



1. Project Data

Project ID P129961	Project Name SUSTAINABLE FOREST & LANDSCAPE MGT		
Country Bosnia and Herzegovina	Practice Area(Lead) Environment, Natural Resources & the Blue Economy		
L/C/TF Number(s) TF-16646	Closing Date (Original) 31-May-2019	Total Project Cost (USD) 5,059,340.46	
Bank Approval Date 15-Jan-2014	Closing Date (Actual) 31-May-2019		
	IBRD/IDA (USD)	Grants (USD)	
Original Commitment	5,575,758.00	5,575,758.00	
Revised Commitment	5,575,758.00	5,059,340.46	
Actual	5,059,340.46	5,059,340.46	
Prepared by Joachim Vandercasteelen	Reviewed by J. W. van Holst Pellekaan	ICR Review Coordinator Christopher David Nelson	Group IEGSD (Unit 4)

2. Project Objectives and Components

a. Objectives

The **Project Development Objective** (PDO) of the Sustainable Forest and Landscape Management Project (SFLMP) as stated in the Grant Agreement dated April 01, 2013 (p.46) was "To build capacity of forestry sector stakeholders and to demonstrate approaches for sustainable forest and land management through integrated management of vulnerable forest, scrub and pasture landscapes".



The PDO and Global Environmental Objective (GEO) indicated in the Project Appraisal Document (PAD para 12) were the same.

For the purpose of Section 4 of this review, the PDO has been divided into two sub-objectives which are subsequently referred to in Section 4 as Objectives 1 to 2 as follows.

Objective 1: build capacity of forestry sector stakeholders for sustainable forest and land management

Objective 2: demonstrate approaches for sustainable forest and land management

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

Component 1. Enhanced Planning and Monitoring for Sustainable Forest and Landscape Management (SFLM) (estimated cost at appraisal: US\$1.07 million; actual cost at closing: US\$0.85 million). This component aimed at strengthening the enabling environment for sustainable forest management. The component had three subcomponents:

- Subcomponent 1.1. Forest Certification Support. The subcomponent helped to certify new forests using FSC standards and supported annual audits and recertification of previously certified forests.
- Subcomponent 1.2. Forest Road Strategic Plan. This included two main activities: (a) preparation of a forest roads master plan and (b) adoption of forest road rehabilitation guidelines to minimize environmental and social impacts.
- Subcomponent 1.3. Forest Management Information System (FMIS) Enhancements for Mainstreamed Decision Making. This involved two key activities: (a) introduction of information related to climate change and (b) dissemination of information to stakeholders.

Component 2. Demonstration and Replication of SFLM Techniques in Vulnerable Areas (estimated cost at appraisal: US\$4.23 million; actual cost at closing: US\$4.48 million). This component aimed at implementing pilot activities to demonstrate already developed sustainable forest management practices to substantially improve forest/habitat management, which would help BiH's climate change mitigation and adaptation program. The component had four subcomponents:

- Subcomponent 2.1. Afforestation - Assisted Natural Regeneration and Stand Rehabilitation. Activities under this included afforestation of fire-affected sites and karst areas and post-planting management such as weeding.
- Subcomponent 2.2. Multipurpose Forestry Demonstration Techniques. This subcomponent involved activities such as thinning of forests, conversion of coppice forest to high forest, biomass management, hunting and wildlife management, forest-based tourism, and removal of waste dumped illegally in the forest.



- Subcomponent 2.3. Fire Management Technique Demonstration and Implementation. This subcomponent intended to engage local communities in implementing appropriate small-scale fire management interventions. Activities included rehabilitation of firefighting access roads, purchase of equipment (vehicles, high-pressure water pumps, and firefighting accessories), and training.
- Subcomponent 2.4. Local Stakeholder Capacity Building. Under this subcomponent, the project provided various trainings to stakeholders at the local administrative and community levels to participate in various forest management-related activities.

Component 3. Project Management (estimated cost at appraisal: US\$0.28 million; actual cost at closing: US\$0.25 million). This component supported project management in both entities. This included (a) operational support in project management, financial management (FM), and procurement; (b) annual audits; and, (c) project evaluations at midterm and closing.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project costs. At appraisal, the total cost of the project was estimated at US\$5.58 million (PAD p7). As the exchange rate between the grant currency (US\$) and the local currency (KM) improved over the implementation time of the project, some budget freed up. Moreover, both PIUs managed to implement agreed activities below budget, thereby generating additional savings. Increased project funds from these two sources was used to finance additional project activities, within the overall scope of the project (ICR para 33). Therefore, at closing, the total cost of the project was US\$5.06 million.

Financing. The appraised amount of finance to cover the total cost of the project was provided through the Global Environment Facility (GEF) (PAD p7).

Borrower contribution. Neither the legal documents, nor the PAD, stipulated that the borrower made a financial contribution (ICR p2, PAD data sheet).

Dates. The project was approved on Jan-15-2014 and became effective on Jun-09-2014. The Mid Term Review (MTR) was undertaken on Apr-24-2017. The original and actual closing date coincided on May-31-2019.

The project did not undergo a restructuring or benefitted from additional financing.

3. Relevance of Objectives

Rationale

Country context. After the armed conflict in Bosnia and Herzegovina (BiH) ended in 1995, the country has evolved into a single sovereign state with a decentralized administrative structure, transferring governance to two autonomous entities (the Federation of Bosnia and Herzegovina (FBiH) and the Republika Srpska (RS)), and one autonomous district (Brcko District). With this change in governance, a unique and complex political, administrative and institutional structure arose in BiH. As the country and its infrastructure has



been rebuilt in the last decades, the economic situation in BiH improved, and it became a potential candidate to join the European Union (EU). However, the BiH is facing several development challenges, including residual ethnic tension, a bloated civil service, an unemployment rate at 27 percent, a restrictive environment for private sector growth, low workforce participation, and a poverty rate that has remained at 15 percent since the global financial crisis in 2008 (PAD p1, ICR p5).

BiH is one of the most forest rich countries in Europe, and even though the forestry sector has a relatively limited contribution to GDP, the sector is strategically important in terms of export revenues and job opportunities. However, despite its relative importance, the management and resource utilization of the forestry sector remains underdeveloped for several reasons (ICR Annex 5). Mirroring the country's institutional structure, forest management institutions are decentralized resulting in different and complex institutional and legal frameworks for forest resource management. Most of the forest is publicly owned, but forest management enterprises are inefficient and not market-oriented. There is a lack of central forest policies at state level which complicates policy harmonization at a decentralized level, and a forest law is absent for the Federation of Bosnia and Herzegovina (FBiH). The unsettled policy framework creates a lack of clarity on the roles, responsibilities, and mandates of the different institutions in forest management. Proper and sustainable management of the sector is further complicated by the lack of forest certification, limited physical accessibility, and lack of proper forest monitoring information. A substantial part of BiH's forest is characterized as having low productivity, and harvesting rates are low, illustrating an inadequate focus on production-oriented sustainable forest management. Technical capacity is also low due to insufficient experience, skills, and knowledge of staff; and lack of up to date technology, equipment and capital investments (ICR para 4-6; Annex 5).

The concept of sustainable forest and land management (SFLM) is common in both objectives. The first objective refers to building up the capacity of forestry sector stakeholders for SFLM. But, the focus is limited to building technical capacity and increasing the potential of commercial (certified) wood production. Many of the technical and productivity issues in the forestry sector, however, are caused by the complex institutional and legal framework; the project did not attempt to address those issues.

The second objective refers to 'demonstrate approaches for SFLM'. The formulation of the second objective is however unclear, as it could be interpreted as the (i) demonstration of SFLM techniques or (ii) the demonstration of FLM techniques to achieve SFLM. Follow up communication with the World Bank team clarified that the first interpretation holds. However, the demonstration of SFLM techniques is an output that refers to the delivery of activities, and not to the effective usage of techniques that result in SFLM. The implicit assumption is that the delivery of SFLM demonstration activities will result in effective implementation of SFLM to achieve the higher-level outcomes of sustainability and export (assumptions 5 and 6 in the Theory of Change). While the sustainability effect of the latter is indeed more difficult to capture in a short time frame, using outputs as an objective lowers the ambition for project achievements and the relevance of the projects. Hence, the second objective could have been more precisely defined using a higher-level outcome. The latter could, for example, be the higher uptake of appropriate techniques for SFLM. Moreover, no clear definition of what 'to demonstrate' entails, i.e., is 'to give a practical explanation and exhibition of' (as per the definition in the Oxford Dictionary) or to delivery activities on the ground.

Alignment with strategy. The project is fully consistent with both the Country Partnership Strategy (CPS) for FY2012-2015 (under the pillar 'strengthen sustainable use of key natural resources, such as water and forests, and improve climate change adaptation') and the current Country Partnership Framework (CPF) for 2016-2020 (under the 'building resilience to natural shocks' focus area).



Previous sector experience. The project builds upon previous World Bank work in the forestry sector (and more broadly in the natural resources and environmental sector) of BiH. After the war, the Forestry Project (P045134, FP, 1998 – 2003) supported the recovery of the forest sector and the protection of forest ecosystems. The successful implementation was continued in the Forest Development and Conservation Project (P079161, FDCP, 2003–10) with a focus on strategic planning exercises, including the second state forest inventory. The Forest and Mountain Protected Areas Project (P087094, FMPAP, 2009–13) strengthened the institutional and technical capacity for protected area management and expanded the national network of forest and mountain protected areas. Most recently, the Republika Srpska (RS) Forestry Development Strategy (2011–2021) supported the aims of sustainable development of forestry to enhance and maintain all forest functions.

Conclusion. The PDO is substantially relevant to the government objectives and priorities, the World Bank's CPF framework and to the rationale for GEF financing. The relevance of the second objective in the PDO ("to demonstrate approaches for sustainable forest and land management") is, however, rated as marginally substantial given its output focus (as defined by the World Bank task team) and hence its low level of ambition.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To build capacity of forestry sector stakeholders for sustainable forest and land management.

Rationale

Theory of Change. The Theory of Change (ToC) is built around the project's aim to support BiH in the sustainable management of the country's forests and associated natural landscapes. The approach of the project was to build capacity for improved and SFLM at central and local level of governance. Objective 1 focusses on improving the technical capacity at the level of (decentralized) government institutions, by investing in an enabling environment for SFLM (ICR paras 12 and 13). The following specific areas of capacity building were addressed by the project (see ICR para 13). First, forest road accessibility was assessed and inventoried for the development of a road master plan that would attract future road investments. Second, forest products managed in an environmentally, socially, and economically sustainable way were certified and would provide access to higher value export markets for forest products. Third, improvement of the quality (and timing) of information on forest resources and their change patterns would improve the monitoring of essential forest management elements. All of these activities were expected to strengthen the financial basis in BiH for SFLM and improve the base for an economically feasible forestry sector.



Outputs. The following outputs were reported in the ICR (Annex 1, pg 44):

- Three climate change mitigation and adaptation indicators (carbon stock, area lost to fire, area under insect/pest attack) were included in FMIS (original target 3; target achieved). The ICR could have been more explicit on what exact activities were undertaken to update the FMIS; and whether capacity of government institutions has increased to keep the system up to date, and if so, use the data for improved policy making. Moreover, as mentioned in the ICR (para 44), in RS the public enterprise responsible for forest management used funds outside the project to add climate change indicators to their FMIS system.

21 government institutions provided with capacity-building trainings. These included three institutions from RS (RS Sume, MAFW, and Forest Inspection) and 18 from FBiH (MAWF – Federal Forest Institute and Forest Sector - 2; CFMCs - 9; Firefighting municipality department - 1; Forestry Faculty

- Sarajevo; Local Community - 5; and municipalities). The ICR could have been clearer on the selection criteria of government institutions to be supported.
- Two databases of over 5,000 roads in RS and of 4,586 roads in FBiH (the FBiH database includes 2,906 forest truck roads and 1,680 public forest roads).
- Equipment purchased for office and firefighting in RS: 10 computers and 30 GPS devices, 2 digital laser distomats (this is a cross line laser equipment), optical distomat, and communication equipment; protective field gears (jacket winter/summer - 13; trousers winter/summer - 13; winter/summer shoes - 13; trouser belt - 4; vest - 2; cap - 4; and shirt - 4). In FBiH: 12 laptops, 12 desktops, 1 color printer, 2 dictaphones, a projector with stand and screen, 2 external hard disks, 73 mobile devices, 2 digital calipers and hunting cameras, 1 server, 1 field vehicle, 1 firefighting truck, 285 firefighting backpacks and high-pressure pumps, wood-chopping machine, motor cutter, clearing saws, and chain saws.

Outcome. As only a general PDO-level indicator was defined for this project in the PAD (ICR Annex 1.B p44), there no specific PDO indicator for this objective. However, the project's achievement regarding two out of four intermediate outcomes and their achievements reported in the PAD are listed below:

- 1.87 million ha of forest in BiH was certified for FSC (original target 1.85 million ha; target achieved)
- One strategic forest road master plan in RS completed (original target 2; target not achieved)

Conclusion. Based on the project's outputs and intermediate outcomes the project has been successful in increasing the size of certified forests, supporting annual audits for re-certification, updating the FMIS, training staff in government institutions, and providing technical equipment. Since the project increased the size of newly certified and re-certified forests, it is likely that certification efforts supported by the project allowed access to higher value markets. The certification efforts are clearly attributable to the project, as the ICR (para 41) mentions that *'the certification would have been continued without the project; however, the scale of achievement would have been much smaller'*. Access to better information on the road network and forest monitoring indicators are likely to lead to more informed management, planning, and investments by the concerned policy makers. The project was, however, not able to complete the road master plan for FBiH by project closure because of delayed access to information from decentralized government institutions.

While all these outputs and intermediate outcomes might have increased the capacity of the forestry sector stakeholders to manage forests in a sustainable way, limited evidence to support this claim is provided in the ICR. First, the only indicator aimed at assessing the project's achievement of capacity building was the PDO



indicator of “the (number of) land under sustainable land management” which is only weakly linked to capacity building (as is acknowledged in the ICR in para 88). Second, the results framework allows an assessment of the achievement of the project in terms of the supply of technical assistance to forestry stakeholders, but it cannot provide direct evidence that capacity of the supported government agencies has increased due to the project. While the project successfully increased the area of certified forest in BiH, there is no evidence in the ICR that sales or private investments in forests have improved, and hence the country’s access to environmentally sensitive markets has improved. It is further uncertain that the road master plan has effectively led to increased investments, as evidence is only provided on the number of roads digitalized. Similarly, while the ICR provides evidence that the project increased access by forest management to relevant georeferenced information, no evidence is provided whether the project has led to higher capacity to analyze and interpret the information, and eventually to improved decision making (and hence investments) regarding climate change mitigation.

However, in follow up communications with IEG the World Bank task team provided various examples of how project experiences have contributed to the preparation and management of follow up projects as well as to improved forestry policy making (at least in RS). Such additional evidence available only after the ICR was prepared indicates that the project has indeed contributed to the capacity of the forestry sector stakeholders, and hence the efficacy rating for Objective 1 is substantial.

Rating

Substantial

OBJECTIVE 2

Objective

To demonstrate approaches for sustainable forest and land management.

Rationale

Theory of Change. The ToC in Figure 1 of the ICR assumes that the tangible and targeted demonstration and implementation activities will demonstrate appropriate techniques for and approaches to SFLM in BiH (ICR para 13). Together with the first objective, it was anticipated that this would increase the country’s basis for sustainable and economically feasible forest management; and eventually lead to the long-term outcome of “Increased export, to environmentally sensitive market, improved carbon sequestration, and climate resilient sustainable forest management to optimize forest production”. However, it is unclear in the ToC how the project expects the demonstration activities to contribute to the sustainability of forest and land management in BiH beyond the fact that the ToC assumes these activities would be maintained and scaled up (ICR para 16). The ICR could have been more explicit on what is meant by sustainability and what aspects of demonstration activities were expected to lead to more sustainability of forest and land management.

Outputs. The following outputs were reported in the ICR (Annex 1 p45):

- 933.5 ha rehabilitated fire-affected areas and bare lands through reforestation/afforestation (560 ha planted in 5 cantons in FBiH; 373.5 ha in mostly unfavorable site conditions in RS).
- In Republika Srpska (RS), thinning in 491.4 ha and coppice treatment in 150.8 ha (total 642.3 ha). In FBiH, thinning in 511 ha and coppice treatment in 261 ha. In FBiH, 1,842 ha of area under enhanced production on state lands includes thinning, coppice, afforestation, reforestation, protection of forest



services and fire management. The ICR (para 50) states that the quality of forests had improved by visually comparing project with non-project areas.

- Tourism facilities constructed: FBiH has constructed 4 canopies (one with sanitation facilities), 5 hiking and 2 walking paths, and a football playground in Central Bosnia Canton. Similarly, in Kresovo municipality, 4 canopies and 2 lakes/reservoirs (Lake Vaganj and lake Torine) have been constructed. The ICR does not provide information on whether these facilities are up and running, and if so, how many visitors (and revenues) have been attracted.
- In RS, hunters' cottage in special hunting area 'Kamenica' and an Eco-visitor center Mosor – Kupres have been established.
- RS has rehabilitated 26.7 km of firefighting access roads in 14 sections of 4 regions, and FBiH has rehabilitated 22.1 km. The ICR does not mention how many fire roads were existent and in need of rehabilitation at project appraisal, which makes it difficult to interpret the magnitude of the achievement.
- Equipment with state-of-the-art technology for a new Mediterranean nursery in Trebinje, automation system with sensors for temperature and moisture, and irrigation boom, and for an existing nursery in Dobož Nursery Production Systems (batch mixer with belt, dibbler flexi filler, precision seeder, tray covering unit - roller conveyer, automatic seeder for oak, manual seeder for broad-leaved species, growing tray - Type 1, Type 2, and Type 3; and irrigation system (holding area irrigation boom 28×100 m and growing frames). The ICR (para 53) states that the Dobož nursery achieved 14% of its production capacity, no information is given about the Trebinje nursery.
- 70 game repellents installed in three hunting grounds in RS to improve wildlife and traffic safety. The ICR (para 54) notes that road traffic accidents with wildlife have been dramatically reduced.
- Cleaning of dumping sites in 12 micro-locations. The ICR (para 54) states that local communities have shown increased awareness of waste disposal and changed disposal behavior, but it is unclear based on which evidence this statement is made.

Outcome. The general PDO-level indicator defined in the PAD is the “land area where sustainable land management practices were adopted as a result of project (ha)”. While the PDO indicator is not specifically linked to this objective in the PAD, we use the PDO indicator to assess the achievements of the second objective. At the time of completion, the land area covered with sustainable land management practices was 3,325 hectares of which about 1,000 ha was reforestation and the remainder forest restoration, which was an achievement of 18% over the original target of 3,000 hectares. However, while this indicator provides evidence on the size of the demonstration activities undertaken by the project, it provides little evidence on how the demonstration activities have contributed (or were expected to contribute) to the sustainability of forest and land management.

The ICR listed the achievements of the following intermediate outcome indicators:

- 1,030 hectares of area restored or re/afforested (original target 1,000; target achieved)
- 934 hectares of area re/afforested (original target 1,000; target not achieved)
- 2,484 hectares of area under enhanced production on state lands (original target 2,000; target achieved)
- 38 demonstration subprojects completed relating to innovative SFLM methods (original target 28; target achieved)
- 43 demonstration subprojects completed related to fire control (original target 22; target achieved)



Conclusion. The project has successfully (i.e. with respect to the original targets) achieved the intermediate outputs of the area restored or re/afforested; the area under enhanced production on state lands, the demonstration subprojects completed relating to both innovative SFLM methods and fire control.

Rehabilitation and reforestation of forests increased the size of land covered with forest in BiH and hence the potential for economic and societal benefits of forest services. Improved management of existing forests improved the productive capacity of the forest and allowed the production of more valuable commercial timber. Addressing the issues of illegal waste dumping and supporting ecotourism allowed diversification into non-timber forest services and the creation of healthy recreational and economic benefits for local communities. All these activities are likely to have demonstrated to different stakeholders in the forestry sector the importance and benefits of SFLM.

There is certainly evidence on the delivery of a number of outputs contributing to the achievement of Objective 2 (“to demonstrate approaches for SFLM”). However, the evidence is mainly limited to “rehabilitation of forests and reforestation”, and it is questionable as to what extent that replanting forests is a demonstration activity. The verb “to demonstrate” is defined in the Oxford Dictionary as “to give a practical explanation and exhibition of” and it is not clear how some activities have been selected (see efficiency section) and how the project approached the explanation of activities to beneficiaries. The ICR also did not provide evidence that “demonstrating approaches for sustainable forest land management was also expected to lead to building capacity for Sustainable Forest and Landscape Management (SFLM)” as assumed in the project’s design (ICR, para 16).

The PDO indicator, namely “Land area where sustainable land management practices have been adopted as a result of the project (ha)” is the corporate indicator adopted by the World Bank Board. However, the PDO indicator was labeled so that outputs were directly linked to the project (i.e. “[...] as a result of the project (ha)”. As a consequence, the baseline value is assumed to be zero, as there were no project demonstration activities before the project. Any change in the PDO indicator is attributed to the project activities by definition, and the PDO indicator was therefore assumed to be achieved. While it is hard to imagine that there has been no area in BiH where sustainable land management has been adopted, an impact evaluation would have been useful in providing evidence on the extent to which the demonstration activities of the project contributed to more sustainable forest and land management in BiH.

Since the IEG ICR review team accepted the World Bank team’s interpretation of Objective 2 as the delivery of demonstration activities (outputs), this review concluded that the achievement of Objective 2 was substantial.

Rating
Substantial

OVERALL EFFICACY

Rationale



Based on the substantial efficacy ratings for both objectives, the overall efficacy of the project is rated substantial.

Overall Efficacy Rating

Substantial

5. Efficiency

Methodology. The PAD undertook an economic and financial efficiency analysis only for the second component of the project. As the first project component involved capacity building of institutions, the PAD stated that the benefits are not quantifiable (para 43). Instead, the analysis at appraisal focused on the economic benefits arising from improved forest productivity and from improved forest productivity together with biomass production leading to carbon sequestration.

The ICR (para 106), however, notes that the economic analysis in the PAD had methodological shortcomings leading to inaccurate results. The main issues with the original analysis were (ICR annex 4): (i) the incremental financial and economic impacts of reforestation activities were based on the entire target of 3,000 ha of forest under SFLM, while only 1,000 ha of forest was effectively regenerated, (ii) the wood price used in the analysis was seriously overestimated because only export prices were taken into account, (iii) the benefits of carbon sequestration services were incorrectly estimated due to point (i) above and because of the double counting of production and carbon sequestration services; and (iv) overestimation of commercial harvesting volumes.

The ICR therefore undertook a new economic and financial analysis using a revised approach to the analysis conducted in the PAD at the time of appraisal: a similar discounted cash flow model was used, the EX-ACT model was adapted, and changes were made to the 'with- and without-project' scenarios and calculation of key benefits. The ICR also undertook some sensitivity analysis with respect to changes in the amount of wood harvesting, wood prices, and carbon prices.

Economic Efficiency. The economic internal rate of return (EIRR) calculated at appraisal accounted for the social value of carbon sequestration services (using the FAO EX-ACT approach for 25 years) and resulted in an EIRR of 19.2 percent. Using a revised and improved methodology, the ICR estimates the EIRR at 12.7 percent at project closing.

Financial Efficiency. In the original analysis in the PAD, the financial internal rate of return (IRR) was calculated at the appraisal, both with and without carbon benefits, and was estimated at 8.5 percent over a lifetime of 25 years. Financial efficiency was based on export driven valuation of forest products and standing timber. Using a revised and improved methodology, the ICR estimates the FIRR at 5.8 percent at project closing (accounting for carbon benefits).

As shown above, the economic and financial analysis conducted in the ICR generated lower rates of return compared to the PAD. The ICR (para 62), however, notes that "*the decline in the economic performance (compared with the PAD estimates) is due to changes in the analysis and not due to weaker project performance*". The ICR (para 64) further notes that "*the IRR achieved by the project is acceptable for afforestation and reforestation projects with long rotation periods and not particularly high annual natural forest*".



growth rates". This review concludes that the estimated economic IRR is credible, reflecting the increasing social cost of carbon and increasing importance of climate change mitigation over time. It also reflects the trade-off between the harvest size of the available harvestable commercial wood and the carbon sequestration services of non-harvested wood.

The updated economic and financial analysis presented in the ICR has a few issues itself. First, the numbers used in the analysis are not consistent with those reported in the ToC on page 11 of the ICR or in the indicator discussion of Annex 2. For example, the ICR (para 3) states "*increase in forested area and thinning (1,893 ha)*" but it is unclear where this number comes from. Second, the analysis focused only on the benefits from increased area of forest rehabilitated or reforested, and does not discuss changes in efficiency that are related to the demonstration sub projects and their intermediate outcomes (IO 2.3 and 2.4). As capacity building at local and central (see below) levels was part of the PDO, this seems like a missed opportunity to discuss how efficient the project was in improving capacity (see below).

Implementation aspects. Implementation and management of the project was under the responsibility of the PIUs in the two entities, which – as discussed in section 8a – had experience and technical expertise in World Bank forest projects. In both entities, the staff turnover in the PIU and the respective ministry was small (ICR para 65). Both these aspects led to an overall efficient implementation of the project. Even more so, because of the appreciation of the local currency, and savings by the PIU, the project was able to implement additional activities under component 2. The project was not restructured or extended despite implementation delays, most likely because the Country Management Unit became more involved towards the end of the project.

Several delays in implementation were noted in the ICR. First, adding new components to the FMIS (IO 1.3) was delayed in FBiH because the existing FMIS was found to be dysfunctional at the time of appraisal. This indicated that the status and readiness for improvement of the FMIS was not (properly) assessed before the project was implemented and hence additional efforts need to be undertaken to get the FMIS operational by the end of the project. Moreover, the PIU needed to use external support to the FMIS given the lack of in-house technical expertise (ICR para 72). Second, the complex institutional framework because of the high level of decentralization in BiH was considered as a risk to the project in the PAD, and did cause implementation delays in the preparation of the forest road master plan and the identification of forests suitable for certification. This was a particular issue in FBiH, where the limited cooperation and coordination between different agencies (at the federal sector ministry, the PIU, the cantonal authorities, and CFMCs) affected project implementation (ICR para 77). Third, the ICR (para 87) also mentions delays in the fieldwork of demonstration activities linked to unfavorable weather conditions and seasonality of activities, which could have been anticipated to some extent. Fourth, there were delays in procurement because of late initiation of the procurement process (e.g. purchase of the firefighting vehicle, ICR para 104) and a lack of a detailed mapping of potential local service providers (ICR para 104 p32).

Conclusion. The PAD provided a partial assessment of the project's efficiency as it did not undertake an economic and financial assessment of the capacity building objective. While capacity building aspects are indeed difficult to quantify, some intermediate outcomes refer to tangible investments in certified forests for which the efficiency could have been assessed (and probably would have contributed to providing the needed evidence that the project was efficient overall). For example, the economic and financial benefits of having more certified forest (IO 1.1) could have been included in the analysis because there are clear economic benefits (e.g. higher prices) from access to higher value markets.

The ICR (para 68) states in the discussion of 'other outcomes and impacts' that "*Capacity building was the objective of the project, so it has significantly improved better understanding of sustainable forest management*".



However, the delays in project implementation mentioned above, and procurement delays discussed in section 10b of this review, illustrate that capacity regarding project implementation and management has not been fully enhanced. Delays were caused by the highly decentralized policy framework in FBIH and the uneven basis of SFLM activities between entities to start with (e.g. RS already had forests under FSC certification). This implied that project activities were implemented by the many different agencies within the same sector, but with limited coordination between agencies and across entities. In follow up communications with IEG the World Bank team clarified that the decentralized structure within FBIH and unclear mandate of the entity Ministry of Agriculture, Water Management and Forestry were an ongoing issue and led to delays in data collection and project implementation. RS had a less complex institutional structure, and hence implementation was more efficient and there were no adverse implementation issues.

Based on follow up communication with the World Bank team, the second objective of the project is to be interpreted as to demonstrate SFLM activities. The ICR mentions that “the demonstration ambition of the project appears to have been less developed” (ICR para 73). The ICR provides the example of forest thinning, where it argues that a demonstration activity should ex-ante start with testing different thinning intensities in different locations, and demonstrate (and communicate) the optimal thinning intensity based on field evidence to implementing agencies. This did not happen in the project. Hence, if the project objective is to demonstrate SFLM, then a profound discussion of what the project considered as a SFLM activity should have been provided, as well as evidence (‘demonstrate’) on the effectiveness of a chosen activity over its alternatives.

Given the delays and challenges due to the complex institutional framework undermined implementation efficiency in the FBIH, and the unclear definition and selection of demonstration activities, this review rates the efficiency of this project as modest.

Note: The coverage/scope percentage in the table below is only an estimate, as it is unclear how much of the project’s funding was allocated to the forest rehabilitation and reforestation activities for which the rate of return was calculated.

Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	19.20	75.90 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	12.70	80.40 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome



Based on a critical review of the evidence in the ICR (and from follow up communication with the World Bank team) of the project's achievements with respect to relevance of objectives, efficacy of achievements, and efficiency of implementation; IEG rates the project as Moderately Satisfactory.

The relevance of the project's objectives is rated substantial, but only marginally so as the second objective to demonstrate SFLM activities is an output and not an outcome. The project could have been more relevant if it tried to contribute to an intermediate outcome such as the effective uptake or implementation of the SFLM activities that the project promoted.

The overall efficacy of both objectives is rated substantial as the ICR provides evidence on the number of government staff trained, forest certified, roads rehabilitated, equipment purchased, game repellents installed, etc. The PDO indicator in the PAD was only linked to Objective 2 of the PDO, and without baselines or a counterfactual derived from an impact evaluation, proper attribution remains difficult. Efficiency is assessed as modest as the efficiency analysis is solely based on a partial economic and financial analysis of the demonstration component of the PDO, implementation issues in FBiH, and unclear selection of demonstration activities.

Based on these results, the project's overall outcome had moderate shortcomings and is rated moderately satisfactory.

a. Outcome Rating
Moderately Satisfactory

7. Risk to Development Outcome

The ICR identified one major risk to development outcomes (para 110-111) arising from the lack of adequate financial resources to carry out SFLM practices on a regular basis. The project was embedded within existing PIUs and based on existing forest management plans. Nonetheless, additional investment is needed to complement improved capacity and to ensure the sustainability of project outcomes and resilience to climate change impacts. To address these concerns, the World Bank is in discussion with the entity and state authorities regarding a follow-up investment finance project as agreed in the CPF 2015–20 and to build upon the lessons learned from the SFLM project (ICR para 111).

8. Assessment of Bank Performance

a. Quality-at-Entry

During the design of the project, the World Bank drew on previous operations and sector work in the country (see section 3 in this review). The project was also relevant to the country's current economic and environmental challenges. The World Bank identified activities in the project in a consultative and participatory process.



The projects were implemented by a PIU that had been established for other World Bank-financed forestry projects. The ICR (para 75) further notes that PIU staff were well trained and acquainted with World Bank operational, fiduciary, and safeguards procedures at the time of project preparation. Hence, both PIUs have technical competent people to manage the project, but the ICR highlighted that the PIU in FBiH did not have the adequate number of staff fully dedicated to the project.

The project has been strongly embedded within local governance structure and agencies. The PIUs in Bosnia and Herzegovina implemented most of the project activities through local forest administrations and management companies in consultation with local stakeholders. This indicated the appropriate selection of stakeholders engaged with, implementation through the existing forest policies and ministries, and contributes to the scale up of project activities. For example, the ICR (para 48) notes that the Bank's activities regarding the forest certification were largely based on the forest management plans (at the time of project appraisal) in consultation with forest management agencies. This assured commitment and buy-in of the implementing agencies.

However, the ICR (paras 72-77, para 106) identifies several issues of concern in the project's design. First, some aspects of the Results Framework were unclear and needed improved explanation, which indicated unclear design of the framework. Second, the ICR states that *"the piloting and demonstration activities such as thinning for the project were not based on solid assessments, were reflected in very limited documentation and communication, and lacked systematic follow up"*. Third, as discussed in section 5 of this review, there were implementation delays caused by the dysfunctional FMIS and the limited cooperation and coordination within FBiH, aspects which could have been addressed before project appraisal. Fourth, the delays caused by the difficulty of attracting competitive bids had not been identified as a risk in the PAD but affected project implementation. Finally, as mentioned above in Section 5 of this review the ICR noted that the economic analysis at appraisal had serious methodological issues (inaccurate assumptions on incremental production, prices, and carbon sequestration services), which led to an overestimation of the potential benefits of the project.

Quality-at-Entry Rating

Moderately Satisfactory

b. Quality of supervision

According to the ICR (para 107) the World Bank adequately supervised the project and provided sound support to project implementation. It was stated that implementation support missions were undertaken twice a year and one technical mission was conducted. During these missions, implementation bottlenecks were identified, and feedback was given on next steps to take, fiduciary aspects and environmental safeguard compliance. Randomly selected sample sites were visited for safeguard supervision, and in one site an issue of wastewater management practices was identified (and quickly resolved by the PIU).

During one of the implementation support missions, the World Bank cautioned against the cumbersome verification process for vendors to engage in World Bank financed operations, but it is unclear whether this affected implementation.

The World Bank requested careful reviews of proposed solutions to identified problems and strived for guidance from within Bank departments before responding to client proposals. Two analytical studies were



conducted to better understand regulations and analyze the value chain of the forest sector, which provided guidance on the topics and encouraged follow up engagements of local government agencies.

The World Bank consulted with relevant stakeholders (e.g. the EU) to explore potential long-term financing opportunities for the forestry sector in BiH and organized a multi-stakeholder workshop.

At the end of the project, when implementation delays in FBiH could potentially undermine the achievement of the PDO, the Country Management Unit also got involved in monitoring the project's progress and helping to resolve implementation challenges.

The ICR (para 113), however, notes a few missed opportunities at the time of the MTR to adjust some of the design flaws regarding the unclear results framework and anticipate project implementation delays linked with the low baseline quality of the FMIS system.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

By design in the PAD (para 37) the M&E reporting was coordinated by the implementing agencies and the PIUs and supported by the cantonal offices, facilitating organizations, community-based organizations, project beneficiaries and other stakeholders. Outcome monitoring and project impact assessments was expected to use and analyze the primary data (from the project sites and beneficiaries) collected by field-based partners, as well as specialized data collected with external technical assistance. The M&E was expected to be consistent with existing structures in the FMIS; reporting would build upon existing formats prepared under other projects implemented by the respective PIUs (PAD paras 37, 38). As such, the M&E system was well embedded in the local institutions and would likely to be sustained after project closing.

The overall quality of the M&E was, however, rated modest in the ICR, and this was mostly influenced by some weak aspects of M&E design. Specifically, the ICR noted issues regarding attribution of achievements to the project and the unclear definition of activities and indicators. In addition, the ICR review flagged some additional issues. These are discussed below.

First, and as discussed in section 4 above, the link between the one PDO indicator and the capacity building component of the project is unclear, and the ICR acknowledges that an *“additional PDO-level indicator covering capacity-building outcome and associated intermediate indicator might have been helpful”* (para 88).



More importantly, as stated in the ICR, the M&E design lacked a focus on impact evaluation aspects that would allow for a better interpretation of results in terms of attribution/impacts of the project. For example:

- Achievement in the M&E is identified by comparing the situation before the project versus the situation after the project. No impact evaluation was developed to look at the counterfactual outcome, i.e. what would have happened at the project sites without the project support. As a consequence, the extent to which achievements in the project can be attributed to the project is limited.
- Most indicators measuring outcomes and objectives in the results framework were project outputs rather than an outcome or objective indicators. For example, the PDO indicator is the 'Land area where sustainable land management practices were adopted as a result of project'. A more useful indicator would have been the 'Land area where sustainable land management practices were adopted' (i.e. without 'as a result of project'). This is similar for all other indicators except for indicator IO 1.1, where the area of certified forest was not linked to the project.
- Consequently, nearly all indicators had a baseline value of 0 because the indicators were formulated as outputs directly linked to the project. The project hence did not take stock of the existing status before implementation of the activities.

Moreover, as highlighted in the ICR, there were also a few shortcomings with the indicators. For example:

- It was unclear how the target of 3,000 hectare for the PDO-level indicator was set. According to the WDI (2019)[1], BiH had 21,850 square kilometers in 2013. As such, the target of forest under sustainable management is only 0.14% of the total forest, and it is unclear whether this was sufficiently ambitious as an indicator or not.
- The indicator IO 1.3 measures the number of climate indicators included in FMIS. However, as the ultimate goal of the project is to build capacity, it is unclear whether the project just delivered new indicators, or also supported capacity to maintain, update, and use modern information systems.
- Similarly, indicator IO 1.4 is a service delivery output of equipment, not an intermediate outcome of increasing technical capacity.
- There is substantial overlap between the intermediate results indicators 'IO 2.1(a) Area restored or re/afforested (Core Indicator) [ha]' and 'IO 2.1(b) Area re/afforested (Core Indicator) [ha]'. Both indicators are core indicators and have the same annual target, so according to the ICR (para 89) it is "*unclear whether the target is for restoration or reforestation/afforestation*". It is further unclear why the outcomes achieved at completion are different, and suggest that IO 2.1(b) is a subset of IO 2.1(a). But if so, then reforestation/afforestation accounts for 91% of the target achieved for IO 2.1(a). A better definition and explanation of the indicators and their targets would have been useful.
- The ICR (para 89 further notes that "*Some intermediate indicators appeared to be accounting the same project activity twice as a number of demonstration projects and areas are covered by those projects*".
- There is also a substantial overlap between indicator IO 2.2 and the two IO 2.1 indicators, so it is unclear what the added value was of this indicator.

The definition and labeling of some objectives and outcomes (and their indicators) are confusing:

- The indicators for IO 2.3 and 2.4 refer to the number of subprojects completed, but as the ICR notes (para 90), it is unclear what the definition of subproject entails. Also, it is unclear how the number of subprojects is linked to the number of beneficiaries and the quality of support provided. i.e. one can



either provide a few trainings to a larger audience or more training sessions to smaller groups. Is the implicit assumption that training in more – but smaller – groups improved capacity building? There is no discussion or supporting evidence of this assumption.

- The labeling of the PDO-level indicator is somewhat confusing, as in the PAD (para 17) the indicator is referred to as ‘Total land under improved management using SFM techniques’ but in the ICR it is labeled as ‘Land area where sustainable land management practices have been adopted as a result of the project’ (ICR para 19 p16). Sustainable land management is a broader concept than sustainable forest management (e.g. soil conservation measures), and in the definition of the indicator only forest activities are included (ICR para 19). A more consistent labeling of ‘SFLM’ would have been useful.
- Component two of the project refers to “Vulnerable Areas” while in the PDO reference is made to “vulnerable forest, scrub and pasture landscapes”. Did vulnerable areas encompass the vulnerable forest, scrub and pasture landscapes, or was it a broader concept?
- The ICR (para 90) further discusses the unclear definition of the aspects ‘subprojects’, ‘innovative method’ and ‘vulnerable forest’ of some indicators in the result framework.

[1] World Development Indicator data on forest area (in square kilometer) was accessed via <https://data.worldbank.org/> on 12/4/2019.

b. M&E Implementation

The PIUs in both Bosnia and Herzegovina regularly measured the indicators in the Results Framework and reported to the World Bank for inclusion in the Implementation Supervision Reports and updated GEF tracking tools for climate change mitigation, land degradation, and sustainable forest management at the MTR stage.

The ICR (para 91), however, notes the irregular and non-systematic collection of gender disaggregated data, the lack of formal progress reports since the MTR in FBiH (because of the slowdown in technical preparation and decision making) and the lack of collecting follow up data.

c. M&E Utilization

The ICR (para 93) notes that M&E data on performance and results progress were used for management and decision making. The example is given of the added demonstration activities after the MTR, which were selected using M&E data to ensure their contribution to the appropriate result indicator. The project also organized communication and dissemination activities on project activities. However, the ICR also notes that *“the M&E data were used to provide evidence of inputs and achievement of outputs but were not leveraged further to provide evidence of outcomes. This gives a somewhat limited picture of the project achievements”*.

Based on the assessments of the project’s performance on three aspects of monitoring and evaluation this review rates the quality of M&E in this project as modest.



M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

At appraisal, the project was classified as Category 'B and Two Safeguard policies are triggered by the project: Environmental Assessment OP/BP 4.01 and Forests OP/BP 4.36 (PAD para 56)

Environmental Safeguards. The instrument used for the environmental assessment was a stand-alone Environmental Management Framework (EMF) covering the primarily demonstration activities under Component 2. The EMF was disclosed and distributed online, and after public consultation the final EMF was disclosed on November 1, 2013 (ICR para 95). Site-specific Environmental Management Plans (EMPs) had been prepared, reviewed, and approved by the World Bank for each activity when applicable. Field visits to randomly selected sites were part of the implementation support missions for safeguard supervision (see also section 8b).

b. Fiduciary Compliance

The ICR (para 97) notes that the **Financial Management (FM)** arrangements by “*both PIUs remained adequate and satisfactory to the World Bank’s requirements throughout the project period*”. The World Bank assessed the FM satisfactory at project appraisal with moderate risks and compliance was satisfactory in all aspects of FM.

Both PIUs hired dedicated FM specialists, prepared quarterly interim financial reports, and had adequate Internal controls and audit systems. Planning and budgeting were adequate as both PIUs prepared annual plans and budgets based on detailed Procurement Plan for all project activities (which was entered and analyzed in the accounting software). The World Bank received annual external audit reports (except for the first year) and the auditors did not find accounting problems and internal control deficiencies and issued an unmodified (clean) opinion on the project financial statements (ICR, para 97-100). During one of the implementation support mission, one case of internal control weaknesses was found, but the issue was successfully resolved by the end of the mission.

The ICR states that the disbursement arrangements for both PIUs were satisfactory and no ineligible expenditures occurred (ICR, para 101).

Procurement aspects were assessed strong by the World Bank in both the PIUs at the project appraisal and implementation, while risks were rated low. Both PIUs followed the World Bank procurement guidelines and complied with the provisions in the Legal Agreements. Procurement Plans were regularly updated, reviewed, approved, and disclosed; and each contract financed was agreed between the client and the government and followed the appropriate methodology (ICR para 102). The procurement post review (conducted in June 2018) indicated that procured goods and services properly, timely, and transparently; and no possible issues of inappropriate practices, questionable actions, noncompliance fraud or corruption (ICR para 103). Toward the project’s end, a private company alleged



the FBiH PIU of mis-procurement and submitted a letter to the World Bank. However, based on clarifications by the FBiH PIU, there was no breach of policies, principles of public procurement, or World Bank guidelines (ICR para 104).

Delays, however, in procurement arose as several unsuccessful bidding processes had to be repeated (because of an insufficient number or too expensive bids) and it was difficult to find local contractors for small-volume works (e.g. for remote feeder roads). This has led to delays in implementation which, according to the ICR para 105), could have been avoided by a more detailed mapping of potential (service) suppliers.

c. Unintended impacts (Positive or Negative)

The main 'other impact' that is discussed in the ICR is the mobilization of private sector financing, where it is stated that "*The project did not formally mobilize the private sector, but the private sector has benefited from the project achievement*" (para 69). While the ICR states that there could be potential positive spillover effects from private owners' willingness to replicate activities, after observing the benefits of the forest certification on the project supported public forests, it is unclear from which additional information (e.g. conversation with private land owners) this assessment was made. Moreover, public investments in the Forest Stewardship Council (FSC) could also crowd out the private sector, as they were not directly supported by the project. For example, the ICR states that *Ikea* has been supporting the forest certification in parallel to the project, but it is unclear whether private forests are targeted.

Other unintended impacts that could be of concern for sustainability are the following. First, ecotourism was developed and supported in the project, but it is unclear whether there were measures to ensure its sustainability. The only evidence is with respect to infrastructure, but not capacity or awareness of the ecological aspects of tourism. For example, it is stated that during the ICR mission problems in the wastewater management practices were observed in one of the ecotourism facilities, but the PIU resolved this problem adequately and quickly (ICR para 96).

Second, opening roads for improved access of firefighting might increase illegal firewood collection or timbering. It is unclear whether measures were taken to address illegal activities. The ICR however mentions the increased awareness of illegal waste disposal, and that "*Nearby communities have gradually been changing their behaviors and avoiding disposal in and around the sites where the project intervened*" (para 56). However, no evidence is provided in the ICR on how the behavioral change has been induced and how it was achieved.

d. Other

Gender. Although the gender-related indicators were not formally included in the Results Framework at appraisal, the PAD (para 54) states that gender disaggregated data related to capacity building would be collected "*to inform how forestry planning and sustainable management initiatives affect men and women and their communities*". However, the indicators used for the intermediate outcomes did not allow the collection of gender disaggregated data (due to the lack of indicators at beneficiary level).



11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Modest	Modest	
Quality of ICR	---	High	

12. Lessons

IEG has drawn following lessons based on those reported in the ICR (para 112-119) with some changes in language:

- **For a demonstration project to be replicable and guide policy, careful planning is required.** In this project there were deficiencies in the monitoring of the results on demonstration plots and an absence of control plots. Consequently, it was not possible to assess whether the results of the demonstration plots were attributable to the project or not. The lesson is that to gain any benefit from a demonstration project it needs to be carefully implemented and appropriate counterfactuals need to be established if the demonstration plots are to be useful for technical or policy purposes.
- **Cost and complexities in investing in information systems and new technology are often underestimated resulting in implementation delays.** In FBiH, insufficient funds and the underestimation of the task at hand to upgrade the FMIS information system resulted in project implementation delays. The lesson is that the costs of upgrading existing information systems or investing in new technologies need to be properly assessed at appraisal, and that sufficient funds need to be available to procure competitive service providers.

IEG draws the following additional lesson:

Projects that aim to enhance the weak capacity of decentralized government institutions need to assess the root causes of this weakness during appraisal. This project aimed to enhance the low capacity of the forestry stakeholders (regarding policies, strategies and planning) in the context of the decentralized and complex institutional and policy framework of the different entities of BiH. However, while the project sought to address the complex decentralized forest policy in BiH, the implementation of the project itself was negatively affected by the complexity of the institutional setting, and especially so in FBiH. The lesson is that a project's appraisal needs to properly assess how a weak decentralized government could affect implementation capacity and pose a risk for project outcomes.

13. Assessment Recommended?



No

14. Comments on Quality of ICR

The ICR was logically written with enough attention and information on the project background, implementation and outcomes achieved and it complies with OPCS guidelines. The Theory of Change (ToC) is presented concisely and it is clear how project activities were expected to contribute to the PDO. At the same time, the ICR critically assessed some elements of the ToC, the methodology of how achievements were measured, and the methodology of the financial and economic analysis. These subtle comments appropriately signaled some limitations of the project which were elaborated in this ICR review. As confirmed in IEG's communication with the project TTLs, no additional information on baselines or impact evaluation was available, and the ICR had to rely on interviews with key informants and field visits to compare demonstration plots with control plots to observe project achievements. The economic and financial analysis originally presented in the PAD is critically reviewed and a more appropriate methodology is applied in the ICR, using more realistic assumptions that were conservative and verified in the literature, providing more reliable assessment of efficiency. The lessons are based on evidence of the project's implementation and outcome and are useful for a broader audience. Throughout this ICR review, several shortcomings or limitations of the ICR are highlighted, but none of these are considered as substantial.

a. Quality of ICR Rating High