support
Seminars at the local level in the northern region (C&I for spruce and floodplain forests)	Seminars involving all stakeholders	Working group, forestry staff, stakeholders	September-October 2018	Financial support
Regional Workshop Presentation of the National C&I Set	Meeting of national teams on the development of C&I	Working group, international consultants, teams of countries participating in the project	The first half of 2019	Financial support. Consultation of experts

Annex I. Outcomes of the local consultation seminars

General information on forest institutions

Kyzyl-Unkur Leshoz is located in the north-eastern part of the Jalal-Abad oblast in the Bazar-Korgon and Suzak administrative districts. The total area is 52 487.4 hectares. The forest belt in the area of the Leshoz location is favorable for the growth of walnut forests. Walnut forests play crucial role for the quality of water, they retain moisture and regulate the water regime of the mountain rivers. They are also of great importance as a base for harvesting nuts. Since the Leshoz has rangelands, excessive and unorganized pasture of cattle is observed, which leads to destruction of the grass cover undergoes in many areas, which causes erosion, resulting in landslides and surface washout of soil. In this regard, one of the main tasks facing the Leshoz is the rational use of pastures, cattle pastures and camps.

The Arstanbap-Ata Leshoz is located west of the Kyzyl-Unkur Leshoz, with a total area of 13,234.9 ha. The forest type is also nut-fruit. Every year Arstanbap-Ata is visited by more than 30,000 tourists. It has both a positive and a negative side - on the one hand, local residents have the opportunity to receive income from tourism, on the other hand there is a tendency to increase construction on the territory of the Leshoz, which causes some damage to the forest. 90% of the local population are dependent on the forest or live directly on the territory of forests. It is a difficult task for forest managers to find a reasonable balance between all stakeholders, while preserving and increasing the area of forest.

Presentations

In the presentation "Criteria and indicators of sustainable forest management for Kyrgyzstan" (presentation by Ibraev Emil, April 16, 2018 Kyzyl-Unkur Forestry), a set of C&I developed by the working group was presented, the participants of the seminar were asked to rank C&I by such criteria as importance, feasibility, relevance. It was also suggested to try to include indicators specific specifically for Kyzyl-Unkur and Arstanbap-Ata Leshozes, in accordance with the characteristics and priorities of the Leshozes.

During the seminar the following points were raised:

It is impossible to compare the forests of Europe and the forests of Kyrgyzstan, they have different characteristics and functional priorities are different. The main problem is the excessive grazing of livestock on the territory of the Leshozes.

The national goal is to increase the forest area to 6%, by 2040 whereas the territory of the Kyzyl-Unkur Leshoz is covered by forest by 30%. Therefore, an increase in forest area should not be a priority for this Leshoz. Taking into account population density, lack of land resources and dependence of the population on forest resources, it is necessary to work with the local population to increase the level of knowledge on sustainable management of natural resources. The Leshoz needs to work on restoring and preserving the existing forest, preventing the degradation of forest resources.

Recommendations (given by seminar participants):

- improvement of pasture use (development of cropland breeding, improvement of livestock breeds, pasture management plans, pasture infrastructure, awareness raising of pasture users);
- introduction of new energy-saving technologies (renewable energy sources);
- development of plantations;
- processing shops based on forest products;
- development of nurseries;
- comprehensive disaster risk management plans;
- measures for water and soil conservation;
- ecotourism;
- alternative sources of income (fisheries, beekeeping);
- development of agroforestry.

In the Arstanbap-Ata Leshoz there is a large density of population living on the territory of the Leshoz. There is an understanding that it is necessary to take measures to prevent the depletion of walnut fruit forests, yet the local population does not yet see an alternative to cattle breeding and collection of nuts. There is a great potential for the development of the tourism sector, but the corresponding infrastructure is not sufficiently developed.

Recommendations:

- integrated management plans;
- conducting explanatory work among the local population;
- development of small hydropower stations (water resources are available);
- forest fencing for natural renewal and restoration;
- construction of multi-storey buildings (lack of land resources);
- development of tourism (infrastructure improvement, medical tourism);
- improvement of production chains for value added products;
- processing of calculation and technological maps (the cost of field forest works when recruiting seasonal workers does not correspond to today's economic realities, the norms are obsolete);
- improvement of the material and technical base of forestry.

In general, the problems of forest management are almost identical, although there are some aspects which are only relevant for a specific region. Solutions can be different depending on the goals that each Leshoz sets for itself. Accordingly, the C&I for each Leshoz will have its own characteristics, which differ from the others. At the same time, specific indicators of the Leshoz can be implemented in the Leshoz, but for the development of indicators at the national level, these specific indicators may not be reflected if they are not of national importance.

It was noted that there are no indicators characterizing the socio-economic status of forestry workers, which would indicate in which direction work should be done to increase motivation and capacity, an additional criterion is needed.

As a result, indicators were added to the C&I set:

- 3.6. Pasture use;

- 5.7. Development of alternative sources of income for the local population.

Meeting with employees and tenants of the Arstanbap-Ata

Presentation in the Kyzyl-Unkur leshoz

Meeting in Kyzyl-Unkur leshoz

Meeting in Kyzyl-Unkur leshoz

Participants of the meeting in the Kyzyl-Unkur leshoz

Participants of the meeting in Arstanbap-Ata leshoz

Criteria and Indicators for Sustainable Forest Management – outcomes of the local consultation seminar

Please note that the below table is the result of the local consultation seminars held in preparation for the national workshop. The recommendations on reformulation were discussed and addressed during the national workshop. The full list of C&I that were agreed at the national workshop can be found in Chapter 5 of this report.

Existing wording	Justification for changes	Proposed new wording
Criterion 1. Forest resources	A criterion is the output-oriented activity. *Forest resources* do not represent an activity and they are not output oriented. *Criterion 2 State of Forest Ecosystems Condition* also represents a state of affairs, not an activity. It is therefore advisable to combine them.	**Criterion 1. Maintenance of the forest ecosystems and forest resources conditions.**
1.1. Forest area of the State Forest Fund and the specially protected natural areas.	Only the figure (area) does not show anything about the sustainable management of forests. The figure should reflect the increase in the area covered by forest. For example, by planting, natural regeneration, and transfer into forested areas. Inventory and forest management are seen as tools within this indicator.	1.1.　　Dynamic of the changes in the forest area in all land categories.
1.2. Area of natural forests of the State Forest Fund and the specially protected natural areas.	In Kyrgyzstan, forest relations are regulated by laws and regulations in force in the forest sector, under reservation of specially protected Natural territories. It does not make sense to single out the forests of specially protected natural territories. The Forest Department is also responsible for the forests in specially protected Natural territories. Materials of forest management and forest inventory as instruments.	1.2.　　The share of old-growth forests in the total forest area
1.3. Area of artificial forests of the State Forest Fund and the specially protected natural areas.	Forest management planning.	1.3.　　The proportion of forests used for wood production from the total forest area available for wood production, including specially protected natural areas (SPNAs)
		1.4.　　The area of forest land leased, including forest areas
		1.5.　　Dynamic of changes in forest grazing areas
Criterion 2. State of forest ecosystems		
2.1. The age structure of forests.	Nut plantations in the south of Kyrgyzstan are mostly old-growth trees.	
2.2. Stability of planting and crown cover.	Stability of planting is not dependent on crown cover. It is affected by many factors, including sanitary conditions, the, density, etc.	1.6.　　Areas of stable plants to the total area of forests (in forest agencies based on the forest management materials)
2.3. Forests by type of ecosystem	This indicator is reflected in the form # 1 Inventory of forest fund. The	1.7.　　Distribution of forests by species and forest types

and type of forest.	division of forests based on eco-systems requires the development of special taxa for evaluation. The complexity of the assessment lies in different conditions of growth of individual forest types in different ecosystems.	
2.4. Forest pests and diseases.	This indicator allows to carry out annual survey of forest health conditions	1.8. Total forest area prone to pests and diseases (annually on the results of a survey of forests)
2.5. Forest area affected by climatic and anthropogenic factors.		1.9. Forest area affected by climatic and anthropogenic factors.
		1.10. The area of degraded forests
		1.11. The share of human settlement areas in the total area of the State Forest Fund
Criterion 3. Conservation and restoration of biodiversity		**Criterion 2. Conservation and restoration of biodiversity**
3.1. Area of specially protected natural territories.	Rate of increase or decrease of the forest area in the specially protected natural territories.	2.1. The dynamic of the forest area of specially protected natural territories.
3.2. Natural state of the natural complexes of protected areas.	Forest areas designated for the establishment of specially protected natural territories, high conservation value forests, wildlife, etc.	2.2. Forest area designated for the establishment of specially protected natural territories
3.3. Monitoring of biological diversity.	Forest areas of high-value wood species such as walnut, juniper forests (juniper), Semenov fir, Tian Shan spruce and others.	2.3. The share of forests of specially valuable wood species in the total forest area
3.4. Protection of the specially protected natural areas from violations.		
3.5. Scientific research.	Costs for research in different areas of the forest sector, including social, economic and environmental studies.	2.4. Expenses for carrying out research in the forest sector
3.6. Environmental awareness and education.		
3.7. Mechanisms for the conservation of genetic resources.		2.5. Forest area, intended to preserve or maintain the genetic diversity of forests (including nurseries, dendrariums, plantations of wood species of special value, seed banks and more)
3.8. Conduct of hunting activities.	Forest areas designated for hunting grounds.	2.6. The share of forest areas designated for hunting grounds
3.9. Protection of hunting grounds.	The number and area of forest reserves.	2.7. Number of forest reserves
3.10. Monitoring of wild animals on hunting grounds.		2.8. The number of species of wood and herbaceous plants, mosses, lichens, fungi, and animals and birds that are dependent on forests.

3.11. Biotechnical activities.		2.9. The amount of funds aimed at carrying out biotechnical activities
3.12. Use of wildlife resources.		2.10. Using the resources of fauna in the territory of the State Forest Fund
Criterion 4. Maintenance and increase of forest productivity		**Criterion 3. The maintenance and increase of forest productivity**
4.1. National forest inventory.		
4.2. Forest management.		3.1. The share of forests under forest management planning (annually)
4.3. Reserves of wood by species.		3.2. Reserves of wood by species
4.4. Average annual growth and volume of cuttings.		3.3. The average annual growth and the volume of wood harvested from all logging.
4.5. Non-timber forest products.		3.4. Volumes of use of non-timber forest products, including wild medicinal herbs, fruit products, mushrooms, honey, technical resources and game (annually).
4.6. Reproduction of forest resources.		3.5. The annual volumes of afforestation and reforestation
		3.6. Displacement industrial plantations of different directions
		3.7. The volume of the use of pastures
Criterion 5. Socio-economic importance of forests		**Criterion 4. Improving the socio-economic importance of forests**
5.1. The share of the forest sector in the gross national product.		4.1. The share of the forest sector in the gross national product.
5.2. The economic value of the State Forest Fund and the specially protected natural areas.		4.2. The volume of investments in the forest sector.
5.3. The number of people permanently residing on the territory of the forest fund.		4.3. The number of people permanently residing on the territory of the forest fund.
5.4. The number of people		4.4. The number of job vacancies in forest enterprises

visiting forests for recreational and other purposes.		
5.5. The number of people receiving income from the forest.		4.5. The number of people receiving income from the forest.
5.6. Legal and illegal harvesting of timber and non-timber forest products.		4.6. Budgetary allocations in the forest sector.
		4.7. Development of alternative sources of income for the local population
Criterion 6. Political, legislative and institutional framework		**Criterion 5. Political, legislative and institutional framework for sustainable forest management.**
6.1. National forest policy and legislative framework.		5.1. National forest policy and legislative framework.
6.2. Organizational structure of State Agency on Environment Protection and Forestry.		5.2. Organizational development of the State Agency on Environment and Forestry (SAEPF) and its subordinate organizations.
6.3. Financial and economic instruments.		5.3. The financial and economic instruments in the field of sustainable forest management.
6.4. Scientific research		5.4. Cooperation with scientific institutions for sustainable forest management
6.5. Development of human resources.		5.5. Development of human resources.
6.6. Stakeholder participation in the development and implementation of forest policy.		5.6. Stakeholder participation in the development and implementation of forest policy.
6.7. International cooperation.		5.7. International cooperation in the field of forest relations.
6.8. Monitoring, evaluation and reporting of forest sector development.		5.8. Monitoring, evaluation and reporting on management and development of the forest sector.
6.9. Dissemination of information on the forest sector		5.9. Dissemination of information on the forestry sector

Annex II. Program of the Second National workshop "Criteria and Indicators of Sustainable Forest Management in Kyrgyzstan"

	Wednesday 25th April 2018	Thursday 26 April 2018
M O R N I N G S E S S I O N	**Registration at 8.30.** **Start sharp at 9.00.** **I. Preliminaries** 9.00 - 9.30 1.1 Welcome and short opening remarks by *host country representative*, and *Theresa Loeffler*, UNECE/FAO, followed by a recap of the project rationale, purpose and process. *Presentation, Lana Shelest, UNECE/FAO.* 9.30 - 10.30 1.2 Participant introductions, workshop objectives, agenda, rules and norms. *Presentation.*	**Start sharp at 9.00.** 9.00 - 9.10 Recap from previous day **IV. Screening and developing how to measure indicators.** 9.15-10.30 4.1. Using a decision tree method, screening, prioritising and adjusting indicators. *Group work and presentation.*
	Break 10.30 - 11.00	**Break 10.30 - 11.00**
	11.00 - 11.45 1.3 Key characteristics of effective C&I sets and their implementation. *Expert presentation and peer review Gulnaz Jalilova and Aitkul Burhanov. Q&A* **II. Sharing - critical review of national C&I set.** 11.45 - 12.30 2.1 Presentation of the process of national C&I development and content of the draft C&I set– including outputs from consultations. *Suizanna Seideeva, presentation and peer review.*	11.00-11.30 4.2 How to collect, manage and use information on indicator sets? Best practice, challenges and recommendations for Kyrgyzstan. *Expert presentation Andrzej Talarczyk Q&A* 11.30-12.30 4.3 Developing how to collect data for the indicator sets. *Presentation and demonstration.*
	Lunch 12.30 - 13.30	**Lunch 12.30 - 13.30**
A F T E R N O O N	**III. Coherency and reformulation.** 3.1 Increasing coherency of the indicator set. *Group work and presentation*	13.30- 14.00. Exercise continues. 14.00 – 15.00. 4.4 Presentation of how to collect data. *Presentation for peer review.*
	Break 15.00 - 15.30	**Break 15.00 - 15.30**
	3.2 Remarks on national level indicator formulation. *Kit Prins, presentation.* 3.3 Reformulating the indicator set to be more outcome focussed and specific. *Group work and presentation.* 3.4 Meeting of recap lessons team.	15.30-16.00 Presentation continues **V. Wrap up and planning next steps.** 5.1 Finalising the process plan for the next steps in the C&I set development and presentation. *Collective exercise.* 5.2 Evaluation and closing remarks.
	Close 17.30	**Close 17.30**

Annex III. List of participants

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

Start Date: Wednesday, April 25, 2018 **End Date:** Thursday, April 26, 2018
Participants: 33

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