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Report No: ICR00006131

IMPLEMENTATION COMPLETION AND RESULTS REPORT

IDA-D0950, IDA-57430, and TF-A0750

on a

IDA CREDIT
IN THE AMOUNT OF SDR 4.80 MILLION (US$6.6 MILLION EQUIVALENT)

and on a

IDA GRANT
IN THE AMOUNT OF SDR 3.90 MILLION (US$5.4 MILLION EQUIVALENT)

and on a

GRANT
IN THE AMOUNT OF US $4.11 MILLION
from
GLOBAL ENVIRONMENT FACILITY

to the

KYRGYZ REPUBLIC

for the

INTEGRATED FOREST ECOSYSTEM MANAGEMENT PROJECT

April 28, 2023

Environment, Natural Resources & The Blue Economy Global Practice
Europe And Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2022)

Currency Unit	=	Kyrgyzstani Som
KGS0.012	=	US$1
US$1.279	=	SDR 1

FISCAL YEAR
January 1 – December 31

Regional Vice President:	Antonella Bassani
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ABBREVIATIONS AND ACRONYMS

CBA	Cost-Benefit Analysis
CCC	Consultative and Coordination Council (under SAEPF)
CPF	Country Partnership Framework
CY	Calendar Year
EA	Environmental Assessment
ECA	Europe and Central Asia
EMF	Environmental Management Framework
FAO	Food and Agriculture Organization
FM	Financial Management
FMIS	Forest Management Information System
FS	Forest Service
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIZ	German Agency for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit)
GNI	Gross National Income
GoKR	Government of the Kyrgyz Republic
GUKLOU	Department of Forest, Hunting Planning and Inventory
Ha	Hectares
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results Report
ICT	Information and Communication Technologies
IDA	International Development Association
IFEM/P	Integrated Forest Ecosystem Management Project
INRM/P	Integrated Natural Resource Management/ Plan
JICA	Japan International Cooperation Agency
KAFLU	Kyrgyz Association of Forest and Land Users
KGS	Kyrgyzstani Som
LH	Leskhoz
LSG	Local self-government
LSGC	Local self-government council
M&E	Monitoring & Evaluation
MTR	Mid-Term Review
MoA	Ministry of Agriculture
NCA	Natural Capital Accounting
NFI	National Forest Inventory
PAD	Project Appraisal Document
PDO	Project Development Objective
PIU	Project Implementation Unit
PPP	Public Private Partnership
RF	Results Framework
SAEPF	State Agency for Environmental Protection and Forestry
SDR	Special Drawing Rights

SFEM	Sustainable Forest Ecosystem Management
SFF	State Forest Fund
SLM	Sustainable Land Management
SIP	Strategic Investment Plan
TOC	Theory of Change
USD	United States Dollars
WB	World Bank
XDR	Currency code for the Special Drawing Rights

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P151102	Integrated Forest Ecosystem Management
Country	**Financing Instrument**
Kyrgyz Republic	Investment Project Financing
Original EA Category	**Revised EA Category**
Partial Assessment (B)	Partial Assessment (B)

Related Projects

Relationship	Project	Approval	Product Line
Parent	P151102-Integrated Forest Ecosystem Management	24-Nov-2015	IBRD/IDA
Supplement	P153721-Integrated Forest Ecosystem Management	24-Nov-2015	Global Environment Project

Organizations

Borrower	Implementing Agency
Kyrgyz Republic	Ministry of Agriculture

Project Development Objective (PDO)

Original PDO

The Project Development Objective is to strengthen the capacity of government institutions and communities to improve sustainable forest ecosystem management through investments in management planning, ecosystem restoration, and infrastructure.

FINANCING

		Original Amount (US$)	Revised Amount (US$)	Actual Disbursed (US$)
World Bank Financing				
P151102	IDA-D0950	5,400,000	5,373,529	5,383,889
P151102	IDA-57430	6,600,000	5,358,148	5,292,905
P153721	TF-A0750	4,109,589	4,000,261	4,000,261
Total		**16,109,589**	**14,731,938**	**14,677,055**
Non-World Bank Financing				
Borrower/Recipient		0	0	0
Total		**0**	**0**	**0**
Total Project Cost		**16,109,589**	**14,731,938**	**14,677,055**

KEY DATES

Project	Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
P151102	24-Nov-2015	28-Apr-2017	03-Jun-2019	30-Sep-2021	30-Sep-2022

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US$M)	Key Revisions
19-May-2020	2.86	Reallocation between Disbursement Categories
11-May-2021	5.36	Change in Loan Closing Date(s)
29-Sep-2022	10.42	Cancellation of undisbursed funds

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Moderately Satisfactory	Moderately Satisfactory	Modest

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US$M)
01	19-Apr-2016	Satisfactory	Satisfactory	0
02	14-Oct-2016	Satisfactory	Satisfactory	0
03	08-May-2017	Satisfactory	Satisfactory	0
04	07-Nov-2017	Satisfactory	Satisfactory	.30
05	28-Feb-2018	Moderately Satisfactory	Moderately Satisfactory	.47
06	02-Aug-2018	Moderately Satisfactory	Moderately Satisfactory	.54
07	30-Jan-2019	Moderately Satisfactory	Moderately Satisfactory	.68
08	23-Jul-2019	Moderately Satisfactory	Moderately Satisfactory	.83
09	17-Dec-2019	Moderately Satisfactory	Moderately Unsatisfactory	2.21
10	19-May-2020	Moderately Satisfactory	Moderately Satisfactory	2.86
11	23-Nov-2020	Moderately Satisfactory	Moderately Satisfactory	4.12
12	08-Apr-2021	Moderately Satisfactory	Moderately Satisfactory	5.26
13	15-Sep-2021	Moderately Satisfactory	Moderately Satisfactory	6.74
14	17-May-2022	Moderately Satisfactory	Moderately Unsatisfactory	9.07
15	30-Sep-2022	Moderately Satisfactory	Moderately Satisfactory	10.42

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Agriculture, Fishing and Forestry	**100**
Public Administration - Agriculture, Fishing & Forestry	30
Forestry	50
Other Agriculture, Fishing and Forestry	20

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)

Private Sector Development	**100**
Jobs	100
Environment and Natural Resource Management	**120**
Climate change	59
Mitigation	40
Adaptation	19
Environmental Health and Pollution Management	21
Air quality management	7
Water Pollution	7
Soil Pollution	7
Renewable Natural Resources Asset Management	10
Biodiversity	10
Environmental policies and institutions	30

ADM STAFF

Role	At Approval	At ICR
Regional Vice President:	Cyril E Muller	Antonella Bassani
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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Country Context

1. **The Kyrgyz Republic is a land-locked, mountainous, lower-middle-income country with a multi-ethnic population of about 5.5 million and a very high incidence of poverty.** Due to its elevation and topography, barely seven percent of the land area is arable, the rest consisting of glaciers, mountains, and pastureland or steppe that support livestock grazing. At appraisal in 2013, per capita Gross National Income (GNI) was US$1200, 2.8 percent of households lived in extreme poverty, and 37 percent of the population lived below the poverty line.

Sector and Institutional Context

2. **Forests cover less than six percent of the land area, but they play a vital economic, social, and environmental role and are especially important for the livelihoods of rural and mountain communities (Table 1).** At the time of appraisal, 2.4 million people, or 41 percent of the total population, lived in or near forests and relied on the forests not only for timber and fuel wood but also for pasture and fodder, as well as non-timber forest products such as nuts, fruit, mushrooms, and medicinal plants. The Kyrgyz Republic ranked as the third-most vulnerable country to climate change in the Europe and Central Asia (ECA) region using the simplified index of vulnerability. Rural communities were at great risk due to extended periods of drought and increased intensity of rainfall resulting in increased soil erosion and land degradation.

3. **Institutional limitations combined with a lack of resources and capacity in state agencies had led to inefficiencies in the management of forest resources and the need for sector reform.** The institutional framework for forest management was characterized by a centralized, top-down approach where planning and budgeting was mandated directly by the State Agency for Environmental Protection and Forests (SAEPF). Sector reforms were initiated with strong donor support in the late 1990s, but weak commitment and lack of incentives had prevented policy implementation. A Presidential Decree, "Concept of Development of the Forestry Sector", was issued in May 1999 with the objective of promoting the sustainable development of the forest sector through improved management at the local level, engagement of the population in the forest, and partnership with the private sector. In 2005, the National Forest Program to Support the Implementation of the Concept of the Development of the Forest Sector (2005-2015) was developed, along with the National Action Plan for the Development of the Forest Sector (2006-2010), while the Forest Code was updated in 2007. At appraisal, conditions were converging, with institutional buy-in and ownership, for a broader-based more inclusive forest policy reform that would promote joint forest management and greater economic and more sustainable use of resources.

Table 1: Key numbers in the forest sector

Key numbers	Hectares (ha)
Kyrgyz Republic	19.99 million ha
Forest Service	3.5 million ha
1. State Forest Fund	2.6 million ha
- Forest cover: 26%	~ 650,000 ha
- Grassland: 34%	~ 890,000 ha
- Other land: 40%	~ 1,040,000 ha
Areas of the SFF allocated for afforestation: 12.5%	325,000 ha
2. Protected Areas	871,000 ha
Forest outside the SFF	277,000 ha

4. **Persistent challenges related to a lack of adequate information, skills, and resources in the SAEPF were undermining efforts to improve sustainable forest**

ecosystem management (SFEM). The project aimed to improve SFEM by supporting institutional reforms and addressing institutional and financial capacity constraints at SAEPF (later the Forest Service) and within its subordinate entities (leskhoz[1]), introducing integrated natural resource management planning in pilot leskhozes, and supporting the implementation of these plans. Designed as a "framework" project, the goal was to provide a platform and resources to respond to the specific needs and requirements of the forestry reform process, enabling greater management authority at the leskhoz level for the sustainable management of forest resources in collaboration with local communities.

5. **The project supported the Government of the Kyrgyz Republic's (GoKR) higher-level objectives to address food security and poverty reduction and was closely aligned with the priorities outlined in the 2014-2017 Country Partnership Strategy (CPS).** The CPS for 2014-2017 identified public management of scarce natural resources as a GoKR priority to improve poverty outcomes, particularly for the almost two-thirds of the population that lived in isolated rural and mountainous areas. The project also supported the CPS pillar on governance through its proposed policy and institutional reform to address issues of transparency and accountability in the forest sector at national, local, and community levels.

6. **The project underpinned World Bank regional and sector policies.** First, the project was in line with the World Bank's 2002 Forest Sector Strategy. Second, forests were an important priority for ECA region, and the project contributed to the regional strategic pillars of competitiveness and shared prosperity through jobs and environmental, social, and fiscal sustainability. Third, the project supported the World Bank's climate agenda by building resilience of local communities and by helping to mitigate the effects of climate change through increased forest productivity, reduced emissions from forest fires, and afforestation or natural regeneration of formerly bare lands and/or degraded forests. Finally, the project contributes to shared prosperity through the introduction of improved co-management arrangements between leskhozes and communities to create the conditions for more equitable and sustainable access to forest benefits.

Theory of Change (Results Chain)

7. **For the purpose of this ICR, an illustrative Theory of Change (TOC) was prepared based on the project description in the PAD (**Error! Reference source not found.**).** At appraisal, a TOC was not required.

8. **The project's TOC is organized around two integrated results chains with structured co-benefits at the community level.** The first results chain, to strengthen the capacity of government institutions for improved SFEM, focused project activities around creating an enabling environment through institutional reform and technical support for: (i) a legal, regulatory, and institutional framework that underpins new management models for SFEM at the leskhoz level; (ii) better data and monitoring systems needed to improve accountability and evidence-based decision-making, and (iii) introducing alternative forest management models at the leskhoz level. The second results chain, to strengthen the capacity of communities for improved SFEM, focused project activities around mobilizing community participation to develop integrated natural resource management plans (INRMPs) and investing in their implementation. Field-level investments would be proposed in collaboration with local communities and selected on the basis of criteria outlined in the Operations Manual (see also **Annex 9**). At this local level, through co-management of forest resources between leskhoz and communities, assets and benefits derived from sub-projects

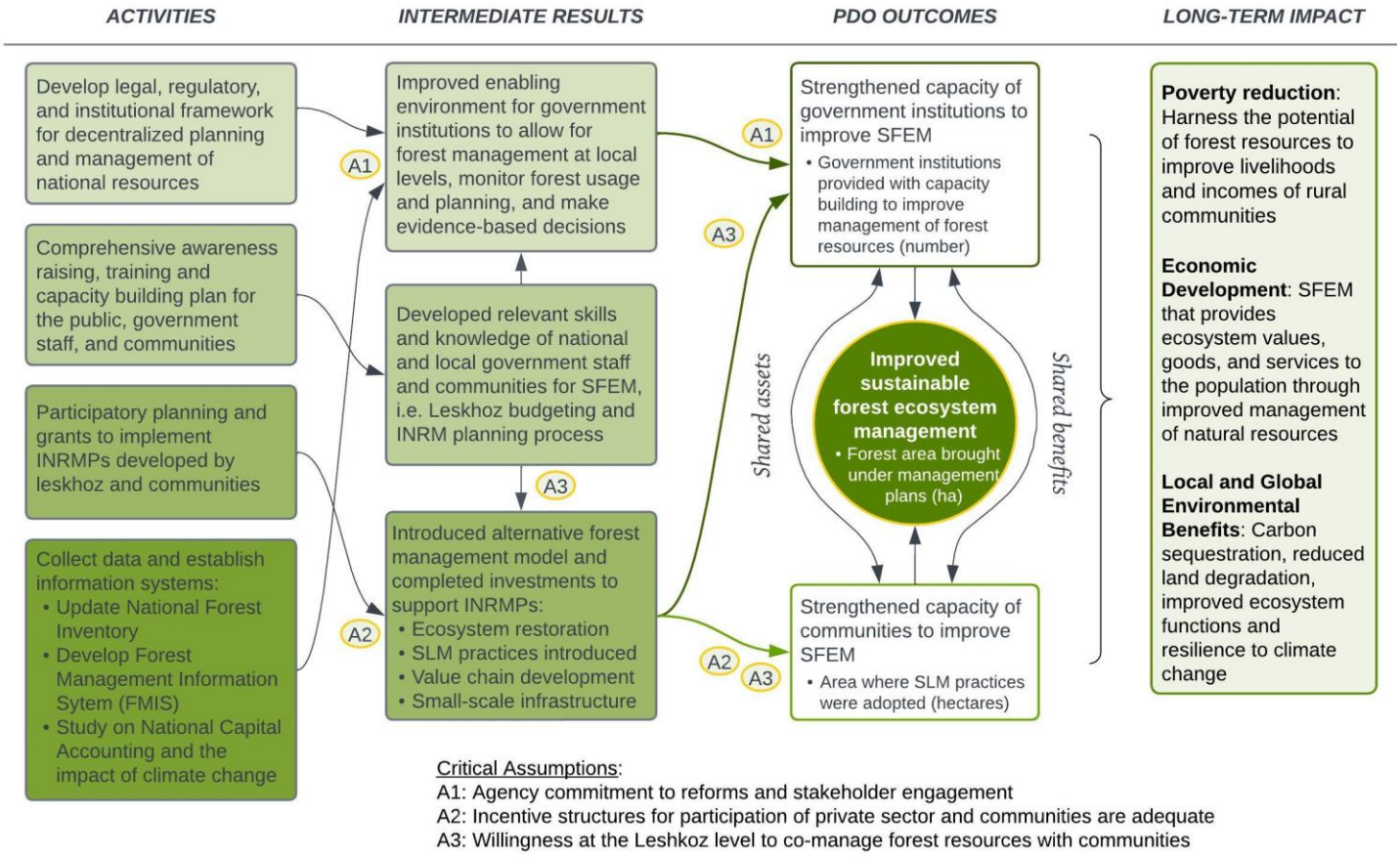
[1] Leskhozes are the local level state forest enterprises responsible for managing forested land and land set aside for afforestation within the State Forest Fund (SFF).

implemented by leskhozes, and micro-projects implemented by communities, would be shared between user groups. Central to the results chain and to improving SFEM was a comprehensive awareness raising, training, and capacity building plan aimed at the public at large, government institutions, and communities in pilot leskhozes.

9. **The longer-term transformational impact** of improved SFEM was expected to contribute towards poverty reduction, economic development, and shared prosperity in a sustainable manner by improving and protecting the existing natural resource base. It would also enhance biodiversity and build resilience to the impacts of climate change by adapting ecosystems and livelihoods and by supporting carbon sequestration. The global environmental benefits would derive from the mitigation and adaptation actions to be defined in the INRMPs, including reducing/reversing land degradation, improved water use and management, maintenance of ecosystem protection functions, habitat conservation and restoration.

Figure 1: Theory of change

Problem statement: Centralized forest sector management combined with weak institutional capacity and a lack of adequate information, skills and resources in the SAEPF (including subordinate management entities) has led to management inefficiencies of forest resources.



Project Development Objectives (PDOs)

10. The PDO is to strengthen the capacity of government institutions and communities to improve sustainable forest ecosystem management through investments in management planning, ecosystem restoration, and infrastructure.

Key Expected Outcomes and Outcome Indicators

11. The PDO consists of three objectives, namely to: i) strengthen the capacity of government institutions to improve sustainable forest ecosystem management; ii) strengthen the capacity of communities to improve sustainable forest ecosystem management; and iii) improve sustainable forest ecosystem management. Three related outcome indicators were defined:

- Government institutions provided with capacity building to improve management of forest resources (#)
- Land area where sustainable land management practices were adopted as a result of the Project (ha)
- Forest area brought under management plans (ha)

12. **The Global Environmental Objective is the same as the PDO.**

Components

Component 1: Forest Sector Institutional Reform (Estimated cost: US$0.88 million (either IDA or GEF), Actual cost: US$0.46 million)

13. Component 1 provided technical assistance, training, and capacity building at the national level to support the development of the policy, legal, regulatory, and institutional framework. Activities supported the development of a framework to create the enabling environment for more decentralized management and planning of natural resources at the national, regional, local and leskhoz levels. The goal of this new approach was to achieve more transparent and sustainable management of natural resources with participation at all levels.

Component 2: Strategic Investments and Piloting of Sustainable Management Approaches (Estimated cost: US$11.38 million (either IDA or GEF), Actual cost: US$10.83 million)

14. Component 2 supported the development and implementation of INRMPs in pilot leskhozes to help increase income and long-term financial sustainability of leskhozes. Priority interventions were funded through a framework approach to identify sub-projects to be implemented by leskhozes and micro-projects to be implemented by communities with a focus on: (i) silvicultural measures like thinning and establishment of plantation forests with short rotation for biomass; (ii) production of high quality seedlings for afforestation and reforestation; (iii) investments in value chains processing of nuts/fruits, ecotourism, etc.; (v) improvement of common resources (i.e. construction of cordon-houses, bridges, power lines); (vi) establishment of nurseries, orchards; (vii) creation of silvo-pastoral systems (e.g., walnut forests or spruce with hayfields, pine with pasture); and (viii) provision of irrigation.

Component 3: Information and Monitoring and Evaluation (Estimated cost: US$2.78 million (GEF), Actual cost: US$2.42 million)

15. Component 3 supported the collection and processing of baseline data, maps, and surveys critical for the development and implementation of new leskhoz management plans, including an update of the National Forest

Inventory (NFI). It also supported the establishment, operation, and maintenance of the Forest Management Information System (FMIS) to store, analyze, and report on data to be generated during the implementation of the NFI and for the preparation and monitoring of management plans. The global partnership Wealth Accounting and Valuation of Ecosystem Services (WAVES) supported natural capital accounting to understand the external factors that influence the forest and pasture sectors.

Component 4: Project Management, Monitoring and Evaluation (Estimated cost: US$1.07 million (IDA and GEF), Actual cost: US$1.06 million)

16. Component 4 financed Project management activities undertaken by the Project Implementation Unit (PIU) established in the SAEPF.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION

17. **The project was restructured in three level-two restructurings**:

- In May 2020 to revise the RF and reallocate between disbursement categories (details under Rationale below);
- In May 2021 to extend the project closing date from September 30, 2021, to September 30, 2022; and
- In September 2022 to facilitate a cancellation of undisbursed funds of SDR950,000, equal to US$1.17 million[2].

Revised PDO and Outcome Targets

18. **The PDO and expected project outcomes were not revised.**

Revised PDO Indicators

19. **The three PDO indicators remained the same, but each related target was adjusted.** For PDO indicator 1 (*government institutions provided with capacity building to improve management of forest resources*), the target was reduced to reflect Government re-organization and merger of some leskhozes. For PDO indicator 2 (*land area where sustainable land management practices were adopted*), the original target was estimated as the total area of pilot leskhozes, whereas the revised target was based on a careful estimate of sustainable land management (SLM) investments included in the INRMPs to be implemented. For PDO indicator 3 (*forest area brought under management plans*), the original target was calculated as 26 percent of PDO indicator 2, equal in proportion to the forest cover on SFF land (see Key Numbers above). To better capture integrated forest management, the target was revised to reflect the actual and entire areas of pilot leskhozes (some were later combined, which enlarged the area). An overview of changes to the Results Framework (RF) is included in **Annex 7** and additional details are in **Annex 1**.

Revised Components

20. **The components were not revised.**

[2] The data sheet refers to only two restructuring. The third restructuring is not reflected due to a system glitch.

Other Changes

21. **Modification of institutional arrangements:** The Implementing Agency was originally the SAEPF located directly under the GoKR. During implementation, the Implementing Agency underwent several institutional changes due to the reorganization of ministries, departments, and the GoKR itself (see also Section III.B.(c). In 2020, SAEPF became the State Forestry Agency (SFA) under the jurisdiction of the Ministry of Agriculture, Water and Regional Development. In August 2021, the SFA was again reorganized into the Forest Service (FS) under the Ministry of Agriculture (MoA). The ICR will refer mainly to the FS as the Implementing Agency and central administrative unit for 41 leskhozes.

Rationale for Changes and Their Implication on the Original Theory of Change

22. **Revisions to the results framework:** In addition to changes to the PDO indicators (para. 19), 12 of the 13 original intermediate results indicators were also revised or replaced with new indicators and targets. Under Component 1, the intermediate result indicators were revised to reflect the results of activities being undertaken in institutional reform, capacity building and public engagement, as well as changes in context, e.g., in budgeting procedures for leskhozes. Under Component 2, indicators were revised to reduce confusion across three indicators for afforestation and restoration and replaced with a single measure. The indicator for number of beneficiaries was revised for clarity and the target adjusted upwards. For Component 3, some indicators were revised to provide more information on the use and adoption of information systems in planning. Under Component 4, an indicator on GRM was added to assess beneficiary feedback mechanisms. An overview and ICR assessment of changes to each intermediate indicator is provided in **Annex 7**.

23. **Reallocation between disbursement categories:** A reallocation between disbursement categories allowed for project savings of US$ 1.17 million (US$900,000 under the GEF grant and SDR200,000 (equal to app. US$270,000) was under the IDA credit) to be used to respond to the COVID-19 crisis and its post-recovery process. Specifically, the funds were used to procure multi-purpose forest fire equipment, adequate Personal Protective Equipment (PPE), and disinfectants for all 41 leskhozes, and (ii) to provide seedlings of fruit trees and berry bushes to vulnerable households as sources of alternative income and food in the most affected areas. Combined, this expanded the number of benefiting institutions and local communities, increased the environmental benefits and improved community livelihoods, while the overall scope of activities and alignment with GEF objectives remained the same.

24. **Closing date extension:** The original project closing date was extended 12 months from September 30, 2021 to September 30, 2022 to ensure sufficient time for the completion of ongoing strategic investment contracts and completion of remaining project activities.

25. **Cancellation of undisbursed funds:** On September 23, 2022, shortly before project closing, an undisbursed amount of SDR950,000 equal to app. US$1.2 million out of project savings was cancelled from IDA Credit 5743 and returned to the Country Portfolio. Following January 30, 2023, at the end of the grace period for receiving withdrawal applications, the remaining balance was cancelled and returned to the original funding sources, including: US$109,328 from GEF Grant TF0A0750; SDR19,206 from IDA Credit 5743; and SDR19,583 from IDA Grant D095 – the latter two both equal to app. US$26,000 on January 30, 2023.

26. **Changes to the RF, reallocation between the disbursement categories, modification of institutional arrangements, and cancellation of funds did not significantly change the theory of change.**

II. OUTCOME

A. RELEVANCE OF PDO

Rating: Substantial

Assessment of Relevance of PDO and Rating

27. **The Project's development objective remains aligned with the World Bank's Country Partnership Framework (CPF) for Kyrgyz Republic for FY24-28 currently under preparation.** The PDO aligns closely with CPF Objective 2.2. "Enhance efficiency and sustainability of natural resource sectors", which calls for reducing land and forest degradation through climate-adapted technologies and practices, and improved access to markets. It notes that improving resource efficiency in agriculture and land-use sectors is critical to drive diversified growth and support sustainable rural livelihoods. Furthermore, the PDO supports two objectives in the latest Systematic Country Diagnostic (SCD) Update: 1) Building an effective state: improving governance of SOEs and making public administration more transparent and accountable; and 2) Implementing climate change strategies: developing legal frameworks for environmental and social risk management and building capacity for landscape restoration and sustainable resource management. Finally, the PDO was also aligned with the most recent CPF for FY19-22, in particular Objective 9 on enhancing resilience to climate change and disaster risks, which addressed building environmental resilience through promoting sustainable management and use of natural resources and improving management and mitigation of natural risks and disasters.

28. **Project results have informed the Kyrgyz Republic Resilient Landscape Restoration Project (RESILAND) – P177407, which is under preparation.** Project objectives and outcomes are consistent with the RESILAND project which proposes to increase the area under sustainable landscape management and support for climate-resilient infrastructure and livelihoods. The Project objectives are aligned with the most recent World Bank Group Forest Action Plan (2016-20)[3] and Climate Change Action Plan (2021-25)[4] and the goals of the Paris Agreement in support of the Green, Resilient, and Inclusive Development. The objectives are also consistent with the World Bank's enhanced support for community engagement in nature-based solutions, and forests and integrated landscape management.

29. **The Project remains relevant to Kyrgyz Republic's strategic development priorities.** Project achievements continue to provide targeted support to priorities outlined in the Concept of Development of the Forest Industry of Kyrgyz Republic until 2040.[5] Priorities in this national strategy include increasing the contribution of forestry to the country's GDP up to one percent, reducing the poverty level of the rural population in forest areas by 10 percent, forest conservation and increasing forested area by up to 6.5 percent. The Project also aligned with the GoKR's National Development Strategy 2040, which includes a long-term vision for environmental protection, climate change adaptation and disaster risk reduction. The strategy's medium-term plan (2018-2022) entitled "Unity, Trust,

[3] "World Bank Group. 2016. World Bank Group Forest Action Plan FY16–20. Washington, DC. *https://openknowledge.worldbank.org/entities/publication/a076f461-6ea2-564d-86b3-1896526ac31d*
[4] World Bank Group. 2021. World Bank Group Climate Change Action Plan 2021–2025; Washington, DC. *https://openknowledge.worldbank.org/entities/publication/ee8a5cd7-ed72-542d-918b-d72e07f96c79*
[5] The Concept of Development of the Forest Industry of the Kyrgyz Republic was approved in May 2019, and developed in partnership with the Food and Agriculture Organization.

Creation" includes addressing governance issues, and improving public administration and assets management, especially through deployment of information and communication technologies (ICT) and e-government solutions.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Rating: Substantial

Assessment of Achievement of Each Objective/Outcome

30. Project achievements are assessed against each of the objectives in the PDO (para. 11).

PDO 1: Strengthen the capacity of government institutions to improve sustainable forest ecosystem management

- PDO outcome indicator 1: Government institutions provided with capacity building to improve management of forest resources (Target 100% achieved).

31. **The Project strengthened the capacity of the central Forest Service and 41 leskhozes to improve sustainable forest ecosystem management.** *At the national level,* capacity was strengthened by amending the Forest Code to provide the legal and regulatory foundation for realizing the GoKR's strategic visions for the forest sector, and improving central data collection, monitoring and oversight of national forest conditions by rolling-out a nation-wide Forest Management Information System. The use of standardized labor costs will help improve transparency in forestry work, and a Roadmap for leskhoz boundary resolution will help resolve disputes and clarify land boundary uncertainties. Collectively, these interventions have improved the operating environment of the FS and leskhozes and led to observable changes in behavior and practices.

32. *At the local level,* capacity was strengthened by introducing a new model of forest management in pilot leskhozes and municipalities, improving critical infrastructure, and investing in income-generation. These interventions have delivered better protection and conservation of forest resources and expanded reforestation/afforestation of land for more efficient management of natural resources. Collectively, the support has improved the operational and financial foundation of leskhozes as forest enterprises with co-benefits for local livelihoods in forest communities.

(i) Strengthened capacity of the Forest Service to improve SFEM

33. **Amendments to the Forest Code create the appropriate legislative and institutional conditions for sustainable forest management.** The project was instrumental in drafting amendments to the Forest Code that support the realization of the GoKR's strategic visions for the forest sector as outlined in the updated Forest Sector Development Concept 2040 (see para. 29). The amendments eliminate contradictions with the Constitution and other legislative acts, are harmonized with key related legislation, e.g., Land Code, and introduce more precise terms and provisions that create the conditions for effective legal regulation of the sector. The draft law on the Forest Code adopts good practice in separating management and control functions between the central Forest Service and local leskhozes to ensure financial and institutional sustainability of the forest sector and to increase transparency and accountability. The Code also introduces new management approaches, such as payments for ecosystem services and defines forests of high conservation value. The recommendations of a project-funded functional analysis of the forest sector were reflected in the above Concept and provided a strong basis for the preparation of the amendments. Stakeholders buy-in was built through a consultative process carried out over two years under

project-leadership as outlined in **Annex 8**. The revised Code has been reviewed and approved by relevant ministries, undergone multiple rounds of revisions, and is expected to be adopted within June 2023.

34. **A new digital system for managing forest resources and activities is having a transformational impact on accountability in the forest sector and is a potential flagship of effective e-government.** The Forest Management Information System (FMIS) forms an essential part of the Kyrgyz forest management information architecture. Consolidating data from the existing forest cadaster, from forest management plans, and from the National Forest Inventory (see para. 36 below), the FMIS creates a sound monitoring framework and allows the FS to store, analyze, retrieve and report information for multiple purposes and audiences. Rolled out in all 41 leskhozes, rather than just the 13 pilot leskhozes as planned, the FMIS has so far been updated with information on forest resources and forest users covering an area of nearly 890,000 hectares (intermediate indicator #8: revised target 588 percent achieved). As seen in the results below, the FMIS is contributing to increased operational efficiency, and the supply of better information, thereby contributing to improved forest ecosystem services and State governance. Used effectively, the FMIS can be a strategic tool for economic growth and provide increased transparency and participation.

35. **Changes in behavior and practice can already be observed.** *First, the FMIS has improved efficiency and management practices, and created savings.* Data reliability has improved by using the FMIS to automate the preparation of documents required for forest management. For example, more than KGS27 million in overdue lease payments to date has been identified. In addition, irregularities identified by the FMIS has resulted in staff and management changes to root out corruption and illegal practices. *Second, the FMIS has promoted transparency.* The FMIS eliminates some elements of corruption by improving accountability, especially regarding land lease management, which is the main source of income for leskhozes. For example, at project start there were over 20,000 tenants leasing state forest land from leskhozes. In the process of implementing the FMIS, 15,000 leases have so far been entered into the database, while more than 4,000 irregular lease contracts have been identified and acted upon. *Third, the FMIS has resulted in the adoption of new regulations, demonstrating its potential as an effective tool of e-government.* Senior management has fully embraced the digital transformation. In February 2022, a new rule was introduced, which ensures new contracts for leasing SFF land can only proceed when the spatial area is digitally recorded in the FMIS. Furthermore, the FS has mandated that all reporting can only be done through FMIS.

36. **An updated National Forest Inventory and study on National Capital Accounting equips the FS with critical knowledge for evidence-based policymaking and for fulfilling international reporting requirements.** The second NFI utilized new satellite imagery and remote-sensing technologies to take stock of the total forest area by forest type, ownership, species, and size category, and considered key parameters related to levels of degradation, regeneration, pests and diseases, illegal logging, and forest fires, among others. Land use cover has also been mapped for the country, and a plan prepared for conducting the third NFI. The results of the NFI empower the FS with critical evidence necessary to understand the impact of forest policies and planning for sustainable management of forest resources The NFI also enables the FS to report on data requirements under various international agreements. A digital platform was developed for the national initiative 'Jashyl Muras' (Green Heritage) to support and access information on the organization, planning and accounting of forest plantations. Natural Capital Accounting (NCA) on the actual contribution of forests to the national economy and its people has provided a deeper understanding and recognition of the important role the forests play. NCA offers evidence of the growth potential in the forest and tourism sectors, reveals the value of non-market forest products and ecosystem services, and shows how economic sectors such as agriculture and tourism benefit from forests. This information is

critical for the development of cross-cutting sustainable development policies and strengthens the knowledge base of the FS for effective planning and sustainable management of forest resources. It also enables the National Statistical Committee to better account for the environmental services offered by forests and include forests in the national accounts.

37. **The approved guidelines for standardized costs of labor in leskhozes will help improve transparency and efficiency of forest management.** The FS now has a schedule of standardized daily tariff rates for different forestry activities and a methodology for calculating the cost of forestry work. Through improved cost control and simplified accounting within a standardized framework agreement, the guidelines are helping to ensure efficiency and transparency of production rates for silvicultural and forest reclamation work.

38. **A process was developed for identification of legal and geographical overlaps and disputed boundaries of the At-Bashi and Talas leskhozes and a Roadmap prepared to resolve boundary disputes in other leskhozes.** Based on cartographic and land tenure analyses, the final report for the two leskhozes, posted at the MoA, proposes alternative options with step-by-step actions to secure SFF lands through state registration. A procedural Roadmap was prepared based on the investigations in 10 pilot leskhozes for resolving disputed borders, taking into account the World Bank Operational Policy 4.12 on involuntary resettlement. The Roadmap has been approved by the FS and recommended to all leskhozes for resolving issues with disputed territories and borders.

(ii) Strengthened capacity of pilot leskhozes to improve SFEM

39. **Improvements in critical infrastructure and small forest patrol vehicles have strengthened leskhoz capacity for forest conservation and protection.** Improvements to leskhoz' field houses (cordons), bridges, and power lines are facilitating the work of leskhoz staff in the field. Combined with forest patrol vehicles with fire-fighting capabilities, leskhozes and their staff are now better equipped to monitor larger areas and to respond to fires even in remote locations. Construction of power lines and transformers, and subsequent electrification of cordon houses in remote locations is helping conserve forest resources through reduced the cutting of trees for firewood in those areas. In the beneficiary survey, leskhozes reported that project-funded improvements are also helping to reduce the number of violations linked to illegal forest activities due to improved surveillance. Fencing of forest crops was completed to protect from damage by livestock grazing on 1,350 hectares, and additional fencing of established forest crops is helping to promote natural regeneration.

40. **Plantings and installation of irrigation facilities allow for development of unproductive and degraded lands through the creation of forest and fruit plantations.** Forest crops were planted on over 2,500 hectares in pilot areas, see **Table 6,** (intermediate indicator #5: original target 126 percent achieved, and revised target 105 percent achieved) and soil preparation undertaken for future plantings on an additional 1,100 hectares. Construction of 10,500 meters of irrigation canals to bring water for irrigation to 650 hectares of unproductive land has created an opportunity to attract local investors to establish orchards or plantations.

41. **Greenhouses have expanded the quality and quantity of planting material for future re/afforestation.** With fully operational facilities, nine leskhozes are growing planting material with a closed root system all year round, producing between 2,000-4,000 seedlings annually, for a total of 20,000 seedlings of conifers and 5,000 seedlings of hardwoods. Going forward, the focus will be on competitive and import-substituting seedlings for afforestation

and landscaping. Some leskhozes are planning to construct cooling chambers for saplings to help extend the planting period of forest crops, thereby increasing the volume of plantings.

42. **Installation of drip irrigation for nurseries and orchards, sustainable agroforestry practices, fruit and nut processing facilities, and fertilizer production have improved conditions for efficient use of forest resources.** Installation of drip irrigation has enabled efficient use of water resources on lands where irrigation canals have been built and wells drilled, benefiting orchards and nurseries established. Planting of fruit trees with agricultural crops, such as barley, are expected to increase crop yields over time. Construction of refrigerated storage now allows for produce to be sold or processed gradually. Fruit and berry processing facilities have created value-added non-timber forest products (NFTP) and allowed communities to process dry fruits and berries beyond what is harvested from project-funded nurseries. Construction of cattle bridges allow for more rational use of near-settlement pastures, including on SFF lands, by driving animals to distant pastures. Two leskhozes are producing vermicompost (biohumus), a natural organic fertilizer easily absorbed by plants, which improves the structure of the soil and its agrochemical indicators and makes seedlings more resistant to diseases and pests.

43. **The financial foundation of pilot leskhozes is strengthened through sale of seeds, saplings, and vermicompost, through new opportunities for leasing of previously unproductive land, and through future sale of crops.** At project closing, observations from the beneficiary survey and closing workshop reveal optimism and confidence about the longer-term benefits of project investments in pilot leskhozes. Leskhozes' self-assessment of future revenue from new activities show that they expect to earn US$400,000 a year combined for all 13 pilots (see **Annex 4**). This has given rise to improved confidence in their ability to generate income for re-investment into sustainable ecosystem management going forward after project closing (intermediate indicator #2 achieved).

44. **A comprehensive training and capacity building effort made a critical contribution to improving SFEM at national and local levels of the FS.** In total 19,807 people (30 percent women) participated in training and capacity building events organized by the project on a range of topics (see **Table 8** in **Annex 1**). At project completion, over 70 percent of stakeholders interviewed during the Beneficiary Survey indicated that their knowledge about sustainable forest management has significantly improved as a result of project training activities, while another 28 percent indicated that their knowledge has improved to some extent (intermediate indicator #3 achieved). The program reached beyond staff of the FS central office and 41 leskhozes, to include the National Statistical Committee, the Department of Forest and Hunting Inventory of the Forest Service, Forest Ecosystem Development Department of the Forest Service, Central Asian Institute for Geosciences, local forest users, and others.

PDO 2: Strengthen capacity of communities to improve sustainable forest ecosystem management

- PDO outcome indicator 2: Land area where sustainable land management practices were adopted as a result of the project (Original target 28% achieved and revised target 109% percent achieved).

45. **The Project strengthened the capacity for SFEM in:** (i) pilot leskhozes by supporting communities' participation in forest management and investing in sub- and micro-projects on SFF land; and (ii) pilot municipalities by restoring degraded and unproductive land for economic development and assisting vulnerable households during the pandemic.

46. **Participatory development of INRMPs and investments strengthened awareness and involvement of local communities to improve SFEM.** A comprehensive process to mobilize community participation was carried out in

three phases under the guidance of local community-based NGOs (see **Annex 9** for details). The effort facilitated strong community participation in the development of INRMPs and related investment plans through proposals for sub- and micro-projects (intermediate indicator #6 achieved).

47. **Sub- and micro-projects introduced SLM practices on 174,849 hectares of land or 18 percent of the area covered under INRMPs prepared (see Table 2).** Capacity building of local communities is intertwined with the local leskhoz operations due to a high degree of sharing of assets and benefits between forest user groups (see Box). As "forest users" whether working for leskhozes or leasing SFF land, the capacity of local communities for SFEM - just as that of leskhozes - has been strengthened from improvements in critical infrastructure, from land restored, fenced and irrigated, from post-harvest cold storage and processing and from alternative livelihood opportunities, such as beekeeping. Complementary training on integrated pest management, cultivation of planting material and forest product processing for forest users has also helped to strengthen capacity for SFEM.

48. **In total, 10,285 people benefited from access to assets and services as a result of participating in project interventions, which is helping to relieve pressure on forest resources.** This includes those who received equipment and planting materials and other assets, those who are benefiting from irrigation and infrastructure improvements, as well as those employed in project activities through 167 permanent and 1,092 seasonal jobs (intermediate indicator #4 achieved).

Many assets and benefits are shared between Leskhozes and nearby communities

Leskhozes, also called Forest Enterprises, operate different income-generating activities, and rely on forest users to work on SFF land in support of leskhoz operations. This creates jobs for local residents as well as production, which is mainly consumed by local communities. Another forest user group among local residents are tenants, who lease SFF land to graze livestock, operate nut forests and fruit orchards, or engage in agriculture, tourism, and beekeeping on SFF land. Therefore, improvements to the asset base provide benefits for all forest user groups, just as improvements in benefits, such as increases in production and incomes, translate into food security, jobs, and new economic opportunities for local households.

Box 1: Leskhoz - forest enterprises

49. **Local self-governments (LSGs) in six municipalities adjacent to leskhozes developed an effective model to use low-productivity lands to support the social needs of the community.** While LSGs are government entities, they focused project activities on strengthening the capacity of local communities. To address lack of economic opportunities, increase incomes and create new jobs, the pilot LSGs focused on restoring degraded land and developing unproductive land to grow income-generating inter-cropped fruit and berry crops. At project closing, plantings on municipal land covered a total of 655 hectares, exceeding the target of 619 hectares approved in the Municipal Forest Management Plans (MFMPs). Support for agroforestry practices is expected to provide environmental benefits of improved soil quality, increased vegetative cover, and reduced desertification while delivering economic benefits from better harvests.

50. **The model is having a positive effect on both local livelihoods and land restoration.** In one municipality, afforestation was seen as a way to decrease dependency among vulnerable households on livestock production, and thus contribute to land restoration. Furthermore, the model has helped increase community leasing of municipal forest plots for income-generation. At the closing workshop, LSGs shared some positive outcomes relating to a number of households that are prospering out of poverty due to the economic opportunities from afforestation. When local communities were affected by COVID-19 and related restrictions, LSGs applied the same model of targeted support towards poverty reduction to distribute more than 160,000 seedlings to 7,717 vulnerable

households, along with information on planting methods. Seedlings consisted mainly of apple, apricot and blackcurrant varieties. The result is captured in the Beneficiary Survey, where 80 percent of interviewees in LSGs state that the local population supported project implementation and engaged actively in the process.

PDO 3: Improve sustainable forest ecosystem management

- PDO outcome indicator 3: Forest area brought under management plans (Original target 603% achieved and revised target 112% achieved).

51. Based on the achievements under PDO 1 and 2, the project successfully improved sustainable forest ecosystem management by introducing integrated management plans on over 970,000 hectares of SFF lands and adjacent pilot municipalities equivalent to the size of 13 pilot leskhozes and the area covered in the MFMPs in six pilot municipalities (**Table 2**). In addition to the range of environmental, economic and social benefits described in the previous section, it is worth noting that scaling-up of forest management planning has contributed to further testing and refining of the INRMP guidelines (see para. 79). The FS has now adopted the guidelines for implementation by all leskhozes. Furthermore, recent regulations (see para. 62) allow leskhozes to invest commercial revenues from INRMP and other activities into operations and maintenance of SLM investments, as well as new activities.

Table 2: Total area brought under management and SLM (ha)

LH/LSG	Area covered by INRMPs and MFMPs (ha)	Area covered by sub-projects & micro-projects (ha)
LH (INRMPs)	970, 338	174, 182
LSG (MFMPs)	619	668
Total	**970, 957**	**174, 849**

Justification of Overall Efficacy Rating

52. **Overall project efficacy is rated substantial.** This is justified by the attainment of all three parts of the PDO, with all three targets achieved or exceeded. The capacity of government institutions at both central and local levels for sustainable forest ecosystem management has significantly improved. The project successfully introduced integrated natural resource management planning on over 970,000 hectares, equal to 39 percent of SFF lands, in 13 leskhozes and six municipalities. Investments in sustainable land management practices were carried out covering 175,000 hectares to implement priority measures identified in the INRMPs and aimed at improving forest management. Leskhozes are reporting confidence in the long-term financial viability of investment activities and positive economic impacts on operations, even if it is too early to point to evidence of this. Capacity for improved forest management at the community level was strengthened in terms of awareness raising, participation, and livelihood support. It is worth highlighting the considerable progress achieved in the final two years given the challenges of the pandemic during this time, and the lack of progress till the Mid-term Review (MTR).

C. EFFICIENCY

Rating: Modest

Assessment of Efficiency and Rating

a. Economic analysis

53. **At appraisal, a Cost-Benefit Analysis (CBA) was conducted for the overall project.** This showed an internal rate of return (IRR) of 20 percent, based on a 40-year horizon to account for the long-term benefits of the proposed interventions and a discount rate of 10 percent. Benefits included silvicultural thinning output, silvo-pastoral wood and hay production, nut collection and processing, orchards, and carbon sequestration. Costs included the overall project and annual operating costs related to each benefit stream. At completion, a CBA of the investments under Component 2 was carried out using a 40-year horizon and a discount rate of 10 percent for comparison. A scenario analysis was developed using a 20-year timeframe to account for the average lifespan of physical investments, such as fences. The summary results of the CBA are given in **Table 3** below (Annex 4 provides a detailed analysis).

54. **At completion, the CBA results indicate a net present value (NPV) of US$1.28 million and an economic IRR of 12 percent (Table 3).** Closing and appraisal results are not fully comparable due to differences in the types of costs and benefits considered. The current analysis includes the following: direct investment costs associated with Component 2 and annual costs related to SLM investments as identified in the Final Project Report. The analysis captures economic benefits: (i) derived by leskhozes related to increased income from forest activities due to technical assistance, improved seeds, and fertilizer and infrastructure improvements; and (ii) forest benefits due to reforestation/afforestation actions. Not included in the analysis, due to lack of information, is the expected additional production by forest tenants and community members, nor the ecosystem services delivered by the project, e.g., erosion control, prevention of landslides, and protection of watersheds. Thus, the overall result underestimates the magnitude of the Project's economic net benefits. A scenario-analysis shows that the project's NPV is still positive in a 20-year timeframe before the need to rehabilitate or replace physical investments arises. Applying a 6 percent discount rate[6] improves the NPV to US$6.2 million under a 40-year timeframe and 2.7 million under a 20-year timeframe. However, under a 40-year scenario without any carbon benefits, the NPV turns negative with a 5 percent economic rate of return (ERR).

Table 3: Cost-benefit analysis results: scenario-model with 40- and 20-year timeframes and 10 and 6 percent discount rates

	40 Year Model		20 Year Model	
	10%	6%	10%	6%
ENPV				
Appraisal	$17 320 000	$38 300 000	$12 265 772	$24 901 907
Completion	$ 1 277 057	$ 6 243 683	$ 18 104	$ 2 685 772
ERR				
Appraisal	20%	20%	19%	19%
Completion	12%	12%	10%	10%

b. Implementation efficiency

[6] World Bank. 2016. Discounting Costs and Benefits in Economic Analysis of World Bank Projects. Washington DC: World Bank.

55. **Aspects of the original project design lent themselves towards efficient implementation of planned activities.** The focus on capacity building as a development outcome, the theory of change, and the integrated nature of project components served the project well and improved efficiency. However, there were other aspects of implementation, which hampered efficiency. While the framework approach towards field-level investments under Component 2 helped to target investments to needs on the ground, the process also burdened procurement, which negatively impacted efficiency. Extensive delays in staffing the PIU and moving towards effectiveness, inadequate capacity in the administrative and technical line agencies, poor procurement documentation and contract management, and lack of qualified technical staff within the PIU to review and supervise detailed technical designs, tendering of procurement packages, and addressing on-the ground issues – all reduced efficiency and necessitated a longer implementation period. Political instability leading to constitutional changes, a new government, reorganization of the implementing agency also reduced implementation efficiency. While restrictions under the global pandemic delayed mobilization of consultants and commencement of works, and thus on-site support, it is worth noting that project savings provided PPE to leskhozes and municipalities and support for vulnerable households during the crisis.

56. **A comparison of actual expenditures with appraisal estimates by component shows that while there were some deviations, overall project efficiency was as expected.** The project disbursed 91 percent of allocated resources. The costs of Component 2, which funded investments to implement the INRMPs in the pilot leskhozes, accounted for 73 percent of project funds, in line with the appraisal estimate (71 percent). Net currency gains against the KGS in procurement allowed for a reallocation of funds in support of vulnerable households at risk during the pandemic. A cancellation of US$1.2 million in project savings was finalized prior to project closing in order to keep the funds in the country portfolio. Cancelled funds - given additional time - would have been applied towards additional activities under Component 2 (communication with the PIU). The remaining difference of US$230,000 is due to historical exchange rate differences between USD/SDR accounting for US$69,000 in losses and to cancellation of remaining funds of US$161,000 at project closing. Actual expenditures towards administrative costs under Component 4 corresponded well to the appraisal estimate despite the 12-month extension, indicating a reasonable level of efficiency at the PIU.

c. GEF incremental analysis

57. At appraisal, a separate incremental cost assessment was not required. However, the project financial analysis did cover aspects of GEF financing including the benefits of carbon sequestration (see section above). Under Components 1 and 3, GEF financing helped ensure a focus on building capacities for institutional reform of the forest sector and developing new knowledge from studies and assessments critical for both national level M&E and global reporting on key environmental indicators. In total, the project disbursed 97.3 percent of GEF funds, of which US$900,000 from the GEF grant was reallocated towards pandemic support (see **Annex 4** for further details).

58. **Overall, project efficiency is rated modest.** While the economic analysis shows a positive return on investment given the modest investment amount and the strong carbon effect, implementation was significantly hampered by lack of capacity and external events.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

59. **Overall project outcome is rated Moderately Satisfactory.** This is justified by: (a) project development objectives that remain substantially relevant at Project closing; (b) a substantial attainment of project development objectives; and (c) a modest level of efficiency.

E. OTHER OUTCOMES AND IMPACTS

Gender

60. **The project was not gender-tagged at the time of preparation, yet careful consideration was given to address gender inclusion in the project design.** Women make up a sizable proportion of forestry users, yet men have traditionally dominated the governance of the forestry sector. The project helped to address this inequality by including a requirement that women account for a minimum of 30 percent of project beneficiaries, that female-only focus group discussions form part of community consultations, and that gender disaggregated data be collected. At project closing, these design elements have largely been fulfilled.

61. **At closing, women account for 38 percent of 10,285 project beneficiaries, who benefit from access to assets and services delivered by the project (Table 7).** Informed by focus-group discussions, the project paid attention to target sectors where many women work, such as in gardens and processing of NTFP, as well as poor and vulnerable households, which are often female-headed. Women accounted for one third of participants in community consultations to develop INRMPs (see **Table 4**) and women benefited from participation in training activities and capacity building events, where they represented 30 percent of the total 19,807 participants. Intermediate Result 4 captures the share of women participating in sub- and micro-projects, who have received equipment, planting materials and other assets, and well as women benefiting from infrastructure improvements, particularly irrigation (original target 55 percent achieved and revised target 132 percent achieved).

Institutional Strengthening

62. **Institutional strengthening was at the core of the IFEM project, and the GoKR is showing growing commitment to strengthening capacities to improve management of forest ecosystem services.** On April 29, 2022, Resolution No. 233 "On other funds accumulated on special accounts" was passed by the Cabinet of Ministers. This measure permits 100 percent of revenue generated by commercial services to stay within leskhoz for reinvestment in the pursuit of FS objectives. In addition, up to 30 percent of the total budget can be spent on additional staff costs, including bonus payments. On August 1, 2022, Resolution No. 434 "On the conditions of remuneration of workers who are not classified as civil servants and employed in public institutions, including institutions subordinate to state executive bodies of the Kyrgyz Republic" was passed by the Cabinet of Ministers, resulting in an increase in salaries for the FS staff amongst others. Collectively, these measures offer better support for leskhoz operations, which in turn are affected by high staff turnover.

> *"The IFEMP has become one of the largest and most multi-vector projects in the forest industry over the past 30 years, which has made a significant contribution to institutional reforms, strengthening the material and technical base, creating infrastructure facilities, introducing digital technologies, and integrating new areas of the economy into the forest industry."*
>
> Quote from the Borrower Project Completion Report

Poverty Reduction and Shared Prosperity

63. **The project provided support to the Government's ambitious social priority for the forest sector** to reduce poverty levels among the rural poor living near forests or on the territory of the State Forest Fund by 10 percent by 2040. It has done so by underpinning the objectives to achieve this goal, including: (i) promoting joint forest management; (ii) diversifying incomes; and (iii) introducing integrated management of natural resources.

64. **During implementation, pilot municipalities - in particular - developed an inclusive forest management model targeted to address socio-economically disadvantaged households.** According to the LSGs, the targeting of benefits to specifically include poor households without productive assets likely had a positive effect by directly lifting the income level for the poorest segment of society. However, a socio-economic impact assessment was not prepared at closing to assess this observation.

65. **New evidence from the project-financed study on Natural Capital Accounting** illustrate the important role forests play in supporting local and poor livelihoods**.** The study finds that 95 percent (or US$148.9 million) of revenues generated from the forests stay within the communities that live nearby. Considering that 10,285 persons have been provided with access to assets, services, and jobs because of project interventions (see **Table 7** below for an overview of beneficiaries), this implies that the project is likely to positively contribute to reducing poverty in pilot leskhozes and municipalities.

66. **Finally, the project has helped alleviate the additional pressure on forest resources induced by the global pandemic.** The project responded proactively to the findings in the Forest Accounts, which predicted that the income-generating potential of forests will become even more crucial in the aftermath of the COVID-19 crisis. As many seasonal workers were forced to return to their remote home communities, pressure on forest resources increased in tandem with the need for income and survival. Pandemic support in pilot communities specifically addressed this concern by distributing seedlings to the poorest households most likely to engage in unsustainable practices with a negative impact on forest resources.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

67. **Project development objectives were ambitious at the right level**, and the design oriented towards diverse areas of forest management in a holistic and integrated manner at the national level and in pilot areas. The components were clearly structured with a high degree of internal logic.

68. **The project took care to define the change in institutional performance expected at the Forest Service and its subdivisions, but PDO indicators were not well aligned to capture this outcome.** Central to the project logic was the

increased devolution of management authority to and financial stability of the leskhoz. Apart from a single intermediate indicator, which was revised given constraints in the Budget Code that did not allow for its assessment, no other indicators were aimed at capturing changes in institutional performance. Rather, the PDO indicator was output-based and lacked appropriate targets (see Section IV.A. for further discussion of M&E shortcomings).

69. **The design was based on a solid analysis of development priorities and preliminary pilot phase and reflected important lessons learned.** The technical basis for the design of the project was a World Bank Program on Forests (PROFOR) study "Forest development potential in Kyrgyzstan (2012)" and a preliminary study of pilot leskhozes testing new management models with support from German Agency for International Cooperation (GIZ). Among the key lessons incorporated were: (i) a multi-stakeholder and multi-sectoral approach improves transparency and accountability; (ii) support for integrated natural resource management and planning recognizes trade-offs in land-use management decisions; and (iii) outsourcing resource management functions to the community and private sector (such as seedling production) supports the development of public private partnerships. Seeking to scale ongoing reforms, the project engaged a wide, but appropriate, selection of stakeholders. At the same time, given the large state apparatus with multiple layers of administrative units, implementation arrangements became simultaneously inclusive and complex with a high risk for decisions to be caught in bureaucratic bottlenecks.

70. **The project embraced a framework approach to provide flexibility in defining reform measures, capacity building, investments and technical assistance needs.** As the project provided support to the already ongoing reform process implemented by the Government with support from several donors, using a framework approach allowed for on-going diagnostic of needs and gaps to optimize the impact of the project. Similarly, field-level investments would be identified based on priority measures in the INRMPs, funding envelope, and the project time frame. In hindsight, this adaptive management approach served the project well, especially given the uncertain political and operating environment that came to define the second half of the implementation period but also caused fragmentation of activities and burdened the procurement process (see Section III.B below).

71. **The overall risk rating was Substantial.** Key risks included: (i) political instability; (ii) resistance to reform in the forestry sector, which the project was designed to address by example; and (iii) the limited experience and capacity of the Implementing Agency (SAEPF, later FS) and at the leskhoz level. The latter was addressed through a Financial Management and Procurement Assessment to identify training and capacity building needs.

72. **Overall, project readiness was adequate**, though more attention should have been given to the RF and M&E implementation arrangements. In addition, the investment selection process could have been more streamlined at the early stages of the project implementation to avoid delays in procurement in the first few years of the project.

B. KEY FACTORS DURING IMPLEMENTATION

73. **In reflecting on the factors that affected implementation, it is helpful to keep in mind the overall prevailing country context during the same period.** In the Kyrgyz Republic, the IFEMP project was the first-ever donor-funded project implemented by a *state agency,* which lacked prior experience in handling the Bank's administrative, fiduciary, and technical requirements. Political upheaval and reorganization of the government with a new constitution, as well as frequent changes of ministerial staff and absence of officials for prolonged periods came to define day-to-day operations for the PIU. Even the PIU itself underwent transformation and folded-in under a ministry, thereby reducing the PIU's authority and agency. Finally, the global pandemic presented its own challenges.

(a) Factors subject to the control of the government and/or implementing entities control

74. **Project effectiveness was delayed by 11 months.** During negotiations an extension of the effectiveness deadline from 120 days to 180 days was agreed, with effectiveness expected by May 24, 2016. However, with delays in recruiting PIU staff and preparing the operational manual, the project became effective on April 28, 2017.

75. **Considerable implementation delays set in from the beginning affecting the first procurement packages.** Advancement of several activities was constrained by delayed institutional support critical for the preparation and finalization of TORs and technical specifications and participation in procurement evaluation committees. Consequently, just six months into project implementation, the possibility of suspending the project was invoked.

76. **While the government showed commitment to reform of the forest sector, there was a lack of empowered leadership at different levels of government and administration.** A general culture for upward delegation of decision-making at times caused a sense of paralysis as implementation came to a standstill while waiting for approval, e.g., using the Consultative and Coordination Committee as an approval mechanism for project investments, rather than just as a steering function as planned. This was further pronounced during periods of reorganization when leadership and staff would change, and the PIU needed to re-establish working relations.

77. **Weak capacity for effective procurement and contract management further slowed implementation progress.** First, the PIU lacked technical capacity and oversight due to difficulties attracting and retaining skilled specialists and engineers. This meant that the poor quality of detailed technical designs was not addressed in time, leading to delays in tendering procurement packages and addressing on-the-ground issues. Second, deficiencies in contract management prevented proactive measures being taken. For contracts issued in KGS, the spiraling cost of material, especially if imported, in the wake of the pandemic was difficult for local companies to absorb, as those contracts did not include a provision for price increases due to inflation. In addition, time-based contracts for field-related work created unnecessary complications that would have been prevented if using a lump-sum contract (see Section IV.B).

78. **A new Budget Code complicated the implementation of field-level investments.** Introduced in 2017, just as the project became effective, the new Budget Code limited the ability of pilot leskhozes to manage their own financial resources, which was contrary to the objectives of the project. Leskhozes had to request money directly from the MoF six months in advance, which meant that some leskhozes did not receive the funds in time for newly planned field activities, i.e., spring planting season. This also gave rise to revision of one indicator, as reinvestment of funds in pilot leskhozes was not feasible in that context. To address this, the project supported new regulations passed in 2022 to allow all revenue generated from commercial services to stay within the leskhozes for reinvestment.

79. **On-going collaboration with developments partners improved project outcomes.** Four partners were particularly active: Food and Agriculture Organization (FAO) with a project on “Sustainable Management of Mountain Forest and Land Resources in the Conditions of Climate Change”; GIZ with a Regional Program and project on "Biodiversity conservation and poverty reduction through the management of walnut forests and pastures with the involvement of the local community", and Japanese International Cooperation Agency with a project on "Development of rural business based on forest products in the Kyrgyz Republic"; and the World Food Programme (WFP) with “Food for work and training” and “Cash-based transfers” programs. Together with the above projects, work was organized to coordinate some project activities relating to the development of legal documents, improvement, and approval of INRMP guidelines, afforestation and food security.

80. **Community involvement in the start-up phase built a strong foundation for project investments.** The INRMPs were developed thorough a community engagement process. As the process was entirely new to both leskhozes and communities, it was a steep learning curve for everyone involved. Two local NGOs facilitated community mobilization and engagement leading to the participation of nearly 1,000 community members, of which 25 percent were women, in the preparation of integrated management plans and proposals for investments.

81. **During implementation, however, engagement waned likely due to the reduced scope of investments in micro-projects.** Micro-projects presented potentially larger benefits for individual community members. Yet, from an original portfolio of 83 micro-project proposals submitted by local communities, 20 were submitted for review and approval by the Consultative Coordinating Council, while 10 were financed (see **Annex 9** for details on the process). During implementation, the financial arrangements for micro-projects created obstacles to their smooth operation as the Ministry of Finance would not permit leskhozes to open current accounts needed to make purchases. Additionally, rising costs in the wake of the COVID-19 pandemic caused financial difficulties for initiators of micro-projects to make their 20 percent contribution.

(b) Factors subject to World Bank

82. **Prior to effectiveness, the World Bank team did not utilize the time from approval to effectiveness to prepare for upcoming important tasks that could have benefited from early preparation,** such as outlining the criteria for screening leskhozes, or defining the rules of sub- and microproject investments, etc. Instead, these issues were left for discussion later, which added to the implementation delay.

83. **Following effectiveness, the Bank team undertook adequate supervision, but could have provided more timely and candid reporting on implementation issues to Bank management.** The World Bank conducted 15 implementation support missions, equal to 2.7 missions per year over a five-and-a-half-year implementation period. However, at the time of the MTR in June 2019, with disbursement less than 10 percent, the project was still rated Moderately Satisfactory despite considerable implementation delays and the disbursement lag. To advance implementation progress, at MTR the Bank team engaged in restructuring the project and, shortly after, developed a detailed action plan in collaboration with the PIU.

84. **Close supervision of the PIU and technical support for detailed engineering designs by the Bank team was instrumental to advance implementation and achieve intended outcomes.** Following the MTR, the Bank assigned a locally based co-Task Team Leader and mobilized local technical consultants to support supervision. Through regular - sometimes daily - contact with the PIU and close follow-up on work schedules and contract management, the Bank team advanced implementation and addressed the disbursement gap. Unable to attract and retain qualified staff to prepare and review technical specifications of proposed investments, the PIU lacked the capacity to effectively manage the procurement process. The Bank was in regular discussion with the PIU to re-organize to strengthen capacity. Additional staff was hired in the final two years to support component management, procurement and FM. Nonetheless, the Bank team still needed to fill gaps and provided essential support and advice to the PIU, which enabled the project to complete all but one of 149 contracts signed.

85. **The decision to extend the project closing date 12 months compensated for time lost before effectiveness.** By extending the closing date, the original implementation period planned for 5.5 years was maintained. Time lost to political instability and the global pandemic (see below) was absorbed by the project. It is commendable that the project achieved intended development outcomes under these circumstances.

86. **The Bank responded proactively to the challenges induced by the pandemic (see below).** Pandemic-related restrictions delayed implementation just as sub- and micro-projects were gaining momentum and the need for field-level training and monitoring became increasingly important. The Bank responded by carrying out a Technical Mission in October 2020, and proactively moved to online capacity building modules and introduced the KoboToolbox. The latter, which is a geo-enabled initiative for monitoring and supervision (GEMS), is especially designed for application in challenging environments and enabled project-level M&E despite restrictions.

(c) Factors outside the control of government and or implementing entities

87. **Public protests in October 2020 ushered in a political transformation, a new constitution, and an extensive reorganization of the government and ministries.** In October 2020, protests over the results of parliamentary elections, led to the resignation of President. A new constitution in April 2021 transitioned the country to a presidential system, consolidated power in the executive branch, and weakened checks and balances. Also in 2021, there was an extensive government reorganization, and several ministries, departments and agencies were reorganized and relocated. This affected the project's institutional implementation arrangements (see para. 21), resulted in high turnover of staff in key ministries and the erosion of institutional knowledge and leadership. As a result, decision-making on important implementation issues was delayed at a critical moment when field-level implementation was accelerating.

88. **The global pandemic caused considerable delays in the mobilization of consultants, contractors and commencement of field works.** Transportation restrictions obstructed the import and delivery of supplies to project sites, prevented international consultants from travelling (for NFI, FMIS), and postponed face-to-face training and capacity building. This in turn affected the quality of designs, and on-site supervision by PIU and supervision companies. However, the Bank acted proactively to address these shortcomings in supervision (see III.B.(b) above).

89. **Notably, the PIU was proactive in redirecting project savings for Covid-related support**. This allowed for additional support for the most vulnerable households and for acquiring special equipment and Personal protective equipment (PPE) for leskhoz and municipal staff in the fight against the pandemic in the most remote areas of the country. A partnership with WFP also assisted vulnerable households by providing food packages in return for planting saplings in five districts.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

M&E Design

90. **The project's theory of change was coherent** with clear links between planned short-term outputs, intermediate and project development outcomes, and expected long-term transformational impacts. The original PDO remained relevant over time.

91. **The design of the Results Framework, however, was not adequately specific, measurable, achievable, relevant, and timebound (SMART).** At the PDO level, it may be noted that indicator 1 was output-based, that indicators 2 and 3 lacked yearly targets, and that PDO indicator 3 was defined as a sub-indicator of PDO indicator 2.

Similarly for intermediate indicators, 8 out of 13 lacked yearly targets, while several targets were confusing, particularly related to areas restored or re/afforested and beneficiaries (see Annex 7 for changes to the RF).

92. **Designed as a framework project, it was anticipated that that the RF would need further specification.** Many of the specific activities and investments (subprojects) to be carried out under Component 2 were not known at the time of appraisal, and it was therefore expected that the RF would be finetuned during the first year of implementation. However, due to delays this did not happen, and going into the MTR the RF received a major overhaul with new targets at the PDO level and a revision of almost all intermediate indicators. Changes to the RF were finalized in April 2020 and co-signed in an Amendment of the Financing and Grant agreements in May 2020.

93. **Revisions to the RF did not fully address its shortcomings.** Revisions to the PDO indicators made them more specific, measurable, and relevant. Changes to intermediate indicators captured more specific details about types of interventions, made some indicators clearer and more measurable, and combined other indicators where it made sense to do so. However, four of the now ten intermediate indicators relied exclusively on the end-of-project beneficiary survey as the data source, thereby reducing their potential to inform project management. At the MTR in June 2019, the Bank team considered restructuring the PDO and outcome indicators but was dissuaded by the long ratification process of up to one year in a project already facing considerable delays in implementation.

94. **M&E activities were institutionally embedded in the PIU with support from relevant FS departments and leshkoz staff.** The main data sources relied on FS and its departments, leshkoz reports, and minutes of meetings. Supervisory functions in the field to monitor and evaluate implementation of project activities would be jointly arranged with communities. The PIU was responsible for presenting progress in semi-annual and annual progress reports. Special requirements were made to include data disaggregated by gender.

M&E Implementation

95. **Inherent design weaknesses in the RF did not allow for proper tracking of intermediate indicators.** In the early implementation phase, many of the intermediate indicators were dependent on the finalization and approval of INRMPs to begin tracking progress. Later, following the revision of indicators, parts of the RF were dependent on the final beneficiary survey to assess progress towards intermediate targets.

96. **Project-level M&E in the PIU was satisfactory.** The project benefited from a single M&E unit without staff turnover from project start to closing, who carried out regular and detailed M&E activities. The PIU maintained a comprehensive M&E system, where data on indicators, pilot leskhozes, beneficiaries, planted areas, crop survival rates, registration of purchased goods, construction items, etc. were regularly recorded. M&E capacity and arrangements were reviewed at MTR, especially for results under Component 2. A database based on 1C software was used by project leskhozes to help monitor INRMP implementation with investment locations captured on a digital map linked to the database.

97. **Field-level supervision and monitoring of project activities lacked adequate technical oversight.** Frequent turnover of engineering specialists hired by the PIU to monitor and supervise construction works and implementation of subprojects lowered the consistency and quality of technical oversight.

98. **A final evaluation of project outcomes and beneficiaries' satisfaction was completed** and included field work to verify results and interviews with key project stakeholder groups.

M&E Utilization

99. **M&E was underutilized as a project management tool but was adequate for assessing project achievements.** The RF did not illuminate the roadblocks affecting the project, however, the PIU used M&E data to track implementation and define more realistic outcome targets at MTR. The detailed record keeping in the PIU allowed for satisfactory assessment of realized outputs, which in combination with the final evaluation are sufficient for verifying results and their attribution to project outcomes.

100. **The project itself sought to anchor M&E institutionally in government institutions.** The FMIS and NFI are important building blocks to inform decisions on forest management, but unfortunately, they were finalized too late to inform the project, i.e. through an accounting of the carbon emissions reductions from project interventions. Going forward, FMIS use and maintenance will be critical for the long-term sustainability of M&E of Kyrgyz forest systems.

Justification of Overall Rating of Quality of M&E

101. **The overall quality of the M&E system is rated Modest.** While the M&E framework was adequate in permitting a proper assessment of the results chain and the attainment of project outcomes, there were significant shortcomings: (i) the design of the RF at appraisal and the less than adequate changes to intermediate indicators at MTR; (ii) the lack of proper technical supervision of field implementation; and (iii) the under-utilization of M&E as a project management tool. The project benefited from a dedicated M&E unit in the PIU, which enabled the project to substantially achieve expected project development objectives.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

102. **The project was rated "Category B" (partial assessment) with expected significant positive environmental and social impacts.** Though it was expected that the project would lead to significant positive impacts through improved forest ecosystem/natural resource management, OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.36 Forests, and OP 4.09 Pest Management were triggered to ensure that no activities would have unintended consequences on the environment. The project triggered OP 4.12 Involuntary Resettlement due to the potential restriction of access rights of communities to certain areas to allow forests to regenerate. The project also triggered OP 7.5 Projects on International Waterways because of the possibility of the project to support small-scale drip irrigation activities for orchard establishment. The applicability of OP7.5 was reviewed and a waiver for an exception on notifying riparian states was approved by ECA Regional Vice-President on June 11, 2015.

103. **The project complied with applicable safeguards policies and completed planned mitigation activities.** An Environmental Management Framework (EMF) was prepared by the recipient, including provisions on mitigation of site-specific environmental impacts for anticipated leshkoz-level activities. Consultations were completed on the EMF, which was released within the country prior to Project appraisal. An Access Restriction Framework (ARF) was prepared at appraisal to mitigate for site-specific impacts related to changes in access to forest, pasture or other lands. At MTR, the environmental issues identified in the EMF remained relevant, and were further fine-tuned during the preparation of Environmental Management Plans for the sub-projects, mainly related to conservation of natural habitats, pest management, and soil conservation. The PIU adopted various methods to avoid land and non-land impacts on beneficiaries as a result of initial screenings of project sites.

104. **Overall procurement risk was rated substantial at project start and assessed as Moderately Satisfactory throughout implementation.** Standard measures were applied to mitigate procurement risks, such as PIU staff

training on procurement functions and World Bank's standard procurement procedures. After effectiveness, delays in preparation of procurement packages, particularly related to Components 2 and 3, caused significant implementation delay, and the procurement rating was downgraded to Moderately Satisfactory early on. Procurement was also affected by leadership and management changes in the SAEPF and resignation of the PIU Director, which delayed authorization of procurement procedures. Due diligence assessments in Procurement Risk Assessment System from 2020 onwards were rated as Moderately Satisfactory, which is also the rating at closing.

105. **Procurement challenges related to capacity constraints to define and review detailed estimation designs and to contract management.** For the latter, the main issues were a reluctance by the PIU to enforce penalties as they applied according to the terms of individual contracts, and the use of time-based contracts with reimbursement of actual expenditures for field-related work, which was highly affected by COVID-19 restrictions. Lump-sum contracts based on agreed deliverables would have prevented complications and motivated faster completion of activities.

106. **Financial management (FM) was assessed as satisfactory throughout project implementation period.** A due diligence FM assessment in Portfolio Risk Management system in 2019 confirmed that FM mechanisms were generally adequate and acceptable to the Bank. The Bank's FM specialist participated in missions and confirmed the satisfactory performance in the PIU. No management issues were raised in the external audits. Nearly 75 percent of project funds were issued in SDRs, which fluctuated against the dollar throughout implementation with a downward trend. At project start, the exchange rate effective on August 31, 2015, was 1.40 USD/SDR, while at closing this was 1.28 USD/SDR effective on September 30, 2022. This helps to explain the final financial figures: from the original amount of US$16.11 million, US$14.68 was disbursed and US$1.36 was cancelled, leaving a balance of app. US$69,000 in exchange rate loss (see **Annex 3** for details).

C. BANK PERFORMANCE

Quality at Entry

107. **The project was based on a solid diagnostic of the Kyrgyz Republic's development challenges and supported the Bank's engagement strategy in the region.** The team drew on the Bank's extensive knowledge to address forest ecosystem management and incorporated key lessons learned from other projects in the region to empower local actors and involve local communities in INRMPs. The team paid attention to poverty and gender issues in the project design. Provisions for safeguards, procurement, and financial management were adequate at entry. High risk ratings were properly mitigated in the operations manual and as conditions for effectiveness. The PAD provided a framework approach to implementing investments on the ground, which served the project well.

108. **The design of the Results Framework, however, could have been more robust at entry.** Prepared without annual targets, there were inherent design weaknesses in the RF. These shortcomings persisted throughout implementation and did not allow for proper tracking of progress towards project outcomes.

Quality of Supervision

109. **The Bank organized bi-annual missions to support project implementation.** With just two changes in task team leadership following effectiveness and at mid-term, the project enjoyed reasonably stable project management and benefitted after the MTR from a locally-based co-TTL and mobilization of local technical consultants to support project supervision. However, more proactivity by the Bank could have helped to accelerate implementation in the

early phase following approval and during the long delay before effectiveness was declared. Leading into the MTR, with less than 10 percent disbursed, three and a half years after approval and over two years following effectiveness, the Bank team did not seize the opportunity to reflect poor progress towards the DO in the project ratings. By not flagging poor performance, the project missed an opportunity to draw attention to the challenges on the ground and to create renewed momentum that could have advanced progress towards the DO. As noted, the Bank team considered restructuring the PDO and outcome indicators but was dissuaded by the long ratification process.

110. **Following the MTR, the Bank's proactive leadership with close supervision and technical oversight was essential to accelerating implementation progress.** Despite political upheavals, government re-organizations and a global pandemic between MTR and closing, Bank support enabled a substantial achievement of project outcomes with only a 12-month extension without cost overruns. The Bank team provided dedicated assistance on component management, safeguards, financial management, and procurement, and maintained candid communication lines with both the PIU and Bank management. Regular, often daily, communication with the PIU ensured close supervision, filled the gaps in specialist knowledge lacking in the PIU, advanced implementation and closed the disbursement gap. The team prepared adequate transition arrangements at project closing by ensuring that the cancelled amount remain in the country portfolio. The Bank remains engaged in the environment sector, with a project under preparation, which includes support for Nature-based Solutions for landscapes restoration and resilience against climate change induced disasters. Collaboration is also continuing with key development partners such as FAO and GIZ.

Justification of Overall Rating of Bank Performance

111. **Overall Bank performance is rated Moderately Satisfactory.** This is justified by the Moderately Satisfactory quality at entry with some shortcomings to the design of the results framework, and to the Moderately Satisfactory quality of supervision with some shortcomings in proactive management in the early phase.

D. RISK TO DEVELOPMENT OUTCOME

112. **Government commitment to institutional reforms in the forest sector can be observed in the engagement, within the FS and more widely, to revise the Forest Code - passage of which is expected in early 2023.** Measures have been approved that are steps towards greater decision-making power by leskhozes in their operation, e.g., in reinvesting revenues. These are important to sustaining the outcomes of the strategic investments financed by the project and to retaining staff and contribute to the confidence of leskhozes in being more self-reliant.

113. **Institutional support is needed for more devolved and sustainable leskhoz management.** Leskhozes are still constrained in their financial operations through existing regulations, e.g., the Budget Code (see para. 78), and the requirement to pay 'taxes' to the central administration. Going forward, further national level reform will be required to prepare a stronger legal foundation for more localized management models to exist. The legal documents informed by the Project along with the outcomes of project investments can serve as the basis for further reforms, which are being supported by other development partners such as FAO and GIZ.

114. **The project supported digital technologies that require sustained capacity to operate.** The operationalization of the FMIS and update of the NFI are critical tools for sustainable forest management. As such, they require sustained technical capacity, human resources, and financing. Going forward, it will be critical that the FMIS is updated with information on all SFF land and kept up to date by the leskhozes. For this to happen, uniform standards remain to be developed so that leskhozes can make regular changes to the database in the course of economic

activity. Regulations are also needed to require regular updates of forest management plans based on the FMIS database. Maintenance of the FMIS requires highly qualified specialists and infrastructure for its reliable and safe functioning. Regular training of FS specialists and improvements to the system will be needed. To mitigate some of these risks, an FMIS User Manual was developed to help train new users. The FS is also actively seeking additional training resources from other donors and is engaging with FAO on a new project which includes the FMIS. An implementation plan for the next update of the NFI (NFI-3) has also been developed. The pipeline Kyrgyz Republic Resilient Landscape Restoration (RESILAND) project will utilize a phased approach used under IFEM Project. The project introduced a Forest Management Information System that was successfully implemented by grouping the activity into three phases: planning and design, programming and installation, and application. The proposed RESILAND Project will similarly phase the development of the integrated mudflow and flashflood monitoring system and the integrated glacier and snow cover monitoring system and the relevant ICT tool, using lesson learnt from IFEM Project.

V. LESSONS AND RECOMMENDATIONS

115. **Adopting a framework approach allows for flexibility in planning and implementation of INRM investments but needs a strategic angle to ensure efficiency between investments and streamlined procurement**. The project adopted a framework approach to target field-level investments under Component 2 through a participatory process of planning and decision-making. While this allowed for timely identification of the needs and gaps at the local level and was responsive to investment proposals generated by communities, there were disadvantages. Managing community and leskhoz expectations during the of prioritization and selection of investments was challenging. In the absence of a predefined process to streamline selection among a range of investments, procurement management became that much more challenging as contracts differed in their technical specifications, and the possibility to batch some contracts was lost. In similar contexts, future projects would benefit from setting out guidelines on investment selection, which can then be used to streamline the process for both stakeholders and project implementation units.

116. **Introduction of an alternative forest management model based on community engagement works well, especially in pilot municipalities.** Unlike leskhozes, which operate as forest enterprises, pilot municipalities did not have an institutional profit motive in developing economic opportunities for local communities on non-SFF land. This allowed for better collaboration between the municipalities and communities with higher levels of engagement than between leskhozes and communities on SFF-land. Municipalities, which more carefully balanced economic opportunities with social needs, reported a reduction in poverty from bringing about improvements in local livelihoods through development of forest and fruit orchards on degraded land. With 270,000 hectares outside the SFF, the potential for future scale-up of community-based forest management and restoration is high and should be actively explored.

117. **A forest management information system generates important benefits for forestry operations and policy.** In a context of limited capacity and experience, the phased roll-out of the FMIS allowed for a gradual introduction to new software that was ultimately adopted by all 41 leskhozes, and not just the pilots. With the measures taken by the FS, the FMIS is already contributing to increased operational efficiency, and the supply of better information, thereby helping to improve forest ecosystem management and governance. In the Kyrgyz Republic for the FMIS to

be effective and serve as a strategic tool for economic growth with wider benefits in terms of transparency and participation, it is important that it is adequately resourced and receives on-going institutional support. Future operations can take note of the value of a phased approach to information systems, and the need to provide enabling institutional and financial frameworks to ensure wider benefits.

118. **Targeted institutional reforms can be effective and an efficient use of resources.** The project used a flexible, non-prescriptive approach to identifying strategic directions and interventions, e.g., a sector functional analysis, a consultative Forest Code revision. These activities were carried out with relatively small levels of financing, but, nonetheless, are playing a critical role in steering important, yet complex policy and institutional reforms in the forest sector. Projects would benefit from taking similar flexible approaches to identifying interventions that can have far reaching impacts.

119. **More candid ratings could have allowed for better proactivity in addressing key implementation issues earlier.** The project faced considerable delays and challenges, e.g., in procurement, which were affecting implementation progress in its first few years. However, ratings remained Moderately Satisfactory. Downgrading is a significant decision with implications for both the project and the broader message from the Bank in the country and region. However, an earlier downgrade could have initiated more timely actions to be put in place. Noting that downgrading is not always an easy decision, project management should be prepared to take a calculated risk to downgrade project progress in similar circumstances.

ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: To strengthen the capacity of government institutions to improve sustainable forest ecosystem mgmt.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Govt institutions provided w/ capacity buildg to improve mgt of forest resources	Number	0.00 29-Oct-2015	52.00 30-Sep-2021	46.00 30-Sep-2022	48.00 30-Sep-2022

Comments (achievements against targets):
Target achieved. This indicator was defined as the number of government institutions provided with managerial and technical capacity building to improve integrated forest ecosystem management. The target was set at 52 and included 51 leskhozes (all leskhoz in the country) and SAEPF. The target was revised in the May 2020 restructuring to reflect the re-organization and merger of some leskhozes. The new target was set at 46 and included all 39 leskhozes in the country, the reorganized Forest Service, and six pilot LSGs in participating municipalities. By 2021, the number of leskhozes had increased to 41, and thus the actual number of government institutions provided with capacity building at project closing is 48. Key achievements to build managerial capacity include (i) preparatory activities for the development of proposed amendments to the Forest Code (submitted to the Council of Ministers for approval), (ii) regulation of standardized costs for forestry works approved and under implementation, (iii) analysis and clarification of boundaries between leskhozes and a roadmap for resolving boundary conflicts, (iv) development and installation of FMIS in all Leshkozes and FS to monitor and evaluate forest conditions through a digital platform, (v) completion of the second NFI with maps prepared for 6 types of forests and submitted to the FS, and (vi) a study on natural capital accounting and the impact of climate change on forest ecosystems. To build the technical capacity in government institutions, the project provided

120 days of capacity building and training activities for staff of FS, leskhozes, LSGs, and other government and community institutions to the benefit of 19,807 participants of which 5,908 were women (see **Table 8**).

Objective/Outcome: To strengthen the capacity of communities to improve sustainable forest ecosystem mgmt.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Land area where sustainable land mgt. practices were adopted as a result of proj	Hectare(Ha)	0.00 29-Oct-2015	616,000.00 30-Sep-2021	160,000.00 30-Sep-2022	174,849.00 30-Sep-2022

Comments (achievements against targets):

Original target 28% achieved and revised target 109% percent achieved. The indicator was defined as the area where sustainable land management practices have been adopted as a result of the project investments. The original target of 616,000 hectares included the entire pilot area calculated as the average size of 51 leskhozes x 12 (the number of pilot leskhozes at appraisal). The area included both forested areas, grassland, and other types of land, not all which are suitable for investment activities. The revised target of 160,000 hectares was based on the areas within Leshkozes and municipal forests that would benefit from the specific SLM practices outlined in Integrated Natural Resources Management Plans (INRMP) and realized through sub-project and micro-project investments. At project closing, a total of 174,849 hectares are benefitting from investments in plantation, forest nurseries, green houses, irrigation, apiculture, bore holes, pits, cordons, fencing, bridges, power lines, firefighting equipment, etc. This is equal to 18 percent of the area brough under integrated management (PDO indicator 3).

Objective/Outcome: To improve sustainable forest ecosystem management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion

Forest area brought under management plans	Hectare(Ha)	0.00 29-Oct-2015	161,000.00 30-Sep-2021	864,700.00 30-Sep-2022	970,338.00 30-Sep-2022

Comments (achievements against targets):

Original target 603% achieved and revised target 112% achieved. The indicator was defined as the forest area brought under integrated management and covered in the 5-year INRMPs. The original target of 161,000 hectares was calculated as a quarter fraction of PDO indicator 2 in proportion to a 26 percent forest cover of the SFF. When the indicators were revised, essentially the target for PDO indicator 2 was shifted to PDO indicator 3. The target was increased to 864,700 hectares in May 2020 to reflect the actual area of pilot leskhozes and municipalities brough under integrated forest management, based on data from the Department of Forest and Hunting Management. At project end, at total of 970,338 hectares within the SFF are covered in INRMPs for 13 pilot leskhozes (some leskhozes were combined, which enlarged the area) and an additional 619 hectares covered in MFMPs for six pilot LSGs (see **Table 5)**.

A.2 Intermediate Results Indicators

Component: Forest Sector Institutional Reform

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of Leskhozes and SAEPF that have operationalized three project supported instruments/interventions	Number	0.00 29-Oct-2015	12.00 30-Sep-2021	13.00 30-Sep-2022	13.00 30-Sep-2022

Comments (achievements against targets):

Target achieved. The indicator was revised in May 2020 (below) to better assess the operationalization of three key project-supported interventions for forest sector reform, namely: update of the Forest Code (SAEPF), adoption of standardized costs (LH), and guidelines for clarifying boundaries between leskhozes (LH). At project closing, key achievements include: First, a draft law "On amendments and additions to the Forest Code of the KR" was developed and submitted for consideration with the Cabinet of Ministers three times, but was repeatedly returned back due to reorganization of ministries, departments, and the GoKR itself (new constitution). The documents passed the approval procedure with ministries and departments again on September 28, 2022 and is awaiting consideration by the Cabinet of Ministers. Second, a standardized methodology for calculating labor cost in forestry work was approved on March 19, 2019 by SAEPF Order No. 01-9/02. Third, a Roadmap for resolving disputed borders based on a review and analysis of title documents of 10 pilot leskhozes has been endorsed by the Forest Service and recommended to all LH. The Roadmap has already been applied and helped clarify the borders between At-Bashi and Talas leskhozes. According to 72.2 percent of all interviewed employees in 13 pilot leskhozes, boundaries of the leskhozes were fully clarified.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of Leskhozes reporting confidence in ability to generate income for re-investing into sustainable ecosystem management	Number	0.00 29-Oct-2015	12.00 30-Sep-2021	13.00 30-Sep-2022	13.00 30-Sep-2022

Comments (achievements against targets):

Target achieved. The indicator was revised in May 2020 (see Annex 7) to assess the confidence levels of Leshkozes to generate and reinvest income into future operation for sustainable forest ecosystem management. Findings from the independent project evaluation report show that 42 percent of investments made in the implementation of INRMPs were used for income-generating activities, i.e. greenhouses, nurseries, orchards, and beekeeping, and that the forecasted increase in net income from the launch of new income-generating subprojects is 140 percent in the first year (from 2022 to 2023). Another 44 percent of investments were used for infrastructure sub-projects, which will directly benefit the core activities fulfilled by the leskhoz, and thus is likely to have a positive effect on the efficiency of leskhoz operations. In the Beneficiary Survey, Directors of the 13 pilot leskhoz were asked “To what extent can your leskhoz switch to self-financing without budget support after the implementation of project measures?“. Compared to the definition of the indicator, the question of confidence in self-financing is more ambitious than that of confidence in ability to generate income. The result of the survey

showed that 55 percent of those interviewed confirmed that they are either fully confident or mostly confident that they can switch to self-financing without further budget support, with another 12 percent being moderately sure. Only 25 percent are sure or mostly sure that they cannot switch to self-financing after project closing. Confidence levels varied between leskhoz, with Uch-Korgon, Toktogul, Kochkor-Ata, Kara-Kulja, Aksy and Balakchi being the most confident, and At-Bashy, Batken, and Naryn leskhozes being the least confident in their future self-financing.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Proportion of Leskhoze staff in pilot Leskhozes reporting increased/improved capacities for sustainable forest management	Percentage	0.00 19-May-2020	50.00 30-Sep-2021	50.00 30-Sep-2022	98.50 30-Sep-2022

Comments (achievements against targets):

Target 197% achieved. New indicator added in May 2020 to assess the change in capacities of leshkoz staff with respect to sustainable forest management as a result of the project. Target was set at 50 percent to be determined through a self-assessment survey of staff in the 13 pilot leshkozes and FS. The beneficiary survey showed that of all forestry employees surveyed, 90.8% responded that the project provided capacity building and training events. More than 55 percent of the surveyed forestry specialists noted that they personally received training several times a year during the entire project period, while more than 21 percent responded that they had received training several times a year for the last 2 years (see **Table 8** for an overview of all project capacity building and training events). Of the 65 interviewed employees of the 13 pilot leskhozes, 70.8 percent indicated that their knowledge about sustainable forest management has significantly improved as a result of project training activities, while another 27.7 percent indicated that their knowledge has improved to some extent. Consequently, 98.5% of surveyed leskhozes' employees indicated that their capacity to use forest ecosystems in an environmentally sustainable manner had improved

Component: Strategic Investments and Piloting of Sustainable Management Approaches

Indicator Name	Unit of	Baseline	Original Target	Formally Revised	Actual Achieved at

	Measure			Target	Completion
Number of persons in project sites provided with access to assets and services as a result of participating in project interventions (disaggregated by gender)	Number	0.00 29-Oct-2015	1,700.00 30-Sep-2021	10,500.00 30-Sep-2022	10,285.00 30-Sep-2022
Number of female persons in project sites provided with access to assets and services as a result of participating in project interventions	Percentage	0.00	60.00	25.00	33.00

Comments (achievements against targets):

Original target 110% achieved (direct beneficiaries) and revised target 98% achieved (all beneficiaries). The original indicator, defined as "Direct Beneficiaries", was broadened in the May 2020 restructuring to measure the number of persons in project sites provided with access to assets and services as a result of participating in project interventions. At project closing, 1,863 beneficiaries have benefitted directly from project support while a total of 10,285 persons have been provided with access to assets and services because of project interventions (see **Table 7** for an overview of beneficiaries). This indicator captures persons participating in sub-projects and micro-projects, those who received equipment, planting materials and other assets, and people who are benefiting from irrigation and infrastructure improvements. It also includes people who are employed in project activities through 167 permanent jobs and 1,092 seasonal jobs. Data was collected through the project M&E system and supported through the final project report to validate outcomes and survey beneficiary engagement.

Sub-indicator: Original target 55% achieved and revised target 132% achieved. At project closing, direct female beneficiaries accounted for 33 percent of the 1,863 direct beneficiaries, thereby reaching 55 percent of the original target. When the indicator was revised (see above), the target value was reduced to 25 percent of all persons provided with access to assets and services through project interventions. A gender breakdown by type of benefit is provided in **Table 7.**

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Area of forest planted and under assisted regeneration through project interventions	Hectare(Ha)	0.00 29-Oct-2015	2,000.00 30-Sep-2021	2,400.00 30-Sep-2022	2,527.00 30-Sep-2022

Comments (achievements against targets):

Original target 126% achieved and revised target 105% achieved. In May 2020, three original indicators were restructured into a single indicator measuring the area of forest planted and under assisted regeneration (see **Table 6**). The revised indicator tracks afforestation, reforestation, and restoration on areas with less than 10% canopy cover and assisted regeneration in select areas. The target was achieved and exceeded with plantings and natural reforestation on a total of 2,527 hectares. This includes plantings on 1,838 hectares and facilitation of forest natural reforestation on 26 hectares in 13 pilot LHs, plantings on 655 hectares in six pilot LSGs, and plantings on 8 hectares as part of micro-projects. Project results were confirmed through regular monitoring of the survival rate of crops carried out by leskhoz staff and regional representatives of the PIU. In areas with low normative survival rate, leskhoz carried out “forest planting additions” at their own expense. In addition, fencing of forest crops was completed to protect plantings from damage by livestock on a total area of 1,351 hectares, and the soil was prepared for future plantings on an area of 1,097 hectares

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Proportion of public in project areas satisfied with citizen engagement processes in planning and management of Leskhozes lands	Percentage	0.00 19-May-2020	50.00 30-Sep-2021	50.00 30-Sep-2022	57.00 30-Sep-2022

Comments (achievements against targets):

Target 114% achieved. In the May 2020 restructuring, four original indicators were replaced by a single new indicator to measure the satisfaction of communities in project areas with their engagement in preparation of the INRMPs, prioritization of investments, and their implementation. The result is captured in the final beneficiary survey. Among those interviewed (sample size 208) in the leskhozes and LSGs, 57 percent and 80 percent, respectively, stated that the local population supported project implementation and engaged actively in the process.

Component: Information and Monitoring and Evaluation

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
National forest inventory updated for Kyrgyz Republic	Yes/No	No 29-Oct-2015	Yes 30-Sep-2021	Yes 30-Sep-2022	Yes 30-Sep-2022

Comments (achievements against targets):

Target achieved. The indicator was based on five key deliverables related to the update of the first National Forest Inventory (NFI-1), which was carried out in 2008-2010 with the support of FAO. By the end of the project, all five deliverables were satisfactorily completed and submitted to the FS, including: (i) the NFI-2 database has been submitted and data validation has been completed, (ii) a report has been developed with results of the analysis for NFI-2, (iii) a land cover classification map was prepared for six types of forests with the entire data set, (iv) allometric models of tree species with the application methodology were prepared, and (v) an Implementation Plan for NFI-3 was presented. NFI-2 is currently under a 4 month maintenance warranty during which technical support is provided. Results of the NFI are stored with the FS in the same type of Open-Source Database (Postgres) as the FMIS, which allows for shared IT maintenance. Formal adoption of the NFI report is the responsibility of the GoKR. Available at https://nfi2-kyrgyzstan.info.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Area in hectares updated for	Hectare(Ha)	0.00	150,000.00	150,000.00	882,709.00

forest management planning purposes using FMIS.		29-Oct-2015	30-Sep-2021	30-Sep-2022	30-Sep-2022

Comments (achievements against targets):

Target 588% achieved. The original indicator tracked the "number of participating Leshkozes collecting baseline resource data and making it available for management plans" with a target of 12 pilot leskhozes (with a total area of 150,000 hectares). The revised indicator tracked the entrance of baseline data in hectares into the FMIS with a target value based on pilot leskhozes. However, the project supported the adoption of FMIS in all 41 leskhozes, and at project closing, a total of 882,709 ha have been updated in detail using FMIS and is available for purposes of forest management planning. The FMIS is housed in ULOU. The ICR accessed the platform on December 2, 2022 to verify the results.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of Leskhozes making use of FMIS	Number	0.00 19-May-2020	40.00 30-Sep-2021	40.00 30-Sep-2022	42.00 30-Sep-2022

Comments (achievements against targets):

Target achieved. A new was indicator introduced in the May 2020 to assess the roll-out of both FMIS I and FMIS II to all leskhozes, and access by LH staff to FMIS to support forest operations and decision-making. At project closing, all divisions of the Forest Service, including the central Forest Service, 13 pilot leskhoz and the remaining 28 leskhozes are connected to the FMIS and have received training in how to update the database, which will allow the Forest Service to promptly, timely, transparently, and reliably receive and exchange information with all stakeholders in forest management

Component: Project Management, Monitoring and Evaluation

Indicator Name	Unit of	Baseline	Original Target	Formally Revised	Actual Achieved at

	Measure			Target	Completion
Proportion of issues lodged with the PIU that are satisfactorily resolved as needed in agreed time frames	Percentage	0.00 19-May-2020	100.00 30-Sep-2021	100.00 30-Sep-2022	100.00 30-Sep-2022

Comments (achievements against targets):

Target achieved. A new indicator was introduced in the May 2020 restructuring to assess the effectiveness of the Grievance Redress Mechanism based on the share of issues lodged with the PIU that are satisfactorily resolved and documented by project management in line with agreed procedures. According to the PIU, a total of 49 complaints/appeals had been received and registered, of which 63.3% (31) were related to the activities of the project. As per the PIU, 100 percent of issues lodged with the PIU were satisfactorily resolved. According to the Beneficiary Survey, from among 65 employees of 13 pilot leskhozes, 50 percent confirmed that they had contacted the PIU with various questions. Of those 60 percent indicated that *all* issues were promptly addressed, and 27 percent responded that *most* issues were promptly addressed, while another 12 percent indicated a *50/50* situation.

B. KEY OUTPUTS BY COMPONENT

PDO 1: Strengthen the capacity of government institutions to improve sustainable forest ecosystem management	
Outcome Indicators	PDO indicator 1: Government institutions provided with capacity building to improve management of forest resources.
Intermediate Results Indicators	- Number of leshkozes and SAEPF that have operationalized three project-supported instruments/interventions - Number of leshkozes reporting confidence in ability to generate income for re-investing into sustainable ecosystem management - Proportion of leshkoz staff in pilot Leskhozes reporting increased/improved capacities for sustainable forest management - National forest inventory updated for Kyrgyz Republic - Area in hectares updated for forest management planning purposes using FMIS - Number of leshkozes making use of FMIS
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	**COMPONENT 1** • **Introduction of amendments and additions to the Forest Code**. Harmonizes the Forest Code with other legislative acts of the Kyrgyz Republic and creates the necessary legal and institutional conditions for sustainable forest management. Passed the approval procedure with ministries and is still under consideration by the Cabinet of Ministers of the Kyrgyz Republic at the time of writing this ICR. The delay in approval of changes and additions to the Forest Code by the Cabinet of Ministers of the Kyrgyz Republic is due to the necessary changes and additions to the Land Code. • **Development/adjustment of tariff rates (standardized prices) for forestry activities (methodology for calculating the cost of forestry work).** SAEPF Order No. 01-9/02 dated March 19, 2019 approved the tariff rate in the amount of 786 KGS as a base rate for an 8-hour working day to be applied when paying workers performing forestry work and for testing in production in pilot forestry enterprises.

	• **Development of mechanisms for the transfer of economic functions and models of forest resource management focused on self-financing.** Prepared a Draft Resolution of the Cabinet of Ministers of the Kyrgyz Republic “On approbation of PPP models/projects and a new management structure for forestries, focused on self-financing on the basis of pilot leskhozes as part of the reform of the forestry sector” and a background statement to it. • **Development of the Regulations on the functional zoning of the territory of the State Forest Fund (SFF).** Temporary regulation "On the functional zoning of the state forest fund of the Kyrgyz Republic" and the forest classifier of the Kyrgyz Republic were approved by the order of the State Forest Agency under the Ministry of Agriculture dated December 10, 2021 No. 01-6/69. • **Report on defining the boundaries of the At-Bashi and Talas leskhozes.** A consultant team consisting of a legal adviser and a land management specialist reviewed primary materials, carried out an analysis to clarify and establish boundaries (interdepartmental interaction), and carried out field work to study and verify cartographic, forest management materials of in the two leskhozes. The final report is posted on the website of the Ministry of Agriculture (https://agro.gov.kg/ru/forestry/). • **Determination/regulation of the borders of the pilot leskhozes.** Title documents of the SFF lands of 10 pilot forestry leskhozes were studied and border problems were identified. A Roadmap was prepared based on the materials of 10 pilot leskhozes for resolving disputed borders, taking into account World Bank Operational Policy 4.12 on involuntary resettlement. The Roadmap has been approved by the Forest Service and recommended to all leskhozes in resolving disputed territories and borders. **Study Tour:** • Study tour to Latvia as a country with advanced experience in forest sector optimization (8 people, 2 of them women) from December 3-10, 2017.

COMPONENT 2

As a result of a comprehensive consultation process facilitated by a local NGO, within six months, leskhoz and local communities had developed 119 subproject proposals and 83 microproject proposals aimed at the development and restoration of forest ecosystems and infrastructure. The outcome for Sub-projects is described below, while outcomes for micro-projects are described below under PDO 2, Component 2. The consultation process is further detailed in **Annex 9**.

• **Development and implementation of Integrated Natural Resources Management Plans (INRMPs)** that aims to ensures integrated and sustainable management and use of all natural resources (forests, pastures, water, agricultural land, etc.) within leskhoz boundaries. Key achievements include:

- **Guidelines for the preparation of INRMP.**
- **Training and capacity building in preparation of INRMPs for 13 leskhozes** (originally 14 leskhoz but two were later combined).
- **Prepared strategic investment plans based on the INRMPs and MFMPs**

Table 4: Training and capacity building for INRMPs

	Information	Focus Groups	Capacity building	M&E Training	Total	Total (%)
Men	4 379	1 053	533	652	6 617	71%
Women	1 983	284	187	218	2 672	29%
Total	6 362	1 337	720	870	9 289	100%

• **Sub-projects:** The project financed 89 sub-projects, which were implemented in 13 pilot leskhoz. An independent appraisal of project results confirmed the following achievements:

- **Forest and fruit crops were planted on 2,527 ha with a survival rate of 70-80 percent** (see also intermediate indicator on "Area of forest planted and under assisted regeneration through project interventions" above and **Table 6** below).
- **Construction of 42 cordon-houses for leskhoz employees 100% completed and operational.** Most cordon houses were built in the most remote areas in order to timely carry out fire-fighting and forest protection measures as well as to create favorable working and living conditions for leskhoz and forest industry workers. Out of the total 42 cordon-houses, 23 were constructed with improved conditions (water supply and sanitary facilities, 61 sq.m.) and 13 (61 sq.m.) with simplified conditions, and 6 mini-cordons (31 sq.m.).
- **Construction of 10 greenhouses varying between 200 m2 and 800 m2 in size** in Chui, Karakol, Naryn, At-Bashinsky, Talas, Aksy, Toktogul, Uch-Korgon, Kochkor-Ata leskhozes. The greenhouses are all in operation and allow each leskhoz to grow between 2,000-4,000 seedlings of planting material per year, for a total of 20,000 seedlings of conifers and 5,000 seedlings of hardwoods per year combined.
- **Construction of cold storage completed and equipped with refrigeration units** in three leskhozes with a capacity to store 230 tons of fruit per season and a drying capacity of 160 tons. The total volume of agricultural products that can be stored will be 400 tons per facility.
- **Construction of 10,500 meters of irrigation canals in Balykchi and Chuy leskhozes.** Construction of a chute reinforced concrete channel with a length of 6,000 meters to develop unproductive lands of about 400 hectares. Construction of a chute reinforced concrete channel with a length of 4,500 meters of the Chui LH develop unproductive lands with an area of about 250 hectares.
- **Construction of 3 irrigation systems**. Irrigation pipelines have been completed and commissioned in Uch-Korgon LH (4,000 meters) and in Kara-Kulja LH (1,000 meters). The irrigation system planned for the Boz-Boltok site in Frunze LH with a pumping station and water storage facilities was 59 percent complete at project closing. The facility is planned to be completed through similar projects of the MoA.
- **Construction/drilling of wells.** One well in Karakol LH and four wells in Balykchi LH. All facilities are in operation.

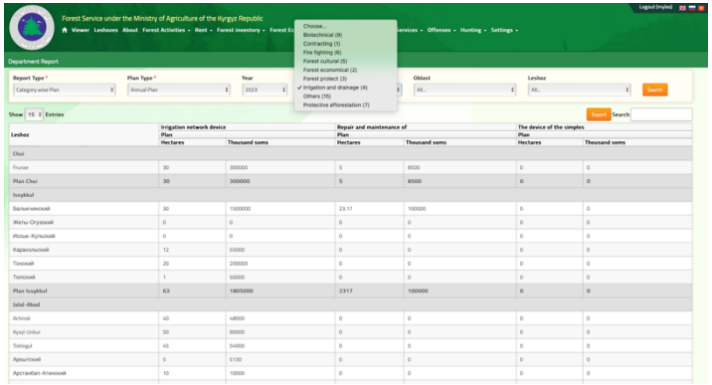
- **Construction of power lines in two pilot leskhoz**: 10 kV power lines for 13.25 km and 0.4 kV power lines for 1.82 km. Works completed at 4 sites and facilities put into operation to improve the working conditions of leskhoz workers by connecting 2 cordon-houses to power supply lines, and the social and living conditions of the local population
- **Construction of 4 bridges:** 2 automobile bridges (in the Toktogul and Batken leskhozes), 2 livestock driving bridges at the "Zhyrgylan Mine" site (Karakol leskhoz), and in Kochkor-Ata leskhoz. All bridges are in operation.
- **Construction of 2 concrete pits for vermicompost (Biohumus) production.** Complete and functioning, making it possible to grow high-quality seedlings and seedlings resistant to diseases pests.
- **Equipment for beekeeping and honey production:** 150 bee colonies and hives for At-Bashy LH and 500 bee colonies and hives for Kara-Kulja LH and equipment for extraction, creaming, and decrystallization of honey were delivered and functioning in 2022 with a production of 1 ton of honey in At-Bashy LH. Work is underway to achieve an increase in the volume of honey production.
- **Renovation and reconstruction of 6 facilities at the mountaineering and tourist base "Dugoba"** in the Uch-Korgon LH are 100% completed and in operation. Better conditions for tourists after the renovation of the camp site will allow for increasing the income of the Uch-Korgon LH.

• **Restoration of municipal degraded forests in six pilot municipalities based on the** approved MFMPs
- Fruit plantations have been planted on 655 hectares, which is 106% of the planned 619 hectares.
- Special machinery and equipment for each of the six pilot LSGs to install drip-irrigation systems, build fencing, and provide seedlings.
- Construction of a pipeline and irrigation tanks (4 tanks). Works were completed on 4 reservoirs (700 cubic meters each) and a pipeline of 4.5 km was laid in Kyzyl-Tuu village in Jalal-Abad oblast. The facilities were put into operation.

COMPONENT 3

• **National Forest Inventory updated (NFI-2).** The updated NFI allows for assessing changes in forests regardless of ownership and provides information for government agencies and society about the current state of forests and the effectiveness of measures taken in the field of environmental protection and forest protection. The NFI-2 fulfills an important reporting requirement under the country's international obligations: the UN Framework Convention on Climate Change (UNFCCC), the UN Convention on Biological Diversity and the FAO Forest Resources Assessment. Available: https://nfi2-kyrgyzstan.info.

• **Development of a Forest Management Information System (FMIS).** The FMIS enables the collection and reporting of forest and pasture data through an online database, which will allow for continuous monitoring of activities in the forestry and pastures of the SFF.



• **Key research on natural capital accounting and the impact of climate change on forest ecosystems**. The results of the study were approved by the Academic Council of the National Academy of Sciences of the Kyrgyz Republic and published. Recommendations were provided to the Forest Service and the National Statistical Committee. Results include: (i) methodologies for the economic evaluation of three forest ecosystem services (providing timber, tourism and CO2 absorption), (i) statistical reporting on forest accounts, (iii) an assessment of the current state of forests, (iv) a forecast of changes in forest area under two scenarios SSP1-2.6 and SSP5-8.5, with an increase in temperature from 1.2° to 3.7° from 2021 to 2080, (v) determination of the temperature optimum of Tien Shan spruce and juniper arborescence under the conditions of climate change. The study showed that forest ecosystems are vulnerable to climate change because an increase in temperature affects the shift of the lower limit of growth and the temperature optimum vertically in spruce and juniper forests.

PDO 2: Strengthen the capacity of communities to improve sustainable forest ecosystem management	
Outcome Indicators	PDO indicator 2: Land area where sustainable land management practices were adopted as a result of the project
Intermediate Results Indicators	- Number of persons in project sites provided with access to assets and services as a result of participating in project interventions (disaggregated by gender) - Proportion of public in project areas satisfied with citizen engagement processes in planning and management of Leshkozes lands
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	**COMPONENT 1** • **Communication Strategy.** Awareness raising activities for target groups, responsible institutions, resources, timelines and indicators. The Communication Strategy and Awareness Action Plan was approved by SAEPF Order No. 01-9/223 dated September 4, 2019 and included: - 16 newsletters prepared in Russian and Kyrgyz languages, distributed to beneficiaries and development partners by e-mail - 185 press releases, articles in newspapers, magazines, news agencies (Akipress, 24KG, Evening Bishkek, Kabar, Cactus Media, Azattyk, etc.) prepared and covered - 29 reports and live broadcasts organized on national, regional TV channels and radio - 4 videos (over 10 minutes duration) about the Project activities in Russian and Kyrgyz languages, 4 videos (over 2 minutes duration) in Russian and Kyrgyz languages were prepared. The videos were broadcast on the country's national TV channels; - 4 videos about project activities posted on the project's Facebook page - 1,000 copies of booklets in Russian and Kyrgyz languages about project activities published - 15,000 booklets for socially vulnerable groups on planting fruit trees - 400 barcodes (stickers) for pilot leskhozes prepared and distributed - 70 posters prepared on restoration of degraded municipal forests; - 34 information banners prepared for 13 pilot leskhozes, 13 district state administrations; - 1 information banner, roll-ups of the IFEMP; - 100 Environmental Management Plans edited and posted on the SAEPF website (Project page) and the Ministry of Agriculture of the Kyrgyz Republic;

- 3 information tours held for representatives of the media to the Toktogul and Balykchy leskhozes, the natural park "Ala-Archa" to conduct the second National Forest Inventory of Kyrgyzstan.

• **Public information sharing** was carried out through (i) a facebook page dedicated to the project (https://www.facebook.com/Integrated Forest Ecosystems Management Project). (ii) an official website (www.ecology.gov.kg) to provide reliable and up-to-date information on project activities and partners, and (iii) project reports posted on the website of the Ministry of Agriculture (https://agro.gov.kg/ru/forestry/)

COMPONENT 2

• **Community mobilization in the preparation of Integrated Natural Resources Management Plans (INRMPs).** A “bottom-up” approach was applied to allow beneficiaries to plan their own activities, reflected in the INRMPs. The mobilization campaign reached 6,362 people, of which 1,983 were women (31%), through information seminars, round tables, and focus group discussions and needs assessment.

• **Micro-projects:** The project financed 10 micro-projects identified in the strategic investment plans for 13 leskhozes (see **Annex 9** for further details on the consultation process). The micro-projects were implemented in 7 pilot leskhozes. An independent appraisal of project results confirmed the following achievements:

- Planting of coniferous trees and currants on a 2 ha plot in Konur-Dobo, Chet-Nura village (Naryn LH)
- Creation of an orchard of 10 hectares in Dostuk (Kochkor-Ata LH)
- Restoration of apple orchards on 4 ha of subsidiary farm of the secondary school of Bel-Aldyn (Toktogul LH)
- Fencing of forest plantations on 2 hectares of land (Aksy LH)
- Fencing of forest crops on 2 hectares of land (Aksy LH)
- Fencing of a 20 ha orchard with barbed wire (Balykchy LH)
- Fencing of a 2-hectare site to create a fruit-bearing garden on the territory of the Kur-Sai (Kara-Kuldzha LH)
- Development of beekeeping with 25 bee families in the village of Zhany-Zhol (Aksy LH)
- Development of beekeeping with 20 bee families in the village of Kosh-Dobo (Aksy LH)
- Development of beekeeping in Tunuk-Suu village (Batken LH)

	• **Additional support for the prevention of the COVID-19 pandemic:** 28 sets of multifunctional small forest patrol complexes (MLPC) for organizing the protection and protection of forests, disinfection of cities and villages for 28 non-pilot forestry (already provided to pilot LH), accompanied by 10 tons of calcium hypochlorite and personal protective equipment (PPE). • **Distribution of seedlings for vulnerable households:** delivery of 163,804 seedlings to 7,717 vulnerable households in the pilot zone of 10 leskhoz carried out, including 110,182 apple seedlings, 18,158 apricot, and 35,464 currants. Accompanied by booklets inform households about planting fruit trees.
PDO 3: Improve sustainable forest ecosystem management	
Outcome Indicators	PDO indicator 3: Forest area brought under management plans
Intermediate Results Indicators	- Area of forest planted and under assisted regeneration through project interventions
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	• A total of 970,337 hectares within the SFF are covered in INRMPs for 13 pilot leskhozes and in MFMPs for six pilot LSGs • Forest and fruit crops were planted on 2,5276.7 ha, including 1,864.07 ha leskhozes' lands; 654.5 ha on municipal lands and 8.0 ha under micro-projects. The plantings are mainly in satisfactory condition and have a survival rate of 70-80 percent.

Table 5: Areas covered in INRMPs and areas where SLM practices were adopted through investments

№	LH / LSG	Area covered by INRMPs and MFMPs (ha)	Area covered by sub-projects & micro-projects (ha)
	Leskhoz (LH) - INRMPs		
1	Karakol LH (Issyk-Kul oblast)	83 145	8 619
2	Balykchi LH (Issyk-Kul oblast)	3 972	3 084
3	Frunze LH (Chui oblast)	7 693	2 525
4	Chui LH (Chui oblast)	33 561	17 761
5	Talas LH (Talas oblast)	35 387	2 065
6	At-Bashy LH (Naryn oblast)	89 411	18 504
7	Naryn LH (Naryn oblast)	139 706	31 791
8	Aksy LH (Jalal-Abad oblast)	62 589	14 487
9	Toktogul LH (Jalal-Abad oblast)	105 359	21 621
10	Kochkor-Ata LH (Jalal-Abad oblast)	61 238	8 386
11	Batken LH (Batken oblast)	162 410	16 020
12	Kara-Kuldzha LH (Osh oblast)	74 285	13 311
13	Uch-Korgon LH (Batken oblast)	111 583	16 008
	Sub-Total	***970 339***	***174 182***
	Local self-government (LSG) - MFMPs		
1	Bel-Aldy / Toktogul District	63	78
2	Jany-Jol AA / Toktogul District	71	50
3	Nichke-Sai / Toktogul District	54	77
4	Cholpon-Ata / Toktogul District	90	106
5	Dostuk / Nooken District	300	315
6	Onbir-Zhylga / Chui District	42	42
	Sub-Total	***619****	***668***
	TOTAL (LH+LSG)	***970 958***	***174 849***

* MFMPs only covered planned subprojects. At project end, the implemented area of subprojects exceeded planned areas.

Table 6: Plantings of forest and fruit plantations (ha)

#	LH / LSG	Tree species	Planned (ha)	Actual (ha)	% achieved
I. Planting in 13 pilot LH					
1	Aksy LH	walnuts, fruits	142	176	124%
2	Toktogul LH	walnuts, fruits	142	179	126%
3	Kochkor-Ata LH	almonds, pistachios, walnuts	142	176	124%
4	Batken LH	apricot, almonds, conifer	80	80	100%
5	Kara-Kulzha LH	walnut	142	167	118%
6	Uch-Korgon LH	rose hip, cherry, apple, almonds, conifer	144	154	107%
7	Talas LH	apple	142	162	114%
8	Chui LH	apple, walnut, conifer	300	190	63%
9	Frunze LH	pistachios, almonds	136	138	101%
10	At-Bashy LH	deciduous, coniferous	80	90	113%
11	Naryn LH	Tien Shan Spruce	80	84	105%
12	Karakol LH	apple, Tien Shan spruce	150	151	100%
13	Balykchy LH	apricot, apple, poplar	70	93	133%
	Total for 13 pilot LH		***1 750***	***1 838***	***105%***
II. Facilitation on forest natural reforestation					
1	At-Bashy LH	Tien Shan Spruce	10	10	100%
2	Naryn LH	Tien Shan Spruce	16	16	100%
	Total for natural restoration		***26***	***26***	***100%***
III. Plantings by pilot Municipalities					
1	Dostuk JSC	cherry	300	315	105%
2	Nichke-Sai JSC	cherry, walnut, apricot, pear, plum	54	64	119%
3	Bel-Aldy JSC	apple, walnut, pear, apricot	63	78	124%
4	Zhany-Zhol JSC	apple, apricot	71	50	71%
5	Cholpon-Ata AO	apple, apricot, almond, walnut, elm	90	106	118%
6	Onbir-Zhylga JSC	apple, apricot, elm	42	42	100%
	Total for 6 pilot LSGs		***619***	***655***	***106%***
IV. Micro-projects					
IV	Micro-projects	coniferous trees, currants	40	8	20%
	Total for micro-projects		***40***	***8***	***20%***
	TOTAL Plantings		**2 434**	**2 527**	**104%**

Table 7: Beneficiaries: Number of persons in project sites provided with access to assets and services

Type of benefit	Direct beneficiaries	Women (%)	Indirect beneficiaries	Women (%)
Construction of a cordon house per unit	5	40%	30	33%
Total for 42 cordon houses	210	40%	1260	33%
Construction of greenhouses, 200 sq.m per unit	3	67%	50	36%
Construction of 9 greenhouses of 200 sq.m.	27	19%	450	36%
Greenhouse of 800 sq.m per unit	20	75%	65	46%
Total for all greenhouses	50	44%	565	37%
Concrete pit for production of vermicompost per unit	40	43%	120	46%
Total for two pits	80	43%	240	46%
Construction of bridges per unit	25	60%	250	40%
Total for 4 bridges	100	60%	1000	40%
Construction of irrigation canals per unit	400	28%	650	38%
Total for two channels	800	28%	1300	38%
Construction of irrigation facilities of Uch-Korgon lh	40	45%	300	33%
Construction of irrigation facilities of Kara-Kuldzha lh	50	34%	400	20%
Irrigation facilities of Dostuk, a/a Nooken district	14	36%	610	52%
Total for 2 irrigation facilities	104	38%	1310	38%
Construction of a power line in Karakol lh	100	27%	400	33%
Construction of a power line in Kara-Kuldzha Lh	8	38%	85	39%
Total for power lines in two sections	108	28%	485	34%
Drilling wells per unit	25	28%	45	44%
Total for 5 wells	125	28%	225	44%
Overhaul of administrative building in Toktogul Lh	30	30%	72	28%
Canopy-box for agricultural machinery in Kara-Kuldzha Lh	8	50%	35	29%
Construction of administrative building in Chui Lh	30	30%	60	20%
Overhaul of tourist base Dugoba in Uch-Korgon Lh	35	37%	700	36%
Total for major repairs and construction of buildings	103	34%	867	34%
Construction of cold storage facilities in Talas Lh	15	53%	40	50%
Construction of cold storage facilities in Karakol Lh	25	36%	70	50%
Construction of cold storage facilities in Kochkor-Ata Lh	18	39%	60	48%
Total for 3 cold storage facilities	58	41%	170	49%
Workshop to bottle honey in Toktogul lh	40	13%	150	77%
Drying workshop of Aksy lh	35	29%	350	43%
Drying workshop of Uch-Korgon lh	25	28%	250	48%
Workshop to dry seeds in Karakol lh	25	28%	250	48%
Total for 4 workshops to process forest products	125	23%	1000	51%
Total	**1863**	33%	**8422**	39%

Table 8: Overview of trainings, seminars, and meetings implemented

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
1	Kick-off seminar on the project	2017	1,2,3	1	2	108	20	19%	SAEPF, pilot leshozes, partners, stakeholders, PIU	July 8-9, 2017
2	Study trip to Latvia	2017	1,2,3	1	9	8	2	25%	SAEPF, pilot leshozes and PIU director and PIU Coordinator	Latvia, trip for 8 people from 02 to 10 October, 2017
3	Round table on functional analysis	2018	1	1	1	27	9	33%	SAEPF, stakeholders	Bishkek
4	Round table discussion of the Forest Code	2019	1	2	1	47	10	21%	SAEPF, pilot leshozes, partners, stakeholders, PIU	Bishkek
5	Workshop on identifying gaps and contradictions in existing practices in the forestry sector	2019	1	1	1	25	10	40%	SAEPF, pilot leshozes, partners, stakeholders, PIU	November 29, 2019, in the DDFES building
6	Meetings on the Forest Code	2019	1	2	2	21	5	24%	SAEPF, pilot leshozes, partners, stakeholders, PIU	December 2019 at the SAEPF
7	Final seminar to discuss amendments to the Forest Code	2020	1	1	1	45	11	24%	Forest service, pilot leshozes, partners, stakeholders, PIU	October 20, 2020, Bishkek City Hotel
8	Discussion on the results of the research on RTK (working meetings, technical meetings)	2019	1	2	2	20	5	25%	SAEPF, pilot leshozes, partners, stakeholders, PIU	SAEPF

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
9	Seminars on forest management models, including public-private partnerships	2020-2021	1	3	1	95	4	4%	SAEPF, pilot leshozes, partners, stakeholders, PIU	SAEPF
10	Discussion of issues on the disputed boundaries of the pilot forestry enterprises (interdepartmental meeting, meetings at the level of regions, districts and villages)	2019	1	11	11	135	5	4%	SAEPF, pilot leshozes, partners, stakeholders, PIU	
11	Joint workshop on identifying areas for increasing the capacity of the forest sector and protected areas of the Kyrgyz Republic	2019	1	1		95	23	24%	SAEPF, pilot leshozes, partners, stakeholders, PIU	
12	Fruit orchards	2020	2	5	3	79	16	20%	Leskhoz employees, forest users and members of the SSUL	13.07.2020 - 07.08.2020, online
13	Training on Computer Literacy Fundamentals for pilot LH	2020	2	13	1	156	37	24%	Leskhoz employees,	14.08.2020-22.09.2020, offline, for 13 LHs

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
14	Cultivation of planting material for pilot LHs	2020	2	2	3	42	11	26%	Leskhoz employees, forest users	29.09-01.10.2020 for the southern LHs, 08-10.10.2020 for the nothern LHs in Bishkek & Osh city, 29.09-01.10.2020, 08-10.10.2020
15	Forest production processing for pilot LHs/	2020	2	2	3	31	3	10%	Leskhoz employees, forest users and members of the SSUL	07-09.12.12.2020 (for the southern LHs); 10-по 12.12.2020 (for the northern LHs), offline, Bishkek & Osh city
16	Beekeping for pilot LHs	2020	2	2	3	33	3	9%	Leskhoz employees, forest users	17-19.12.2020, 24-26.12.2020, 21-23.12.2020, offline, Bishkek & Zhalal-Abad
17	Training on Forest nurseries and greenhouses for 6 pilot LHs	2020	2	3	3	49	0	0%	Representatives of pilot LSGs	17-19.12.2020, 24-26.12.2020, 21-23.12.2020, offline, Bishkek & Zhalal-Abad

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
18	Training on Fruit Orchards for 6 LSGB	2020	2	3	3	49	3	6%	Representatives of pilot LSGs	17-19.12.2020, 24-26.12.2020, 21-23.12.2020, offline, Bishkek & Zhalal-Abad
19	Exchange visits on capacity building for leskhoz staff, forest users and members of the JFMC		2	2	3	49	7	14%	Leskhoz employees, forest users	28-30.10.2020 for the southern LHs in the north 11-13.11.2020 (for the northern LHs in the south
20	Trainings on the topics "Integrated pest control", "The concept of forest disease" for employees of pilot leskhozes	2021	2	2	3	40	4	10%	Employees of pilot forestry, forest users, representatives of local self-government	Two 3-day trainings on the topics "Integrated pest control", "The concept of forest disease" in Bishkek and Osh from 07/05/2021 - 07/10/2021
21	Meetings of Consultative Coordinating Council	2017-2022	1,2,3	17	1	550	137	25%	Forest Service, pilot leskhozes, partners, stakeholders, PIU	17 meetings of the CCC were held in Bishkek
22	Trainings on EIA (Environmental Impact Assessment) and drafting	2020	2	13	1	125	18	14%	Leskhoz employees, forest users a	

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
	of Environmental Management Plans (EMPs)									
23	Public hearings on investment projects (on environmental and social protection measures) for northern forestries	2020	2	6	1	116	16	14%	Leskhoz employees, forest users	
24	Public hearings on investment projects (on environmental and social protection measures) for southern forestries	2020	2	19	1	347	31	9%	Leskhoz employees, forest users	
25	Environmental safety training for contractors	2022	2	2	1	20	2	10%	Leskhoz employees, forest users	
26	Information seminars at the oblast level for 13 pilot leshozes	2018-2019	2	7	1	145	23	16%	Leskhoz employees, forest users	
27	Information seminars at the oblast level for 13 pilot leskhozes	2018-2019	2	13	1	358	36	10%	Leskhoz employees, forest users	
28	Information seminars at the village level (awareness)	2018-2019	2	15	1	5859	1924	33%	Leskhoz employees, forest users	

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
29	Focus group discussions in 13 pilot leshozes	2018-2019	2	13	1	1053	284	27%	Leskhoz employees, forest users	
30	Capacity Building Trainings	2018-2019	2	13	1	874	218	25%	Leskhoz employees, forest users	
31	Training on the development of the INRMPs	2018-2019	2	26	6	720	187	26%	Leskhoz employees, forest users	INRMP trainings were held in several rounds
32	Meeting to discuss the INRMP	2018-2019	2	39	2	5747	2126	37%	Leskhoz employees, forest users	
33	Joint monitoring and evaluation training	2018-2019	2	13	1	154	31	20%	Leskhoz employees, forest users	
34	Seminar on improvement of Integrated Natural Resources Management Plans for specialists from 13 pilot leshozes	2022	2	1	2	44	10	23%	Employees of 13 pilot LHs	
35	Meetings of for Joint Forest Management Councils (JFMC) in 13 leshozes	2019	2	13	1	137	20	15%	Leskhoz employees, forest users	
36	Informing and mobilizing communities in 6 pilot LSGs for municipal forests (focus groups, meetings of working groups)	2020	2			537	160	30%	Employees of pilot forestry, forest users, representatives of local self-government	

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
37	Degradation training for pilot LSGs (sub-component 2.3. Restoration of degraded municipal forests)	2019	2	6	3	122	37	30%	Employees of pilot forestry, forest users, representatives of local self-government	
38	Round tables for pilot LSG	2019	2	6		457	166	36%	Employees of pilot forestry, forest users, representatives of local self-government	
39	Meeting with ARIS to exchange experience in the implementation of micro-projects and social mobilization	2018	2	1	1	18	4	22%	PIU staff and SAEPF	March 6, 2018
40	Saveguard trainings (environmental and social)	2019-2020	2	13	1	438	94	21%	Employees of pilot forestry, forest users, representatives of local self-government	
41	Trainings on the National Forest Inventory (NFI)	2019	3	5	1	139	45	32%	Stakeholders, FS, ULOU	5 different trainings
42	NFI data collection training	2020	3	1	2	32	3	9%	NFI Supervision and Control Group	29 - 30.05.2020 - two days,
43	NFI data collection training	2020	3	1	5	30	2	7%	NFI supervision and control group, field teams	09-14.06. 2020 five day training
44	Field training for all teams, supervisory staff and Forest Service personnel	2020	3	1	3	6	1	17%	NFI supervision and control group, field teams	13.08.2020, 14.08.2020, 21.08.2020

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
45	Interpretation Results Verification Training (NFI)	2021	3	2	1	11	8	73%	ULOU and TGIL Database Team	19.01.2021, 28.01.2021
46	Training Course on GIS Tools and Open Source Remote Sensing (NFI)	2022	3	6	1	8	5	63%	FIU and TGIL Database Team, Department of Forest Ecosystems	August-September 2022
47	Training on applicable Classification and Verification Procedures (NFI)	2022	3	5	1	7	5	71%	ULOU and TGIL Database Team	15.08-16.08.2022 29.08-30.08.2022 14.09-15.09.2022
48	Training on Field Data Collection Software (NFI)	2022	3	1	1	6	5	83%	ULOU and TGIL Database Team	12/09/2022
49	Training for FS employees on NFI data analysis	2022	3	10	1	6	5	83%	ULOU and TGIL Database Team	August-September 2022
50	Dashboard Application Training (NFI)	2022	3	1	1	14	5	36%	FIU and TGIL Database Team, Department of Forest Ecosystems	April 13, 2022, Bishkek
51	Round table on FMIS	2017	3	1	0	12	7	58%	CAIAG, Agroid, Mountain Communities Alliance, Unison Group, Business Legal Consulting, Development Policy Institute	29/08/2017
52	Kick-off seminar on FMIS	2017	3	1	1	80		0%	SAEPF, pilot leskhozes, partners, stakeholders, PIU	December 20, 2017, Bishkek

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
53	Second National Seminar on FMIS	2018	3	1	1	45	11	24%	SAEPF, pilot leskhozes, partners, stakeholders, PIU	27 November 2018, Bishkek
54	FMIS workshop	2019	3	1	2	17	7	41%	GUKLOU, URLE and PIU	Bishkek
55	Seminar on FMIS "Spatial Data Viewer"	2019	3	1	1	15	5	33%	Employees of GUKLOU, CAIAG	July 30, 2019, st. Timur Frunze 73/2 in CAIAG
56	FMIS training for GUKLOU and pilot leshozes	2019	3	3	2	35	5	14%	Pilot leskhozes	4-5.11.2019, 11-12.11.2019, 14-15.11.2019
57	Final Seminar on FMIS	2019	3	1	1	68	19	28%	SAEPF, pilot leskhozes, partners, stakeholders, PIU	November 19, 2019, Bishkek, Europe Hotel
58	IT Training on FMIS-2 (RMSI) for Forest Service employees	2022	3	1	1	4	0	0%	FS employees	09/24/2022, Bishkek, Forest Service office
59	Training on FMIS-2 for northern forestries and territorial departments	2022	3	1	2	38	2	5%	Employees of leskhozes and territorial departments	26.09.-27.09.2022, Bishkek
60	FMIS-2 training for southern leshozes and territorial departments	2022	3	1	2	52	3	6%	Employees of leskhozes and territorial departments	28.09.-29.09.2022, Bishkek
61	Meetings on FMIS-2 presentations	2022	3	4	1	15	5	33%	FS employees	September 2022, in Bishkek

№	Name of the event	Year	Component (1, 2, 3 or all)	Number (seminars, trainings, etc.)	Duration (day)	Number of participants	of which women	% women	List of participants	Note
62	Training for pilot leshozes on filling out an updated statistical reporting form No. 1LH, No. 2LH, as well as on the use of the methodology for the economic valuation of ecosystem services	2022	3	1	2	21	4	19%	Employees of pilot leskhozes, National Statistical Committee	04-05. 04.2022, c. Osh
63	Training for pilot leshozes on filling out an updated statistical reporting form No. 1LH, No. 2LH, as well as on the use of the methodology for the economic valuation of ecosystem services	2022	3	1	2	23	5	22%	Employees of pilot leskhozes, National Statistical Committee	11-12. 04.2022, Bishkek, hotel "Alpinist"
64	Final seminar on the results of IFEMP	2022	1,2.3	1	1	130	35	27%		23.09.2022, Bishkek, Hotel "Jannat"
65	Grievance Redress Retreat (GRI)	2020	2		1	18	4	22%		Balykchy
	TOTAL			**348**	**120**	**19,807**	**5,908**	**30%**		

ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Nathalie Weier Johnson	Task Team Leader(s)
Irina Goncharova	Procurement Specialist(s)
Nodar Mosashvili	Financial Management Specialist
Tolkun Jukusheva	Team Member
Gillian Ann Cerbu	Team Member
Alisher Khamidov	Social Specialist
Rustam Arstanov	Social Specialist
Nina Rinnerberger	Team Member
Vivian Campbell	Team Member
Asli Gurkan	Social Specialist
Jasna Mestnik	Team Member
Drite Dade	Team Member
Andrew Michael Mitchell	Team Member
Nightingale Rukuba-Ngaiza	Counsel
Linh Van Nguyen	Team Member
Supervision/ICR	
Nathalie Weier Johnson	Task Team Leader
Phillippe Ambrosi	Task Team Leader
Drite Dade, Aidai Bayalieva	Task Team Leaders
Irina Goncharova	Procurement Specialist

Nazgul Albanova	Financial Management Specialist
Linh Van Nguyen	Team Member
Arcadii Capcelea	Environmental Specialist
German Stanislavovich Kust	Team Member
Ma Dessirie Kalinski	Team Member
Kunduz Ermekbaeva	Procurement Team
Syrga Asanalieva	Social Specialist
Adis Medetov	Procurement Team
Davor Smiciklas	Team Member
Nurlan Orozbaev	Team Member
Kunduz Adylbekova	Team Member
Muhammad Najeeb Khan	ICR Contributing Author
Sanne Agnete Tikjoeb	ICR Main Author

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US$ (including travel and consultant costs)
Preparation		
FY15	48.220	250,919.44
FY16	32.538	125,790.05
FY17	-.800	- 500.16
Total	**79.96**	**376,209.33**
Supervision/ICR		
FY16	.550	508.58
FY17	16.622	48,371.77
FY18	29.688	260,826.34
FY19	20.782	402,015.16

FY20	12.526	236,805.74
FY21	30.445	171,945.94
FY22	18.075	113,970.29
FY23	11.078	144,602.45
Total	**139.77**	**1,379,046.27**

ANNEX 3. PROJECT COST BY COMPONENT

Components	Amount at Approval (US$M)	Actual at Project Closing (US$M)	Percentage of Approval (US$M)
Forest Sector Institutional Reform	0.88	0.46	52
Strategic Investments and Piloting of Sustainable Management Approaches	11.38	10.83	95
Information and Monitoring and Evaluation	2.78	2.34	84
Project Management, Monitoring and Evaluation	1.07	1.06	99
Total	**16.11**	**14.68**	**91**

The project disbursed 91 percent of the amount approved at appraisal. The difference between the amount approved and the actual project expenditures at closing is US$1.43 million, and is explained in part by the cancellation of funds during and after project closing and in part by exchange rate loss.

The total amount cancelled is approximately US$1.36 million. On September 23, 2022, prior to project closing, SDR950,000 - equal to app. US$1.2 million - was cancelled from IDA Credit 5743 and returned to the Country Portfolio. Following January 30, 2023, at the end of the grace period for receiving withdrawal applications, the remaining balance was cancelled and returned to the original funding sources, including: US$109,328 from GEF Grant TF0A0750; SDR19,206 from IDA Credit 5743; and SDR19,583 from IDA Grant D095 – the latter two both equal to app. US$26,000 on January 30, 2023.

Exchange rate losses accounted for approximately US$69,000. Nearly 75 percent of project funds were issued in SDRs, which fluctuated against the dollar throughout implementation with a downward trend. At project start, the exchange rate effective on August 31, 2015, was 1.40 USD/SDR, while at closing this was 1.28 USD/SDR effective on September 30, 2022. From the original amount of US$16.11 million, US$14.68 was disbursed and US$1.36 was cancelled, leaving a balance of US$69,000 in exchange rate loss.

ANNEX 4. EFFICIENCY ANALYSIS

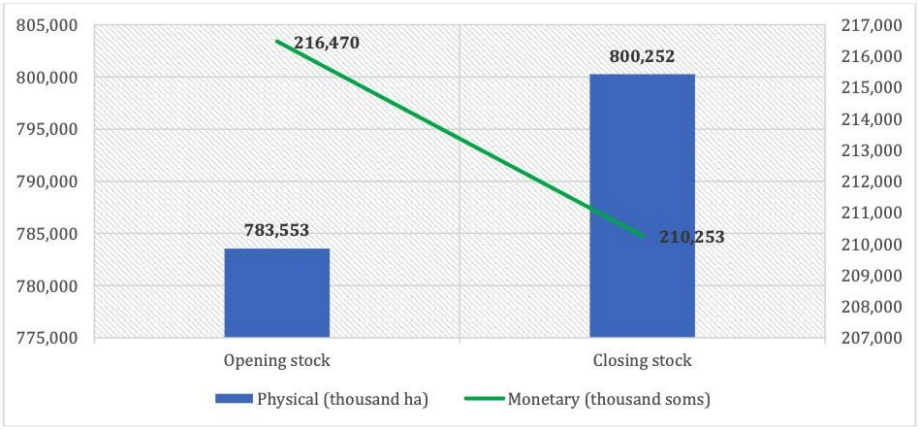
Introduction

The forests of the Kyrgyz Republic have the economic potential to be a driver of growth and poverty alleviation. The GoKR's recognizes this potential in the objectives outlined in the Forest Concept 2040 plan. The goal of the economic priority of forest sector development by 2040 is to increase the contribution of the forest sector to GDP up to 1 percent, to reduce the poverty level of the rural population in forest areas by 10 percent, and conserve and increase forested areas by up to 6.5 percent.

First, the economic contribution of forests tends to be underestimated and a better assessment of the value of forest resources to the economy is needed. Traditional economic measures from the System of National Accounts (SNA) place the contribution of the forest sector at around 0.05 percent of GDP. However, forests of the Kyrgyz Republic are underestimated because ecosystem services of the forest provided to households (such as the use of forest areas for grazing and haying, non-timber forest products, tourism, etc.) remain hidden by traditional National Accounts. Furthermore, the value of the forest as habitat of rare species and provider of other ecosystem services, such as pollination, remains unassessed. According to the project-funded study on Forest Accounts from 2020 forest products in the SFF contributed KGS11.3 billion to the national economy in 2018; about 2 percent of the country's GDP of 570 billion (at current prices).

Second, tapping the potential of forest resources for wider social and economic gains has proved difficult. A technical report on Forest Accounts of the Kyrgyz Republic from August 2020 shows that the physical growth of the forest is not accompanied by a positive monetary valuation. In 2018, the stock of the natural forest land saw an increase of 2.1 percent going from 783,553 to 800,002 hectares, whereas artificial lands (which refers to man- made regeneration of forests) expanded by 3.3 percent with 56,283 hectares at the beginning of the accounting period and 58,147 hectares. These increases were not accompanied by positive valuations in monetary terms.

Figure 2: Contrast between physical (thousand ha) and monetary (thousand KGS) changes in opening and closing stocks of natural forests for the year 2018



Source: Forest Accounts of the Kyrgyz Republic (August 2020).

The IFEM project was designed to tap the economic potential of forest resources in a sustainable manner. At appraisal, an economic analysis of expected cost and benefit streams was carried out over a 40 period. It showed that the base case economic internal rate of return (ERR) was estimated at 19.7 percent with a net present value of the project's net benefit stream, discounted at 10 percent, of US$ 17.3 million in economic terms. In addition, the analysis calculated the economic benefit from reducing GHG emissions by bringing 200,000 ha of SFF under the implementation of INRMPs. It is estimated that an additional 0.1 tCO2-e/ha of GHG would be sequestered annually, amounting to approximately US$ 23.2 million of additional economic benefit over a 40-year period at a price of US$30 per ton of CO2-eq, though the analysis failed to take into account the project-financed inputs and investments that would emit GHG, such as irrigation and construction.

Project benefits

The project generated several types of benefits, some of which can be quantified and others which cannot.

At the local level, benefits include those pertaining to the operation of leskhoz as well as those pertaining to communities with many of the benefits co-shared across forest user groups. Benefits include improved materials, equipment, technology, and infrastructure which will allow for better management of forest resources. Increased production of fruits, nuts, honey, and other investments made in plantations and orchards will support the transition of degraded land into productive land and generate income in the medium and long term. A sustained trend of these benefits is expected to improve food security in the long run – a significant achievement for rural poor household living in mountainous areas and whose livelihoods are dependent on the forest, particularly in the face of increased climate change risks.

At the national level, benefits include improved ecosystem services due to adoption of SLM practices on app. 175,000 hectares. The hidden benefits of project interventions are not easily quantified as the improved forest ecosystem i.e. regulate rivers' water flows, and help prevent mudflows, landslides, and snow avalanches in mountainous terrain. Moreover, the overall project achievements – raising awareness on the role and importance of forests, on future climate risks, and on SLM practices - are expected to contribute to future interest in local self-management in other leskhozes, thus expanding the provision of ecosystem services in the long term.

At the global level, benefits include increased carbon sequestration from afforestation, orchard establishment, and rehabilitation of degraded lands. Through its interventions, the project provided benefits with global significance, such as carbon sequestration through re/afforestation of just over 2,500 ha. Indirect economic gains were realized through reduced erosion, prevention of landslides, and protection of watersheds; however, those benefits in terms of additional ecosystem services delivered have not been quantified.

Project costs

Project costs include:

Table 9: Direct investment costs under Component 2

Assigned purpose of investment projects (KGS)	
Infrastructural	240 517 438
Material and technical base	84 254 950
Income-generating	254 610 963
Total	**579 383 351**

Direct investments, e.g., the costs under component 2 which were directly employed towards investments on the ground (see **Table 9**), as well as costs related to mobilizing communities, preparing INRMPs and investment plans, and project coordination (i.e. all of Component 2).

Annual costs related to the project's SLM investments, which are additional to those that would have been supported in the absence of the project, namely operation and maintenance of leskhozes ongoing activities.

Economic analysis

The final Project Evaluation Report and Borrower ICR includes an analysis of the financial operation of leskhozes in two scenarios; with and without the project. Based on the actual financial operation of each pilot leskhozes over three years from 2019 to 2021, and based on data collection and interviews with pilot leskhoz during the final assessment of project achievements, the analysis projects the future expenses and revenues from both ongoing leskhoz operations and from new project activities.

The basis for the economic analysis starts by using the revenues generated from the new activities, as well as their associated expenses, identified and estimated for the period 2023-2028. The economic analysis does not include the operating activities that were already in place prior to the project although it is conceivable that the project would impact these existing activities. The economic analysis therefore considers only the cash flows that are incremental to the project (the difference between the cash flows that are expected with the project and the counterfactual scenario where the project does not occur).

Direct project investments (KGS580 million) in terms of works contracts were disbursed over a three-year period from 2020, which is the starting period of the analysis (Year 0). The net cash flows from new activities are calculated as revenues minus expenses. From 2029 onwards, the cash flows are estimated to stay constant at their 2023-2028 average.

Project benefits also include the additional carbon sequestration, which is estimated to remain constant from 2023 onwards at US$1.1 million. See further explanation below under "Reduction of GHG emissions".

Overall, the base Cost-Benefit Analysis shows an ENPV of US$1.28 million (equal to KGS185 million on 09/30/2022) and an ERR of 12 percent (Table 10 Error! Reference source not found.**).** The result does not compare favorably with the appraisal estimate, but it should be noted that there are important differences in the analyses and that the result does return a positive ENPV, which makes the project a good investment.

Table 10: Cost-Benefit Analysis (Currency: KGS)

	2020	2021	2022	2023	2024	2025	...	2058	2059	2060
Costs										
Investment (under Component 2)	240 000 000	240 000 000	100 000 000							
Annual costs for new activities			11 816 916	17 655 476	22 201 789	24 224 781	...	25 000 000	25 000 000	25 000 000
Total costs	*240 000 000*	*240 000 000*	*111 816 916*	*17 655 476*	*22 201 789*	*24 224 781*	...	*25 000 000*	*25 000 000*	*25 000 000*
Benefits										
Total revenue from new activities			14 562 786	37 160 927	51 693 381	67 067 671	...	60 000 000	60 000 000	60 000 000
Cash flow from sequetration			11 644 164	23 288 328	34 932 492	46 576 656	...	46 576 656	46 576 656	46 576 656
Total benefits	-	-	*26 206 950*	*60 449 255*	*86 625 873*	*113 644 327*	...	*106 576 656*	*106 576 656*	*106 576 656*
Net benefits	(240 000 000)	(240 000 000)	(85 609 966)	42 793 780	64 424 084	89 419 546	...	81 576 656	81 576 656	81 576 656
Total ENPV					**104 718 682**					
Total ERR					**12%**					

Note: ICR calculation applying a time horizon of 40 years, a discount rate of 10 percent, and the exchange of 09/30/2022.

These are conservative results. First, they do not reflect the value of other benefits provided by the project, such as future output by communities or the value of ecosystem services, such as erosion control and water flow regulation. Second, as an additional precautious measure, the analysis at completion only includes 50 percent of the cash flow from carbon sequestration as there is a possibility that the current logging and timber export ban may be lifted in the future. Given the typical lifespan of physical investments, such as fences, the analysis at completion includes a scenario under a 20-year timeframe **(Table 3**) to test the return on investments before the need for major rehabilitation or replacement is anticipated. The results show that the NPV is still positive with a 10 percent ERR. Finally, under a scenario without any carbon benefits, the NPV is negative with a 5 percent ERR. At the same time, it is important to note that these results are contingent on the sustained maintenance of investments and continued sustainable management of forests under INRMPs, which depends to a certain extent on the financial viability of the leskhoz.

While leskhozes are called ”forest enterprises”, their financial operation is heavily dependent on the central administration and influenced by the overall budget environment. The annual operating budget of different leskhozes vary greatly and is subject to ”taxes” to be paid back to the central administration. The inner workings of this local economy is not apparent and thus present a great challenge for leskhozes to demonstrate their economic self-reliance based on the economic activities within their jurisdiction. For the same reason, it is difficult to assess how project activities are making a difference on the financial operation of pilot leskhoz towards greater self-reliance.

Reduction of GHG emissions

The project supported a study on Natural Capital Accounting, which developed forest accounts to determine the size of carbon stocks of the SFF. For regulating ecosystem services, it is currently only possible to determine the state of Forest Fund ecosystems in terms of the size of carbon stocks of the Forest Fund as of 2010. Based on the available data of the 1st National Forest Inventory of the Kyrgyz Republic (2010), the corresponding total value was determined as 1.363.975 million tons of CO2. It was assumed that the possible rate of sequestration and annual increase in carbon stocks of the Kyrgyz Forest Fund is equivalent to 0.2% of its stocks according to the results of the 1st National Forest Inventory of the Kyrgyz Republic, i.e. 2.73 million tons of CO2 per year. For valuation purposes,

the price of the carbon emission quota was set at 25 Euro per ton of CO2-eq. The economic value of the flow of regulating forest ecosystem services of the Kyrgyz Republic for carbon sequestration in 2018 amounted to 2.73 million tons of CO2/year * 28.61 $/t CO2-eq. = $78 million/year.

At appraisal: The EX-Ante Carbon-balance Tool (EX-ACT) was used at appraisal to estimate the impact of planned forestry investment on the GHG-balance. It showed that the Project's net carbon balance was estimated at around 809,718 tCO2-e of avoided emissions due to increased carbon sequestration from an area of 2,000 hectares re/afforested. For the entire project area expected to be brought under management, this translated into around 0.1 tCO2-e/ha annually over a 40-year period amounting to approximately US$23.2 million of additional economic benefit at a price of US$30 per ton of CO2-eq. However, the analysis at appraisal failed to include the expected GHG emissions from project-financed inputs and investments, such as irrigation, fertilizer use, and construction. Consequently, the Project's net carbon balance at appraisal was overstated.

At closing: The EX-ACT tool was applied again ex-post in lieu of an actual carbon accounting of project activities. At closing, a total of 970,000 hectares of SFF land was brought under management through INRMPs, of which 252,000 hectares are forested (26 percent), while 2,500 hectares were reforested (1,850 hectares) and afforested (650 hectares) with planting of forest and fruit trees on a mix of land in mountainous areas that was previously either degraded or set aside for forest activities. The analysis accounts for some of the project-financed inputs and investments, including open irrigation canals to service an area of 650 hectares, drip-irrigation lines to cover 5 hectares, 42 cordon houses with a total surface of approximately 2,000 square meters, 10 greenhouses with an average size of 5,000 square meters. However, not all inputs could be approximated to be considered in the analysis due to lack of data, including fertilizer use and electricity generated from two power lines. The tool showed a net carbon balance of 1.2 million tCO2-e of increased carbon sequestration. Similar to the appraisal model, it is conservatively estimated that 0.1 tCO2-e/ha of GHG will be sequestered annually over a 40-year period. This will amount to approximately US$1.1 million a year, constant from year four, or US$42 million of additional economic benefit over a 40-year period at a price of US$45 per ton of CO2-eq in accordance with the World Bank's guidance note on the shadow price of carbon[7]. As an additional conservative measure, the economic analysis at completion only takes into account 50 percent of the cash flow from carbon sequestration analysis as there is a possibility that the current logging and timber export ban may be lifted over time. The Kyrgyz Republic banned logging and export of high value trees such as walnut and juniper in 2007 and extended the ban on felling all trees in 2016.

GEF Incremental Analysis

Project interventions targeted the following focal areas under the Global Environment Facility (GEF-6) Programming Directions: 'Demonstrate systemic impacts of mitigation options: Promote conservation and enhancement of carbon stocks in forest, and other land use, and support climate smart agriculture' (CCM-2, Program 4); 'Maintained Forest Resources: Reduce the pressures on high conservation value forests by addressing the drivers of deforestation' (SFM-1); and 'Reduce pressures on natural resources by managing competing land uses in broader landscapes: Scaling-up sustainable

[7] Shadow Price of Carbon in Economic Analysis: Cover Note (2017).

land management through the Landscape Approach' (LD-3, Program 4).

At the time of appraisal, an incremental cost assessment of GEF financing was not required. However, the project financial analysis did cover aspects of GEF financing including the benefits of carbon sequestration (see section above).

At project closing, the ICR uses the latest approach to assessing the incremental value of GEF financing issued by the Independent Evaluation Office in 2021. Of the six proposed pathways to assess GEF's additionality, two are particularly relevant to the IFEM project.

First, the project supported transformational change towards *legal or regulatory reforms* that are unlikely to have occurred in the absence of the project. GEF funds supported activities under Component 1 to reform the forest sector and build the required capacity building at national and local community levels. As stated in the Project Completion Report: "The IFEMP has become one of the largest and most multi-vector projects in the forest industry over the past 30 years, which has made a significant contribution to institutional reforms, strengthening the material and technical base, creating infrastructure facilities, introducing digital technologies, and integrating new areas of the economy into the forest industry."

Second, GEF supported Component 3 financed at US$2.42 million, equal to 60 percent of disbursed GEF funds, which focused on activities specifically aimed at generating knowledge of global environmental importance to build *institutional and governance capacity*. This included an update of the 2008 National Forest Inventory (NFI), which was developed with support from FAO. The updated NFI was based on new satellite imagery to define the extent of forest and pasture resources and employed state of the art methodologies including GIS and remote-sensing technologies. It also included a study on National Capital Accounting with detailed forest accounts to understand the economic contribution and the true value of ecosystem services derived from forest resources. Combined, these tools provide important information to fulfill global reporting requirements, including to the UNFCCC, on key environmental indicators.

In total, the project disbursed 97.3 percent of GEF funds, and the unutilized balance of about US$ 0.01 million will be returned to the GEF. In 2020, due to the spread of the COVID-19 pandemic, on the recommendation of the World Bank and in agreement with the Ministry of Finance of the Kyrgyz Republic and the State Agency for Environmental Protection and Forestry (SAEPF), the project was restructured. From the GEF grant US$900,000 was reallocated to purchase chlorine, PPE, and mobile multifunctional forest fire complexes (special machinery and equipment) to organize the protection of the forest, disinfection of cities and villages for 28 non-pilot forestry enterprises, and purchase seedlings for the most vulnerable households in the pilot leskhozes.

ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

1. Official letter received from The Ministry of Finance

A translated draft of the ICR was shared with the Borrower for review on March 13, 2023. The Ministry of Finance send a reply to the World Bank on April 12, 2023 (enclosed below and followed by a translation).

КЫРГЫЗ РЕСПУБЛИКАСЫНЫН
ФИНАНСЫ МИНИСТРЛИГИ

МИНИСТЕРСТВО ФИНАНСОВ
КЫРГЫЗСКОЙ РЕСПУБЛИКИ

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12.04.23 № 16-3/4448

№

Офис Всемирного банка
в Кыргызской Республике

Министерство финансов Кыргызской Республики (далее - Министерство), выражает свое уважение Всемирному банку и сообщает следующее.

Настоящим Министерство, рассмотрев завершающие комментарии Лесной службы при Министерстве сельского хозяйства Кыргызской Республики по отчету ICR проекта «Интегрированное управление лесными экосистемами», сообщает, что замечаний и предложений не имеет.

В связи с большим объемом информации вышеуказанные комментарии Лесного хозяйства будут направлены г-же Дрите Даде на электронную почту ddade@worldbank.org и г-же Кундуз Адильбековой на электронную почту kadylbekova@worldbank.org.

Пользуясь случаем, Министерство повторно выражает свою благодарность за оказываемую поддержку и надежду на дальнейшее плодотворное сотрудничество.

Заместитель министра **Р.С.Татиков**

2. On the Letterhead of the Ministry of Finance of the Kyrgyz Republic

Date: April 12, 2023
Outgoing reference No. 16-3/4447

To: The World Bank Office in the Kyrgyz Republic

Ministry of Finance of the Kyrgyz Republic (hereinafter referred to as the Ministry), expresses its respects to the World Bank and reports the following.

Hereby the Ministry, having considered the final comments of the Forest Service under the Ministry of Agriculture of the Kyrgyz Republic regarding the ICR report of the Integrated Forest Ecosystem Management Project, reports that the Ministry has no comments or suggestions.
Due to the large amount of information, the above mentioned comments by the Forestry Service will be sent to Ms. Drita Dade at *ddade@worldbank.org* and Ms. Kunduz Adylbekova at *kadylbekova@worldbank.org*.

The Ministry takes this opportunity to reiterate its gratitude for support and hope for further fruitful cooperation.

Deputy Minister **/Signed/**
R.S. Tatikov

3. Summary of comments received from the State Forest Service

The State Forest Service reviewed the draft ICR and sent comments on March 30, 2023. Overall, the FS found the document acceptable. Comments are summarized below:

(i) Minor edits to the Component descriptions;
(ii) Updates on the final project costs;
(iii) Update on the status of the National Forest Inventory;
(iv) Update on the numbers of sub- and micro-projects approved by the CCC; and
(v) Update on and revisions of the final figures in Annex 1, Results Framework.

The comments were reviewed and addressed as appropriate in the final version of the ICR.

ANNEX 6. SUPPORTING DOCUMENTS

Key World Bank Project Documents	Report No.	Date
Project Appraisal Document	PAD1346	October 29, 2015
GEF Endorsement Letter		July 20, 2015
Financing Agreement	CREDIT NUMBER 5743-KG GRANT NUMBER D095-KG	January 18, 2016
Loan Agreement		
Project Operations Manual		May 4, 2017
Amendment to FA and GA		May 22, 2020
Restructuring Paper	RES41367	May 19, 2020
Restructuring Paper		May 11, 2020
Restructuring Paper	RES53170	September 29, 2022
Country Partnership Strategy FY14-17	78500-KG	June 24, 2013
Country Partnership Framework FY19-22	130399-KG	October 10, 2018
Aide Memoires		
Implementation Status & Results Report #1-15		
PCN Resilient Landscape Restoration Project	P177407	

Key Borrower Project Documents	Date
Borrower's Project Completion Report	December 16, 2022
Final Project Evaluation Report	December 1, 2022
Annex to the Final Evaluation Report	December 1, 2022
Functional analysis and recommendations for forest sector reform	January 2019
Forest Accounts of the Kyrgyz Republic (WAVES)	August 2020
Feasibility of Measuring Tourism Sustainability in the Kyrgyz Republic	August 2020
Presentations from the final stakeholder workshop	September 29, 2022

ANNEX 7. CHANGES TO THE RESULTS FRAMEWORK

Table 11: Overview of changes to the results framework

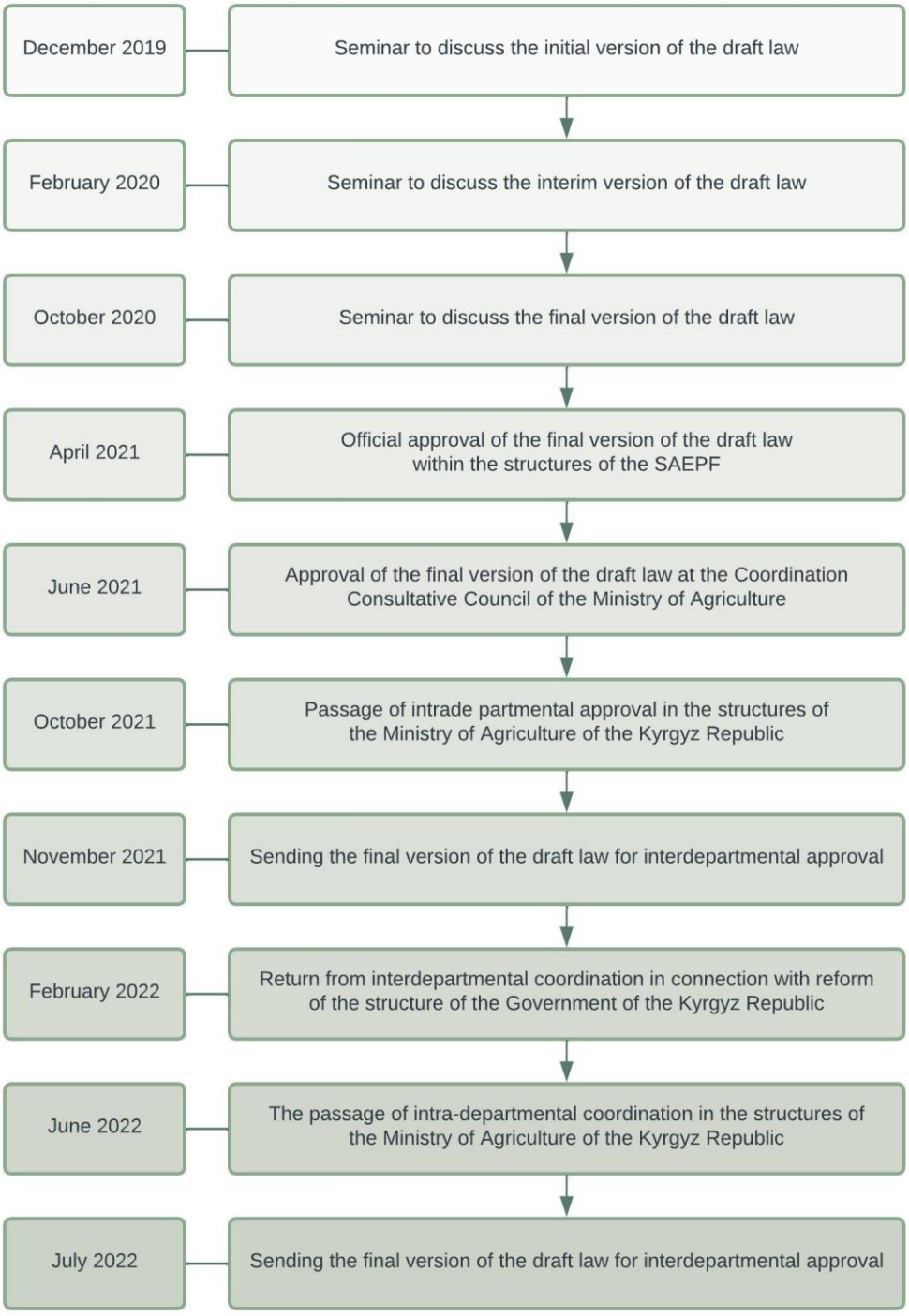
#	PDO Indicator	Original target	Revised target	Rationale
1	Government institutions provided with capacity building to improve management of forest resources	52	46	Revised to reflect re-organization and merger of some leskhozes.
2	Land area where sustainable land management practices were adopted as a result of project interventions	616,000 hectares	160,000 hectares	Decreased to only reflect the areas benefiting from investments in SLM practices as outlined in the INRMPs.
3	Forest area brought under management plans	161,000 hectares	864,175 hectares	Increased to reflect the actual area of pilot leskhozes and municipal forests brought under integrated management plans.

	Original Indicator	Change	Rationale at MTR	ICR Note
	Component 1 – Forest Sector Institutional Reform			
4	Reforms in forest policy, legislation, or other regulations supported (Yes/No)	**Revised:** Number of leskhozes and SAEPF that have operationalized three project supported instruments/interventions (Forest Code, Standardized costs, guidelines for boundaries clarification)	Revised indicator provides specific detail on types of interventions, and targets reflect adoption in project and other leskhozes for the remainder of project duration. Forest Code (1 - SAEPF) Standardized costs (13 - pilot Leskhozes) Boundaries mapped (39 leskhozes)	Indicator was clarified and allowed for improved monitoring.
5	Number of participating leskhozes reinvesting self-generated income into sustainable ecosystem management (#)	**Revised:** Number of leskhozes reporting confidence in ability to generate income for re-investing into sustainable forest ecosystem management	Given the context of government budgeting, it was considered difficult to measure the original indicator. However, it was considered still worth looking at potential to reinvest so the indicator is revised. Confidence levels to be measured in beneficiary survey according to Directors of 13 pilot leskhoz.	Relying on end-of-project beneficiary survey to assess confidence levels did not allow for regular monitoring.

6		**New indicator:** Proportion of Leskhoz staff in pilot leskhozes reporting increased / improved capacities for SFEM	An assessment of change in capacities in leskhoz staff to be determined through self-assessment in the final beneficiary survey.	Relying on end-of-project beneficiary satisfaction survey did not allow for regular monitoring.
7	Number of Leskhozes conducting semi- annual/annual public hearings where information about leskhoz ecosystem management plans and budgets are disclosed (#)	**New indicator:** Proportion of public in project areas satisfied with citizen engagement processes in planning and management of leskhoz lands (%)	A number of indicators are replaced with a new indicator that looks at the response to engagement. Data to be collected through a beneficiary survey on awareness and engagement, which can also disaggregate data by gender.	Monitoring changed from semi-annual and annual public hearings to end-of-project evaluation of beneficiary satisfaction.
8	Male forest resource user participation at public hearings at leskhoz level (#)			
9	Female forest resource user participation at public hearings at leskhoz level (#)			
10	Citizens and/or communities involved in planning / implementation / evaluation of integrated ecosystem management plans (Yes/No)			
	Component 2 – Strategic Investments and Piloting of Sustainable Management Approaches			
11	Area restored or re/afforested (ha)	**Revised:** Area of forest planted and under assisted regeneration through project interventions (ha)	The original indicators were confusing and targets for re/afforested and restoration did not reflect the total area given. The three indicators are replaced with one that captures all areas planted and under assisted regeneration. The area covers project interventions (in Leskhoz and municipal forests) of afforestation, reforestation and restoration on areas with less than 10% canopy cover, and assisted regeneration in selected areas.	Indicator was clarified and allowed for monitoring towards the target.
12	Area re/afforested (ha)			
13	Area restored (ha)			
14	Direct project beneficiaries (#)	**Revised:** Number of persons in project sites provided with access to assets and services as a result of participating in project interventions (disaggregated by gender)	The revised indicator will capture persons participating in micro projects, able to collect NTFPs, trained, receiving equipment, planting materials and other assets, employed in project activities, benefiting from irrigation, etc. Data to be collected through project M&E system and supported through the survey on engagement which will also examine ways in which	Monitoring still allowed for tracking direct beneficiaries by gender as well as for capturing all persons benefitting from access to project-provided assets and services.
15	Female beneficiaries (%)			

			participants consider themselves better off as a result.	
	Component 3 – Information and Monitoring and Evaluation			
16	National forest inventory updated for Kyrgyz Republic (Yes/No)	No change		
17	Number of participating leskhozes collecting baseline resource data and making it available for management plans (#)	**Revised:** Area in hectares updated for forest management planning purposes using FMIS	Indicator seeks to provide more information on the use of the system in forest management planning. GUKLOU will have updated the country-wide forest management plan through a) stand estimates and b) sample plots using the new FMIS software and hardware procured by the project.	Monitoring was improved by tracking the area in hectares updated in the FMIS rather than the number of leskhoz participating.
18		**New indicator:** Number of leskhozes making use of FMIS	New indicator to assess roll-out of the FMIS to all leskhozes, and access by LH staff to FMIS to support forest operations and decision-making. Able to assess use of FMIS from central server in SAEPF.	
	Component 4 – Project Management, Monitoring and Evaluation			
20		**New indicator:** Proportion of issues lodged with the PIU that are satisfactorily resolved as needed in agreed timeframes.	New indicator to assess the effectiveness of the Grievance Redress Mechanism.	Relying on end-of-project beneficiary satisfaction survey did not allow for regular monitoring.

ANNEX 8. PROCESS TO REFORM THE FOREST CODE



ANNEX 9. PARTICIPATORY METHODOLOGY

Community participation to develop INRMPs was nurtured in three phases under the guidance of local community-based NGO.

- **Phase I involved the social mobilization of communities.** This process was launched with a broad public information campaign among the management and staff of forestry enterprises, regional and district administrations, and local forest communities (see Annex 1.B). Reaching more than 6,000 people, of which nearly 2,000 were women, in the initial information meetings, a bottom-up approach was applied to define the key challenges and management priorities to improve SFEM.
- **Phase II supported participants in developing Integrated Natural Resource Management (INRM) plans.** In particular, needs were assessed, prioritised, available resources and capacities of the leskhoz were analysed and the investments needed for further development were identified. The INRMPs were widely discussed in villages bordering the pilot leskhoz area with the participation of more than 5,750 residents (3,624 men and 2,126 women).
- **Phase III was devoted to training and capacity building support.** Taking into account the matrix of strategic investment needs and budgets, as well as the creation of plans for monitoring and evaluating the implementation, a comprehensive training and capacity building plan was developed and implemented.

Result of the participatory process: By the end of the process, participants had developed 119 sub-project proposals and 83 micro-project proposal aimed at the development and restoration of forest ecosystems and infrastructure. The proposals were analyzed and prioritized before being included in a portfolio of 100 sub-project and 20 micro-project investment proposals recommended to be considered for funding. The developed portfolios were submitted for review and approval by the Consultative Coordinating Council. A total of 89 sub-projects and 10 micro-projects were approved and funded by the project and implemented by leskhozes and local communities, respectively.

ANNEX 10. PROJECT MAP