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Report No: PAD2612

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A

PROPOSED ADDITIONAL FINANCING

IN THE AMOUNT OF EURO 12.00 MILLION (US$ 14.89 MILLION)

TO

THE REPUBLIC OF BELARUS

FOR A

Belarus Forestry Development Project - Additional Financing

February 21, 2018

Environment & Natural Resources Global Practice
Belarus, Moldova and Ukraine Country Unit
Europe And Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2018)

Currency Unit =	Belarusian Ruble (BYN)
Euro 1 =	BYN 2.46

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Cyril E Muller
Country Director:	Satu Kristiina J. Kahkonen
Senior Global Practice Director:	Karin Erika Kemper
Practice Manager (Acting):	Ruxandra Maria Floroiu
Task Team Leader(s):	Andrew Michael Mitchell, Vladislava I. Nemova

ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
BYR	Belarusian Ruble (currency)
CPF	Country Partnership Framework
DA	Designated Account
ECA	Europe and Central Asia
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ERR	Economic Rate of Return
ESMP	Environmental and Social Management Plan
EXACT	Ex Ante Carbon Accounting Tool
FAO	Food and Agriculture Organization
FDP	Forestry Development Project
FM	Financial Management
GEF	Global Environment Facility
GHG	Greenhouse Gas
GRS	Grievance Redress Service
ha	Hectare
IBRD	International Bank for Reconstruction and Development
IFR	Interim Financial Report
IRR	Internal Rate of Return
MOF	Ministry of Forestry
NPV	Net Present Value
PDO	Project Development Objective
PIU	Project Implementation Unit
PPSD	Project Procurement Strategy for Development
RF	Results Framework
STEP	Systematic Tracking of Exchanges in Procurement
SCF	Standard Conversion Factor
SFE	State Forest Enterprise
WB	World Bank
WBG	World Bank Group

BASIC INFORMATION – PARENT (Forestry Development Project - P147760)

Country	Product Line	Team Leader(s)		
Belarus	IBRD/IDA	Andrew Michael Mitchell		
Project ID	Financing Instrument	Resp CC	Req CC	Practice Area (Lead)
P147760	Investment Project Financing	GEN03 (9271)	ECCEE (1607)	Environment & Natural Resources

Implementing Agency: Ministry of Forestry, BellesExport

Is this a regionally tagged project?	
No	
[ ] Situations of Urgent Need or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects	Bank/IFC Collaboration No

Approval Date	Closing Date	Original Environmental Assessment Category	Current EA Category
27-Mar-2015	31-Aug-2020	Partial Assessment (B)	Partial Assessment (B)

Development Objective(s)

The Project Development Objective is to enhance silvicultural management and reforestation and afforestation, increase the use of felling residues and improve the public good contribution from forests in targeted forest areas.

Ratings (from Parent ISR)

	Implementation	Latest ISR

	29-Jun-2015	02-Dec-2015	01-Apr-2016	25-Oct-2016	18-Apr-2017	30-Oct-2017
Progress towards achievement of PDO	S	S	S	S	S	S
Overall Implementation Progress (IP)	S	S	MS	MS	S	S
Overall Safeguards Rating	S	S	S	S	S	S
Overall Risk	M	M	M	M	M	M

BASIC INFORMATION – ADDITIONAL FINANCING (Belarus Forestry Development Project - Additional Financing - P165121)

Project ID	Project Name	Additional Financing Type	Urgent Need or Capacity Constraints
P165121	Belarus Forestry Development Project - Additional Financing	Cost Overrun, Scale Up	No
Financing instrument	**Product line**	**Approval Date**	
Investment Project Financing	IBRD/IDA	14-Mar-2018	
Projected Date of Full Disbursement	**Bank/IFC Collaboration**		
31-Aug-2021	No		
Is this a regionally tagged project?			
No			

[ ] Situations of Urgent Need or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

PROJECT FINANCING DATA – PARENT (Forestry Development Project - P147760)

Disbursement Summary (from Parent ISR)

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed
IBRD	40.71	22.52	18.19	55 %
IDA				%
Grants	2.74	0.58	2.16	21 %

PROJECT FINANCING DATA – ADDITIONAL FINANCING (Belarus Forestry Development Project - Additional Financing - P165121)

FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	14.04
Total Financing	14.04
Financing Gap	0.00

DETAILS

Counterpart Funding	0.04
Borrower	0.04
International Bank for Reconstruction and Development (IBRD)	14.00

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any other Policy waiver(s)?

[ ] Yes [✓] No

INSTITUTIONAL DATA

Practice Area (Lead)

Environment & Natural Resources

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Andrew Michael Mitchell	Team Leader (ADM Responsible)	Forestry	GEN03
Vladislava I. Nemova	Team Leader	Natural Resources	GEN03
Alexander Balakov	Procurement Specialist (ADM Responsible)	Procurement	GGOPC
Irina Babich	Financial Management Specialist	FM	GGOEE
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Arcadii Capcelea	Environmental Safeguards Specialist	Environment	GEN03
Hanna Shvanok	Team Member	Operations	ECCBY
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Luz Meza-Bartrina	Counsel	Legal	LEGLE
Nina Rinnerberger	Team Member	Natural Resource Management	GEN03

Extended Team

Name	Title	Organization	Location
Kairat Nazhmidenov	Economist		Bishkek
Louis Bockel	Policy Support Officer	Food and Agriculture Organization of the United Na	

REPUBLIC OF BELARUS

BELARUS FORESTRY DEVELOPMENT PROJECT - ADDITIONAL FINANCING

TABLE OF CONTENTS

I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

A. *Introduction*

1. This Project Paper seeks the approval of the Executive Directors for provision of an Additional Financing (AF) loan in the amount of EURO 12.00 million to the Republic of Belarus in support of the Forestry Development Project (FDP) (P147760). It also seeks the Executive Directors' approval to: (i) address a financing gap and scale up investments in forest nurseries and some low-impact forest harvesting equipment and (ii) amend the Results Framework to reflect the additional activities and investments supported under the proposed AF.

2. The Project's Development Objective (PDO) is to enhance silvicultural management and reforestation and afforestation, increase the use of felling residues and improve the public good contribution from forests in targeted forest areas. The PDO will not be revised as it remains relevant and achievable under the proposed AF.

3. The AF will help finance the costs associated with the scale-up of selected activities (particularly investments in nurseries and forestry machinery/forwarders) initiated under the original project, which will strengthen the developmental impact of the FDP. The proposed AF will also address a gap in financing for some of the activities under the original project that resulted from Government budget constraints due to recent macro-economic imbalances. There will be no new type of activities introduced and the project design and implementation arrangements will remain the same. The implementation period is three years with the closing date on August 31, 2021.

B. *Original Objectives, Design and Scope*

4. Belarus is one of the most forested countries in the Europe and Central Asia region (sixth out of 30 countries) with forest cover of 8.1 million hectares, accounting for nearly 39 percent of the territory (in comparison to 18 percent in 1944). Forests provide multiple environmental goods and services including carbon sequestration and storage, raw material to forest industry, employment in the forest and forest products industries, woody biomass for generation of heat and power, and non-timber forest products for both commercial production and subsistence consumption by local communities. In 2016, the forestry sector contributed 2.7 percent to GDP. However, in more developed forest based economies (e.g. most of Scandinavia and Canada) contribution to GDP is higher, indicating that there is further potential for growth of the forestry sector in Belarus.

5. The FDP was designed to support Belarus strengthen its forestry sector by modernizing some forestry operations, improving the public goods function of forests, and increasing its contribution towards a more prosperous and dynamic rural sector through creating desirable skilled or semi-skilled employment opportunities. The World Bank Board of Executive Directors approved the project for a loan in the amount of US$40.71 million and a grant from the Global Environment Facility (GEF) Trust Fund in the amount of US$2.74 million on March 27, 2015.

6. The Project has three components:

Component 1: Improvement of Silviculture and the Sustainability of Forest Management

Improving silviculture and forest management effectiveness through, *inter alia*:

- the increased intensity of silviculture activities by thinning of young and middle-aged stands through the provision of necessary equipment (including harvesters and forwarders), and including the carrying out of training.;
- the development of the use of woody biomass from logging residues to enhance the forest management productivity through the provision of necessary equipment (including heavy duty chipper machines); and
- the improvement of forest nurseries for afforestation and reforestation through the modernization of selected forest nurseries through, *inter alia*: (i) carrying out of civil works including construction of greenhouses, warehouses, cold stores, wells and water storage facilities (ii) the provision and installation of new seeding lines, greenhouses, cooling machinery and watering systems; (iii) the provision of other forest nursery equipment, and (iv) the carrying out of training.

Component 2: Improvement of Forest Fire Prevention, Monitoring, Detection and Suppression Reducing the incidents of forest fire hazards through, *inter alia*:

- the enhancement of the Borrower's capacity to respond to fire incidents through, *inter alia*: (i) the carrying out of public awareness activities; (ii) the development of a fire-fighting zone system; and (iii) the carrying out of an inventory of depleted peat lands;
- (i) the strengthening of fire detection and monitoring measures through the provision of the necessary equipment; and (ii) the enhancement of communication mechanisms among state-owned forestry enterprises; and
- the improvement of fire suppression efforts through the provision of: (i) modern fire-fighting vehicles; and (ii) other modern fire-fighting equipment.

Component 3: Capacity Building for Sustainable Forest Management. Strengthening the Borrower's capacity for sustainable forest management through, *inter alia*:

- the facilitation of an enabling environment for sustainable forest management through, *inter alia*: (i) the review and update of the Borrower's forest policy and legal framework and forestry sector strategy; (ii) the development of the necessary methods and techniques to improve the biological and landscape diversity in forest management, including through the piloting of trial new silvicultural approaches; and (iii) the carrying out of training activities to raise awareness of state-owned forestry enterprises on international best practices in the forestry sector;
- the strengthening of the forest management information system and forest management planning capacity through, *inter alia*: (i) the provision of equipment; (ii) the development of a web-based interface for sharing information among relevant forest sector stakeholders; (iii) the development of a geo-information system-based map and database of potential forestry carbon (non-Project) investments;
- the use of advanced forest management technologies through the provision of training;

- (i) the design and implementation of a monitoring system of radiological conditions of forests in the Borrower's territory; and (ii) the strengthening of the existing system of protective measures of radiological monitoring activities; and
- the provision of support for the implementation, monitoring and evaluation of the Project, including: (i) the carrying out of the Project audits; and (ii) the implementation and supervision of site specific Environmental and Social Management Plan (ESMP).

7. The original scope of the project envisioned modernizing four nurseries (sub-component 1.3.) through the supply of equipment and materials, with the building works and installation of the machinery to be undertaken with Government funding. However, due to a shortage of funds it became necessary to also include the civil works and installation services within the remit of the loan financing, which has resulted in a financing gap.
8. In addition, for silvicultural thinning in young and middle-aged stands (sub-component 1.1.) it was originally intended to procure and use some of the new harvesters (machines which fell the trees, remove the branches and tops and cross-cut the logs into the required lengths) in combination with older tractor trailer units, to extract the felled timber to roadside. However, implementation has now shown that more agile machinery is needed, requiring the procurement of additional forwarders (low impact purpose designed machines, which extract the logs from the forest to roadside). To address these issues, the AF will support strengthening and expanding sub-components 1.1. and 1.3.

C. Project Progress to Date

9. The FDP became effective on July 30, 2015 and is now in its third year of implementation. Overall project implementation has maintained either a *Satisfactory* or *Moderately Satisfactory* rating, while progress towards achieving its PDO was continuously *Satisfactory* from the start of the project. Procurement is now *Satisfactory*, following the initial low disbursement due to the Project Implementation Unit's (PIU) limited procurement capacity and the complicated nature of the international competitive bidding required for the forestry harvesting machinery. A procurement post review (conducted in December 2016) found that all the contracts reviewed were procured and implemented in accordance with the agreed provisions of the Loan Agreement.
10. Regular implementation support missions have been undertaken since June 2015 to work with the project's implementing agencies to review activity progress, including staffing of the PIU, procurement plans, and steps and timeline for implementing the GEF grant. The Project is in compliance with key loan covenants, including audit and financial management reporting requirements.
11. As of January 30, 2018, the FDP had disbursed US$ 21,5 million (53 percent of the loan), with US$ 37.6 million (92 percent) committed. Around 21 percent of the GEF grant (US$ 576 thousand) has been disbursed and 48 percent committed.
12. Essential forestry machinery and equipment has been procured, including: harvesters and forwarders (142 units including an additional six heavier duty harvester and forwarder units to strengthen the capacity of forestry enterprises to cope with the clearing of the windblown timber arising from the catastrophic storms of July 2016); mobile wood chippers; forestry equipment for mechanized cleaning of felling areas from felling waste (branches and tops left after harvesting); forest fire protection and

response equipment, such as all-terrain light water tankers and/or transportation of personnel/forest guards, and video surveillance systems designed for monitoring and early detection of fires. In addition, the first three new forest nursery complexes, in Ivatsevichi Forest Enterprise (Brest Oblast), Glubokoye Experimental Forest Enterprise (Vitebsk Oblast), and in Minsk Oblast have now been tendered. Construction at the Ivatsevichi nursery began in June 2017 and works are progressing according to schedule (completion is expected during the first half of 2018). Construction commenced at the Glubokoe Forest Experimental Enterprise and the nursery complex (Republican Forest Selection and Seed Center) in Minsk Oblast in September 2017. GEF investments include four simulators for training harvester and forwarder operators, equipment enhancing the nursery infrastructure, specialized equipment for forest fire detection, prevention and suppression, and a number of important technical assignments to improve forest management capacity.

13. Progress towards achievement of the PDO is being monitored and reported by the PIU through its bi-annual progress reports. Table 1 reflects the progress to date.

Table 1. Progress Towards Achievement of PDO

The PDO is to enhance silvicultural management and reforestation and afforestation, increase the use of felling residues and improve the public good contribution from forests in targeted forest areas.				
PDO Indicator	**Baseline**	**Current**	**End Target**	**Current Status**
Area of young and middle-aged production-forest thinned according to approved management plans (hectare)	132,500	151,574.20	165,000	On track with results framework estimates.
Economic performance of participating SFEs enhanced (amount, USD)	0.00	7 680 000	15,826,000	This indicator measures net revenue less expenditure (inclusive of all financing sources) and is on track with RF estimates.
Capacity to produce high quality seedlings increased (number of container grown seedlings per year)	0	0	4,000,000	The capacity will be increased as the new nurseries are commissioned, Ivatsevichi is expected in spring 2018.
Average utilizable volume of commercial timber harvested during intermediate felling in targeted SFEs increased (Cubic Meter per hectare)	28.50	33.50	35.00	On track with results framework estimates. In fact, current value slightly exceeds estimate for year 2 of implementation.

14. In 2016, Belarus suffered from a catastrophic windblow event that blew over some 14,000 ha (approx. 20,000 football pitches) of forest. The damage was not restricted to forests, but houses and buildings were destroyed, power lines downed and transport disrupted. Belarus frequently suffers from these intense windblow events (and other climate related issues such as damage from snow and freezing rain) and this is likely to increase with climate change. The impact of the storms caused significant financial and economic losses to the forestry sector and increased costs in terms of the recovery and rehabilitation operations. In response to the request from the Minister of Forestry in February 2017, the Bank team obtained additional grant funding from the Global Facility for Disaster Reduction and

Recovery to help undertake forest rehabilitation and restoration activities. This includes assessing the current losses and improving the economic analysis of the costs of the on-going climate related catastrophic forestry events based on international experience.

D. Rationale for Additional Financing

15. The proposed AF supports the Government's development goals for the forestry sector to increase the efficiency of afforestation and reforestation, and – in the future – increase revenues from forestry activities. The Ministry of Forestry (MOF) and the State Forest Enterprises strongly support the original project and have requested additional financing to respond to a financing gap for some of the activities under sub-component 1.3. and to scale-up some interventions under sub-components 1.1. and 1.3.

16. **Covering the financing gap under the original project.** The AF will cover the financing gap that resulted from Government budget constraints arising from the recent macroeconomic imbalances. In 2016, the ongoing recession put additional pressure on fiscal accounts. Declining general government revenues (by 6.4 percent in real terms year on year) prompted the government to tighten real spending (by 6.5 percent in real terms year on year) mainly cutting public capital expenditures (by 14.3 percent in real terms year on year). Government state support to enterprises fell from 1.5% of GDP in 2015 to 0.6% of GDP in 2016.

17. Originally, under sub-component 1.3., only the supply of specialized equipment and materials for four nurseries in the Brest, Vitebsk, Minsk and Gomel Oblasts was envisaged under the loan, such as greenhouses, cooling machinery, field irrigation systems, and multifunctional loaders. The building works and installation of the machinery was to be undertaken with Government funding. However, due to the shortage of funds (due also in part to declining revenues due to timber product market conditions and increasing costs) it was agreed between the Government and the World Bank to include the civil works and installation services within the remit of the loan (totaling US$16.67 million). Other options for financing were considered but were not found to be available to the MOF. The AF will now fully cover the funding for the Gomel nursery, including the construction works.

18. **Scale-up of investments and restructuring due to financing gap under the Original project**. The AF will also scale-up the nursery production by including two more nursery complexes in Mogilev Oblast and Grodno Oblast under sub-component 1.3. (six nurseries in total, one for each Oblast in Belarus). The production from all six nurseries is required, partly to increase the efficiency and cost saving of afforestation and reforestation activities and partly to address the need to improve forest structure (in terms of both species mix and age class distribution) as a response to changing climatic conditions and to make the forest more resilient to climatic (e.g. wind blow, snow/ice damage), pest (e.g. bark beetle infestations), and other stresses (e.g. forest fires). Also, the *sectorial programme for growing container grown planting material in the organizations of the Ministry of Forestry* (adopted on May 30, 2014) stipulates an increase in container grown seedlings from currently 2 percent to 30 percent by 2020. The additional nurseries will help increase the capacity of State Forestry Enterprises to produce high quality, container grown seedlings. The increased nursery capacity will help provide the planting stock necessary for rehabilitation of windblown and other damaged forests and support Belarus in the design and management of more climate resilient forests.

19. The AF will also procure reusable cartridges for container grown seedlings that are needed for the new nurseries. These cartridges are part of the additional capital investment required. Replacement of the cartridges over time will be part of the annual operation and maintenance costs to be funded by the enterprises own budgets. Overall, container grown planting material offers a number of advantages (e.g. shorter growing time in the nurseries, a longer planting out season; higher survival rates; reduced need for replacing failures and lower weeding costs) and it allows for a lower density of planting (around 2,700 seedlings per hectare – down from more than twice this, thus realizing considerable savings). Higher survival rates and reduced spacing will have a number of benefits: it will improve stand structure allowing the trees more space to grow into, making the stands more stable in later years; allow more light to hit the forest floor encouraging a more diverse ground flora in the initial years, providing benefits to biodiversity; and reduce the need for early thinning to waste.

20. Under sub-component 1.1. of the original loan, 74 harvesters and 52 forwarders designed to undertake first and young to medium age thinning operations were procured. It was originally intended to use harvesters with older tractor trailer combinations but during implementation these were found not to be sufficiently agile in all situations. This machinery needs to be lightweight and maneuverable to move in between the crop trees to be left after the thinning operation. Once the machines were used, it was found that the best combination of machinery was to use one lightweight harvester in tandem with a lightweight forwarder. As fewer forwarders than harvesters were ordered, there is a shortfall in the number of forwarders. The AF will address this shortfall in the most urgent cases by procuring two additional forwarders.

21. Overall, the AF will expand the impacts of the FDP in terms of improved forest nurseries and production of seedlings and support the achievement of other project indicators (area thinned, and volume of thinnings removed during harvesting).

22. **Cascade Approach:** The World Bank Group (WBG) is intensifying and systemizing its commitment to Maximizing Finance for Development (MFD). The March 2017 Forward Look – A Vision for the World Bank Group in 2030 – Progress and Challenges, introduced the “Cascade Approach" as a concept to guide the WBG’s efforts to leverage the private sector for growth and sustainable development. This approach seeks to help countries maximize their development resources by drawing on private financing and sustainable private sector solutions to provide value for money and meet the highest environmental, social, and fiscal responsibility standards, and reserve scarce public financing for those areas where private sector engagement is not optimal or available.

23. In Belarus, there is good private sector involvement in the wood haulage and wood processing sectors. There are well established large scale investments in timber processing, and board (e.g. chipboard, plywood, medium density fiberboard), pulp and paper production, much of which is exported. The project therefore supports this commercial sector by helping the state forest enterprises sustainably produce raw materials for the industry. Forest management however is solely a function of the state. There are no large-scale forest nursery production facilities in the private sector in Belarus (apart from a few small garden centers geared for the production of ornamental plants for sale to the public). Indeed, even in Western Europe, the control and supervision of seed collection, treatment, production and storage is usually a function of the state (to ensure the purity of provenance, disease control, quality assurance, etc.). The private sector would also find that the investments required are large and with little guaranteed demand for forestry species and sizes, except from the forest enterprises themselves.

24. As mentioned in the Belarus Forest Policy Note prepared by the World Bank in 2013, there is scope in the forest harvesting sector for contractors to participate more in harvesting and extraction. The support that the original project and AF is providing however is specifically targeted at harvesting young and small sized timber. These operations are usually done as a silvicultural requirement (often at either break-even or even at a loss), rather than as a commercial operation and thus do not compete with the private sector. The thinning of these younger stands will contribute to making the later thinnings and harvest more interesting commercially. Commercial contractors are much more interested in larger, semi mature thinnings and final harvesting.

II. DESCRIPTION OF ADDITIONAL FINANCING

A. Proposed Changes.

25. The original PDO will remain unchanged and the AF activities are in line with the original development objective. The only new activities are construction works in the new nurseries and related training. The remaining project design and implementation arrangements will remain the same. The AF is in line with the current and new CPF under development, which includes the cross-cutting theme of environmental sustainability and disaster risk management and supports Belarus' government programs on green growth, forestry and energy efficiency.

26. *Results framework.* The project Results Framework (RF) was revised and agreed to reflect the proposed AF investments and scale-up of some activities. The following indicators were adjusted as shown in Table 2:

Table 2. RF Indicators original and revised targets

Indicator Name	Unit Measure	Original Target	Revised Target
Project Development Objective Indicator			
Capacity to produce high quality seedlings increased	number of container grown seedlings per year	4 million seedlings per year	23.7 million seedlings per year
Global Environmental Objective Indicator			
Amount of carbon (CO_2) sequestered	metric tons, CO_2-equivalent	5,065,508 mt CO_2-e	5 245 627 mt CO_2-e
Intermediate Indicator			
Nursery lines for container grown seedlings of native tree species established	number	4	6
Number of people trained	number	2,380	3,000
of which female	*number*	*145*	*150*
Direct project beneficiaries	number	35,000	35,500
of which female	*percentage*	*10*	*17.5*

27. *Implementation arrangements.* No changes will be required under the AF. The MOF, which is the national authority in charge of state forest sector management in Belarus, has the overall responsibility for project coordination and monitoring of implementation progress. The MOF has

formally delegated the responsibility for managing the day-to-day implementation to the Republican Unitary Enterprise Bellesexport, within which a Project Implementation Unit has been created.

B. *Additional Financing Scope.*

28. Table 3 below shows current and AF costs by sub-component. Specific investments under sub-component 1.1. include the purchase of two multi-purpose forest loading and transportation machines intended for extraction (forwarders) for a total amount of EUR 0.20 million. Under sub-component 1.3., investments will include:

- Complex for Cultivation of Container Grown Planting Material, Gomel Oblast (EUR 3.8 million);
- Complex for Cultivation of Container Grown Planting Material on the Territory of the Basic Nursery of Mogilev Forest Enterprise (Krasnitsa-2 village, Mogilev region) (EUR 3.3million);
- Construction of a Nursery for Cultivation of Container Grown Forest Forming Species' Planting Material in Shchuchin Forest Enterprise, Grodno Oblast (EUR 4.1 million); and
- Reusable cartridges for container grown seedlings (EUR 0.60 million).

Table 3. Costs by sub-component for the Original Project (US$ million) and the AF (Euro €, million)

Sub-components	***CURRENT LOAN***	***ADDITIONAL FINANCING***
	US$ millions	***Euro € millions***
Sub-component 1.1. Development of more intense silviculture specifically optimizing the intensity of silvicultural interventions in young and middle-aged stands	*18.55*	
Two forwarders		0.20
Sub-component 1.3. Improving the quality of seedling production for afforestation and reforestation	*16.67*	
Gomel Oblast Nursery		3.80
Mogilev Region Nursery		3.30
Shchuchin, Grodno Oblast		4.10
Reusable Cartridges		0.60
Total	**35.22**	**12.00**

C. *Contribution to poverty reduction*

29. Many rural areas in Belarus are becoming depopulated with some villages being completely abandoned as people move to urban areas. The proposed AF will contribute towards a more prosperous and dynamic rural sector by creating more desirable skilled or semi-skilled employment

opportunities for both men and women in rural areas. At the same time, an equal opportunity training program will be implemented to ensure technical and nursery staff can operate the new equipment to be procured.

30. The project and AF are helping to support and increase the sustainable production from the forestry sector, while sequestering carbon and providing habitats for biodiversity as well as other environmental services. As well as producing direct employment opportunities in forestry, the production from the forests is the raw material for significant wood processing, wood energy production, value adding and exports from Belarus.

III. KEY RISKS

31. The overall Project risk is rated Moderate. This rating considers risks to achieving the development results based on analysis of each of the risk categories. The risk assessment for the original project will remain relevant to cover implementation risks and mitigation measures under the AF. However, the institutional capacity risks is downgraded from substantial to moderate because the PIU has now gained experience of implementing the FDP. No additional risks are expected as a result of the proposed AF. The risk ratings summary is provided in Table 4.

Table 4. Risk Rating Summary

Risk Category	Rating
Political and Governance	Moderate
Macroeconomic	Moderate
Sector Strategies and Policies	Moderate
Technical Design of Project or Program	Low
Institutional Capacity for Implementation and Sustainability	Moderate
Fiduciary	Substantial
Environment and Social	Low
Stakeholders	Low
Other	/
Overall	Moderate

IV. APPRAISAL SUMMARY

A. Economic and Financial (if applicable) Analysis

32. The project's overall cost is currently estimated at US$57.45 million, including the original project (US$40.71 million), GEF grant (US$2.74 million) and AF (US$14.00 million). The economic benefits of the original project estimated during the project preparation included: (i) increasing the intensity of thinning operations; (ii) increasing the utilization of forest production by using felling arisings, which are currently wasted; (iii) reducing costs and increasing survival rates for forestry planting stocks; (iv) reducing the losses from forest fires. They will remain the same under the AF, although some of them will be generated in greater amounts thanks to the additional investments in improved harvesting equipment and forest nurseries.

33. All benefits described above also generate carbon benefits, either through increasing carbon sequestration through increased forest growth, or reducing emissions by substituting use of fossil fuels or reducing carbon released through forest fires. Greenhouse Gas (GHG) accounting was undertaken to both estimate the amount of carbon benefits, but additionally to assess the carbon footprint of the project which is expected to be positive.

34. Based on the GHG emissions accounting, the project net carbon balance is estimated at 5 245 627 tCO2-e of avoided emissions or increased carbon sequestration over the full analysis period (30 years). Assuming a baseline estimate of the social value of carbon of US$66 per tonne on average, this would translate into a net benefit of the project of around US$213 million over a period of 15 years that is covered under the economic analysis.

35. Given the above benefit streams, the base case Economic Rate of Return (ERR) of the combined operations (original project + AF) is estimated at 40.4 percent. The base case Net Present Value (NPV) of the net benefit stream, discounted at 10 percent, is US$78.1 million in economic terms. The underlying economics of the combined operations remain robust and their economic return is higher than that of the original project (ERR 20.1 percent) because the AF investment will contribute to greater generation of the expected economic benefits. If a low estimate of the carbon social price is taken into account, then ERR would be 35.8% with NPV equal to USD 57.3 million; if a high estimate of the carbon social price is taken into account, then ERR would be 44.4% with NPV equal to USD 99.0 million. The project is economically viable without accounting for carbon benefits.

36. A financial analysis assessed the financial viability of the improved technologies and systems promoted by the original project and AF and the increase in incomes and benefits from indicative investments. Conservative assumptions were made both for inputs and outputs. In line with the current Government policy, the models assume a VAT tax rate of 20 percent on local sales. Prices of commodities/inputs reflect annual averages and those actually paid/received by the market players. Several financial models were prepared to identify and quantify benefits deriving from the project investments in improvement of forest thinning, better use of forest biomass and nursery production.

37. *Improvement of forest thinning*. The financial model, which was prepared during the original project preparation in order to estimate financial return from the investment in improvement of thinning, shows an Internal Rate of Return (IRR) of 47.1 percent over 10-year project period with a positive

NPV. In general, the original project and AF's investments in improvement of thinning will generate an incremental benefit stream of about US$8.3. million per year.

38. *Improved nursery production.* The benefits derived from these investments will be due to the reduced costs and increased survival rates for forestry planting stocks. The financial model which was prepared during the original project preparation demonstrates establishing a nursery with a capacity of about 1.2 million container-grown planting stocks per year. With the AF, the project will invest in six nurseries and each of them will have a production of around 23 million seedlings per year. Apart from purchasing of the seeding lines, greenhouses and cold storages, the investments will also include all the ground and construction works. The economic gains will come from cheaper plants as they will only spend one year in the nursery as opposed to two to three years in the current situation. In addition, the survival will be higher which in turn will lead to lower planting costs because seedlings can be planted at wider spacing. Cost-benefit analysis of the planned investments shows that the IRR on the incremental net benefits is about 14.8 percent with a positive NPV and it is greater than the discount rate (10 percent). This proves that the investments in the nurseries are economically viable.

39. *Economic analysis.* The period of analysis is 15 years to account for the long-term benefits and phasing periods of the interventions within the original project and AF. The scenario presented in the economic analysis is based on conservative assumptions and estimates. The analysis is indicative and demonstrates the scope of economic profitability originated as a result of the conditions prevailing at the time of the preparation. The analysis attempts to identify quantifiable benefits that relate directly to the activities undertaken following implementation of the project components and activities, or that can be attributed to the project's implementation. Price estimates for tradable commodities have been based on the World Bank's Global Commodity Price Projections. All local costs were converted into their approximate economic values using a Standard Conversion Factor (SCF) of 0.8.

B. Technical

40. The AF is designed to meet Belarus' needs in the forestry sector to establish and strengthen forest management techniques that support the multiple goods, services and functions that forests provide. As with the original project, AF investments in the forest nursery component will be from tried and tested standards and will produce higher quality seedlings which will increase viability and survival rates. The specifications for the harvesting machines will be based on modern, but established and well-proven technology, taking into account experience gained during the implementation of the original project.

41. The forest enterprises have a good track record in maintaining and continuing financing of the forestry equipment procured. Indeed, much of the equipment purchased under a previous World Bank loan (which closed in 2003) including a seed treatment plant, is still in use and is still well-maintained. The operation and maintenance costs are met from the Forest Enterprises' own budgets, much of which is derived from the sale of timber and forest products (including seedlings). The new nurseries will produce seedlings more inexpensively, as these containers grown seedlings are raised in a single year as opposed to two or three in conventional and bare root nurseries. The seedlings will also have better survival rates which will reduce the planting costs as the plant spacing can be widened (i.e. less stems can be planted per hectare) and the need to replace failures will be reduced. Replanting, reforesting and afforestation according to approved management plans is an obligation of all the Forest Enterprises and has to date always been undertaken (the forest area of Belarus has been increasing over the last 60 years).

C. Financial Management

42. The PIU has built its FM capacity during the implementation of the main loan through on the job learning and attending World Bank organized learning events that are being periodically offered. Given that the project FM performance under the main loan is satisfactory, identical FM and disbursement will be put in place for this AF operation.

43. Specifically, the same PIU staff will be responsible for handling the transactions under AF loan, similar internal control procedures will be used. Under the AF loan, interim IFRs will also need to be submitted on a quarterly basis, and annual project audits will be required. As the currency of the AF loan is in Euro, a new set of Designated Accounts and Transit Accounts will be required.

D. Procurement

44. Since the original FDP was approved in 2015, the World Bank has adopted a new Procurement Policy Framework, which requires clients to prepare a Project Procurement Strategy for Development (PPSD) and then follow the new Systematic Tracking of Exchanges in Procurement (STEP) system. The AF loan falls under this new framework, while the original FDP follows the old procurement guidelines (January 2011). As the AF is for a limited number of procurement packages a simplified form of the PPSD has been prepared by the PIU, and has been approved by the Bank (November 2017). The PIU has also already prepared a draft Procurement Plan for the AF activities. Due to the introduction of the new procurement procedures, the fiduciary risk rating has been assessed as substantial. This risk will be mitigated through training on the new STEP system to be organized by the Bank in early 2018 for the procurement staff from the PIU to participate.

E. Social (including Safeguards)

45. Women are not well represented in the traditionally male-dominated forestry sector due to its labor intensity and tough working conditions (i.e. heavy manual work, outside in all types of weather). Gender aspects will be monitored as part of the Results Framework indicators on *number of people trained (female)* and *percentage of female direct project beneficiaries*. The project will also engage the PIU and stakeholders at the national and Oblast level to build their awareness of opportunities for quality citizen engagement, and addressing gender-specific constraints in the forestry sector. The site-specific Environmental and Social Management Plans (ESMPs) for the proposed new nurseries consider gender aspects. Training opportunities for women will be provided, particularly in the nursery sector, and this will be tracked through the above-mentioned indicator.

46. All project activities will be implemented within state owned nurseries and/or state owned forest areas and thus no resettlement issues are anticipated. Similarly, to the original project, OP 4.12 is not triggered for AF activities. Proposed project activities are unlikely to result in loss of access to resources and/or economic displacement to communities. The project areas are located on forestry enterprises lands (i.e. publicly owned). The PIU will be responsible for monitoring the implementation of the EMP, and will oversee any social safeguards-related issues that arise from the AF activities during implementation. There is a public inquiry/complaint handling mechanism that was used under the original project, and the AF will build on and strengthen this system. Although OP 4.12 is not

triggered for the AF, all social issues that may arise as a result of the project will be handled through said Grievance Redress Mechanism as per the requirements of OP 4.01.

47. The Borrower, through Bellesexport, will continue to carry out the Project in accordance with the ESMP. Except as the Bank shall otherwise agree, the Borrower, through Bellesexport, will not assign, amend, abrogate or waive the ESMP or any of its provisions.

48. The Borrower will also ensure, that the terms of reference for any consultancy in respect of any Project activity under the Project will be satisfactory to the Bank following its review thereof and, to that end, such terms of reference will duly incorporate the requirements of the Bank Safeguards Policies then in force, as applied to the advice conveyed through such technical assistance

F. Environment (including Safeguards)

49. The AF remains classified as environmental category B-partial assessment since there are no significant or irreversible adverse impacts expected. The project interventions are expected to have largely positive environmental impacts. The World Bank safeguard policies that are triggered are: OP/BP 4.01 on Environmental Assessment, OP/BP 4.36 on Forests (same as in the original project), and OP 4.09 on Pest Management (new). The latter is triggered due to the possibility that improving forest nurseries could stimulate increased use of pesticides, and because the project could provide an opportunity to promote Integrated Pest Management methods in the nurseries. This issue will be addressed by providing information, guidance, and training to all participating nurseries, rather than preparing a separate pest management plan. This will be completed no later than February 2018.

50. The site specific Environmental and Social Management Plans (ESMPs) for Mogilev, Rechitsa and Schuchin have been disclosed (*http://www.bellesexport.by/novosti/1802/*) and publicly consulted with all interested parties and the local population in the participating districts. The participating forestry enterprises have posted the EA documents on their websites (November 2, 2017) as well as provided hard copies to the key stakeholders and conducted face-to-face public consultations on November 20, 2017. Overall, the draft ESMPs have been supported by the participants and no specific questions and issues have been raised.

51. *Climate Change Commitments.* The WB climate change corporate commitments for investment projects include climate and disaster risk screening, greenhouse gas (GHG) accounting to determine ex-ante GHG emissions, identifying climate mitigation and/or adaptation co-benefits and applying a shadow price of carbon to account for carbon externalities in the project economic analysis.

52. *Climate and disaster risk screening*. The WB Climate Action Plan 2016-2020, endorsed in April 2016, commits risk screening to be undertaken for IBRD operations as a proactive approach to considering short- and long-term climate and disaster risks in projects. A risk screening was undertaken for the AF to assess current and future climate and disaster risks using the World Bank's Original Screening Tool for natural resource / forestry projects, which is built around an *exposure – sensitivity – adaptive capacity framewor*k. Specifically, the screening assessed: (i) current and future exposure at the project location to climate and geophysical hazards for extreme temperature, strong winds, and freezing rain; (ii) potential impacts on the project given the hazards; and (iii) adaptive capacity to modulate the potential impacts. Based on this assessment, the overall project risk from climate change is considered moderate. The proposed AF interventions consider climate implications, which were also a key part of the original project design, including physical (i.e. climate-resilient seedlings) and non-physical (i.e.

training of forestry professionals) aspects that will help address the threats and opportunities created by climate change.

53. *Greenhouse gas accounting*. An ex-ante assessment of the GHG impacts of the project (including the original and AF activities) was completed with support from the Food and Agriculture Organization (FAO) and in coordination with the MoF and the PIU. The results of the analysis demonstrate a positive net carbon balance estimated at 7.95 million tCO_2-e (metric tons of CO_2-equivalent) of avoided emissions or increased carbon sequestration over 20 years. This improvement is primarily due to afforestation using tree seedlings, extended areas of forestry thinning that improves forest management and wood use as bioenergy that reduces gas consumption.

54. *Climate Co-benefits*. The project was assessed by the World Bank at 100 percent for climate co-benefits, which demonstrates the project's contribution to climate action in terms of both mitigation and adaptation co-benefits. Mitigation co-benefits result from developing improved forest nurseries for afforestation and reforestation, increasing the intensity of silviculture through thinning and increased productivity of the stands, and developing the use of woody biomass and logging residues for bioenergy, replacing imported gas used for heating. Adaptation co-benefits result from investments in climate-resilient seedlings and improved quality of stands through silvicultural selection.

55. *Shadow price of carbon*. Based on the GHG assessment and assuming a baseline estimate of the social value of carbon of US$30, the project's net benefit is estimated at around US$238 million over the 20 year period.

V. WORLD BANK GRIEVANCE REDRESS MECHANISM

56. Communities and individuals who believe that are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit *http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service*. For information on how to submit complaints to the World Bank Inspection Panel, please visit *www.inspectionpanel.org*

VI. SUMMARY TABLE OF CHANGES

	Changed	Not Changed
Change in Results Framework	✓	
Change in Components and Cost	✓	
Change in Loan Closing Date(s)	✓	
Change in Disbursements Arrangements	✓	
Change in Safeguard Policies Triggered	✓	
Change in Implementing Agency		✓
Change in Project's Development Objectives		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Change of EA category		✓
Change in Legal Covenants		✓
Change in Institutional Arrangements		✓
Change in Financial Management		✓
Change in Procurement		✓
Change in Implementation Schedule		✓
Other Change(s)		✓

VII. DETAILED CHANGE(S)

RESULTS FRAMEWORK

Project Development Objective Indicators

Capacity to produce high quality seedlings increased (number of container grown seedlings per year)

Unit of Measure: Number
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	0.00	0.00	23,700,000.00	Revised
Date	27-Mar-2015	30-Jun-2017	31-Aug-2021	

Amount of carbon (CO2) sequestered
Unit of Measure: Metric ton
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	4,643,384.00	4,727,809.00	5,245,627.00	New
Date	27-Mar-2015	30-Jun-2017	31-Aug-2021	

Intermediate Indicators

Nursery lines for container grown seedlings of native tree species established
Unit of Measure: Number
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	0.00	0.00	6.00	Revised
Date	27-Mar-2015	30-Jun-2017	31-Aug-2021	

Number of people trained
Unit of Measure: Number
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	2,243.00	2,330.00	3,000.00	Revised
Date	27-Mar-2015	30-Jun-2017	31-Aug-2021	

Number of people trained - female
Unit of Measure: Number
Indicator Type: Custom Breakdown

	Baseline	Actual (Current)	End Target	Action
Value	110.00	130.00	150.00	Revised

Date	27-Mar-2015	30-Jun-2017	31-Aug-2021	

Direct project beneficiaries
Unit of Measure: Number
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	0.00	35,000.00	35,500.00	Revised
Date	27-Mar-2015	30-Jun-2017	31-Aug-2021	

Female beneficiaries
Unit of Measure: Percentage
Indicator Type: Custom Supplement

	Baseline	Actual (Current)	End Target	Action
Value	0.00	17.40	17.50	Revised

COMPONENTS

Current Component Name	Current Cost (US$, millions)	Action	Proposed Component Name	Proposed Cost (US$, millions)
Improving silviculture and the sustainability of forest management	36.47		Improving silviculture and the sustainability of forest management	36.47
Improving forest fire prevention, monitoring, detection and suppression, improving forest management information systems	4.88		Improving forest fire prevention, monitoring, detection and suppression, improving forest management information systems	4.88
Building the capacity for sustainable forest management (including GEF Project management)	2.10		Building the capacity for sustainable forest management (including GEF Project management)	2.10

TOTAL	**43.45**			**43.45**

LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Current Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IBRD-84740	Effective	31-Aug-2020	31-Aug-2020	31-Aug-2021	31-Dec-2021

DISBURSEMENT ARRANGEMENTS

Change in Disbursement Arrangements

Yes

Expected Disbursements (in US$, millions)

Fiscal Year	2015	2016	2017	2018	2019	2020	2021	2022
Annual	0.00	0.12	12.35	11.95	13.29	14.00	2.75	0.25
Cumulative	0.00	0.12	12.47	24.42	37.71	51.71	54.46	54.71

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	Moderate	Moderate
Macroeconomic	Moderate	Moderate
Sector Strategies and Policies	Moderate	Moderate
Technical Design of Project or Program	Low	Low
Institutional Capacity for Implementation and Sustainability	Substantial	Moderate
Fiduciary	Substantial	Substantial
Environment and Social	Low	Low
Stakeholders	Low	Low
Other		
Overall	Moderate	Moderate

COMPLIANCE

Change in Safeguard Policies Triggered

Yes

Safeguard Policies Triggered	Current	Proposed
Environmental Assessment OP/BP 4.01	Yes	Yes
Natural Habitats OP/BP 4.04	No	No
Forests OP/BP 4.36	Yes	Yes
Pest Management OP 4.09	No	Yes
Physical Cultural Resources OP/BP 4.11	No	No
Indigenous Peoples OP/BP 4.10	No	No
Involuntary Resettlement OP/BP 4.12	No	No
Safety of Dams OP/BP 4.37	No	No
Projects on International Waterways OP/BP 7.50	No	No
Projects in Disputed Areas OP/BP 7.60	No	No

LEGAL COVENANTS – Belarus Forestry Development Project - Additional Financing (P165121)

Sections and Description
Finance Agreement: Section I.B.2 of Schedule 2 to the Additional Financing Loan Agreement | Description: The Borrower, through Bellesexport, shall ensure that no activities to be carried out under the Project involve Involuntary Resettlement. | Frequency :CONTINUOUS

VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY : Belarus
Belarus Forestry Development Project - Additional Financing (P165121)

Project Development Objectives

The Project Development Objective is to enhance silvicultural management and reforestation and afforestation, increase the use of felling residues and improve the public good contribution from forests in targeted forest areas.

Project Development Objective Indicators

Action	Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
No Change	Name: Area of young and middle-aged production-forest thinned according to approved management plans		Hectare(Ha)	132,500.00	165,000.00	SFEs/MOF/PIU	Bi-annual progress reports	Bi-annual
Description: This indicator is linked to the PDO to enhance silvicultural management of forests.								
No Change	Name: Economic performance of		Amount(USD)	0.00	15,826,000.00	SFEs/MOF/PIU	Bi-annual progress reports	Bi-annual

	participating SFEs enhanced						/ analysis of SFE accounts	
Description: This indicator measures the excess of revenue over expenditures inclusive of all financing sources								
Revised	**Name:** Capacity to produce high quality seedlings increased (number of container grown seedlings per year)		Number	0.00	23,700,000.00	SFEs/MOF/PIU	Bi-annual progress reports	Bi-annual
Description: This indicator measures the number of container grown seedlings for afforestation and reforestation purposes.								
No Change	**Name:** Average utilizable volume of commercial timber harvested during intermediate felling in targeted SFEs increased		Cubic Meter(m3)	28.50	35.00	SFEs/MOF/PIU	Bi-annual progress reports	Bi-annual
Description: This indicator covers the use of felling waste in participating State Forest Enterprises. The unit of measure is actually m3 per hectare								
New	**Name:** Amount of carbon (CO2) sequestered		Metric ton	4,643,384.00	5,245,627.00			
Description:								

Intermediate Results Indicators

Action	Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Revised	**Name:** Nursery lines for container grown seedlings of native tree species established		Number	0.00	6.00	SFEs/MOF/PIU	Bi-annual progress reports	Bi-annual
Description: This indicator monitors the capacity to produce high quality container grown seedlings								
No Change	**Name:** Improved thinning regime developed		Yes/No	No	Yes	MOF/PIU	This indicator includes improved biodiversity friendly management of stands	Bi-annual
Description: This indicator includes biodiversity friendly management of stands.								
Revised	**Name:** Number of people trained		Number	2,243.00	3,000.00	MOF/PIU	Bi-annual progress reports	Bi-annual
Revised	Number of people trained - female		Number	110.00	150.00	MOF/PIU	Bi-annual progress reports.	Bi-annual
Description: This indicator refers to the number of forest professionals and or community members that have received capacity building through training as a result of the project								
No Change	**Name:** Reforms in forest policy,		Yes/No	No	Yes	MOF/PIU	Bi-annual progress reports	Bi-annual

	legislation or other regulations supported							
Description:								
No Change	**Name:** Govt institutions provided w/ capacity buildg to improve mgt of forest resources		Number	0.00	11.00	MOF/PIU	Bi-annual progress reports	Bi-annual
Description:								
No Change	**Name:** New areas outside protected areas managed as biodiversity-friendly (ha)		Number	1,226,700.00	4,500,000.00	MOF/PIU	Bi-annual progress reports	Bi-annual
Description: This indicator measures the number of terrestrial hectares outside protected areas where, as a result of the World Bank operation, the site is managed at least in part to obtain biodiversity gains.								
No Change	**Name:** Project-supported organization(s) publish reports on inputs and effect of consultation and information dissemination activities on project/program/poli		Yes/No	No	Yes	MOF/PIU	Bi-annual progress reports	Bi-annual

	cies (Yes/No)							
Description:								
Revised	**Name:** Direct project beneficiaries		Number	0.00	35,500.00	MOF/PIU	Biannual Progress Reports	Biannual
Revised	Female beneficiaries		Percentage	0.00	17.50			
Description: Direct beneficiaries are people or groups who directly derive benefits from an intervention (i.e., children who benefit from an immunization program; families that have a new piped water connection). Please note that this indicator requires supplemental information. Supplemental Value: Female beneficiaries (percentage). Based on the assessment and definition of direct project beneficiaries, specify what proportion of the direct project beneficiaries are female. This indicator is calculated as a percentage.								

Target Values

Project Development Objective Indicators

Action	Indicator Name	Baseline	YR1	YR2	YR3	YR4	End Target
No Change	Area of young and middle-aged production-forest thinned according to approved management plans	132,500.00	140,000.00	150,000.00	160,000.00	165,000.00	165,000.00
No Change	Economic performance of participating SFEs enhanced	0.00	605,000.00	4,939,000.00	10,496,000.00	12,723,000.00	15,826,000.00
Revised	Capacity to produce high quality seedlings increased (number of container grown seedlings per year)	0.00	0.00	2,000,000.00	2,000,000.00	4,000,000.00	23,700,000.00
No Change	Average utilizable volume of commercial timber harvested during intermediate felling in targeted SFEs increased	28.50	30.00	31.50	33.00	35.00	35.00
New	Amount of carbon (CO2) sequestered	4,643,384.00					5,245,627.00

Intermediate Results Indicators

Action	Indicator Name	Baseline	YR1	YR2	YR3	YR4	End Target
Revised	Nursery lines for container grown seedlings of native tree	0.00	0.00	2.00	2.00	4.00	6.00

	species established						
No Change	Improved thinning regime developed	No	N	N	Y		Y
Revised	Number of people trained	2,243.00	2,250.00	2,330.00	2,340.00	2,380.00	3,000.00
Revised	Number of people trained - female	110.00	115.00	130.00	140.00	145.00	150.00
No Change	Reforms in forest policy, legislation or other regulations supported	No	N	N	N	Y	Y
No Change	Govt institutions provided w/ capacity buildg to improve mgt of forest resources	0.00	0.00	2.00	5.00	8.00	11.00
No Change	New areas outside protected areas managed as biodiversity-friendly (ha)	1,226,700.00	1,226,700.00	1,226,700.00	2,536,020.00	3,845,340.00	4,500,000.00
No Change	Project-supported organization(s) publish reports on inputs and effect of consultation and information dissemination activities on project/program/policies (Yes/No)	No	N	Y	Y	Y	Y
Revised	Direct project beneficiaries	0.00					35,500.00
Revised	Female beneficiaries	0.00					17.50