

Ex-post evaluation – CarBi I (Laos & Vietnam)

Project of the International Climate Initiative (IKI)

Targeted IKI Core objectives: Preservation of natural carbon sinks/REDD+; Protection of Biological Diversity

Project: Avoidance of deforestation and forest degradation in the border area of southern Laos and central Vietnam for the long-term preservation of carbon sinks and biodiversity - CarBi (BMU Signature: 11_111_017_ASIEN_K_Eindämmung Leakage)

Implementing Agency: *World Wide Fund for Nature (WWF)*

Ex-post evaluation report: 2020

		Plan	Actual
Total Costs	Mio. EUR	9.915	9.915
Co-Payment	Mio. EUR	2.915	2.915
Total Grant	Mio. EUR	7.000	7.000
Of which IKI funds	Mio. EUR	7.000	7.000



Summary: The landscape of the carbon sinks and biodiversity program (CarBi) is habitat to several endemic and endangered animal species and threatened by illegal logging, land-use, and landcover change as well as illegal poaching inside and outside of protected areas. Underlying causes for these problems comprise the lack of local law enforcement, missing livelihood alternatives, low institutional capacities and protected area management effectiveness, low problem awareness, and missing community ownership, as well as a lack of cooperation between Vietnamese and Laotian authorities to address cross-border wildlife and timber trade issues. CarBi tried to address several problems with a holistic concept to strengthen institutional capacities, improve the local population's participation, and increase trade transparency and institutional cooperation.

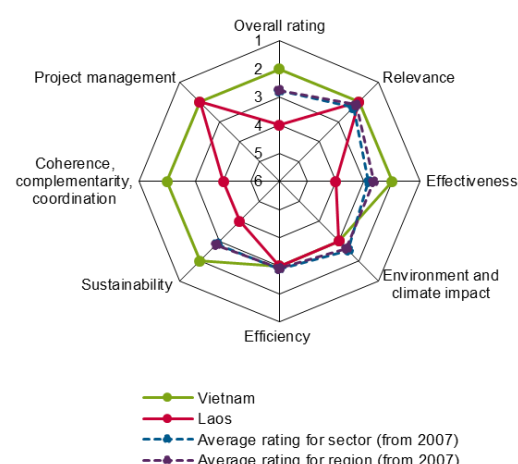
Goals: The impact objectives are defined as (1) Climate change mitigation by reducing emissions from deforestation and forest degradation and (2) Contributing to reducing biodiversity loss by increasing the protection for threatened animal species in the Annamese mountain range in central Vietnam and Southern Laos. Goals at the project outcome level can be defined as (a) Increasing management effectiveness in the four supported protected areas, (b) Implementing a sustainable financing mechanism for long-term conservation finance, (c) Improving livelihoods and increasing the participation of the local population in protected area conservation, (d) Increasing the cooperation between Laotian and Vietnamese authorities for cross-border timber and wildlife trade control.

Target Group: Forest protection departments and protected area management and (indirectly) the project region's population. A global benefit is expected from the reduction of carbon emissions.

Overall Grade: 2 (Vietnam), 4 (Laos)

Rationale: CarBi had an extensive project portfolio, which produced a couple of very successful outcomes while other activities fall far behind their initial expectations in terms of impacts and sustainability. Therefore, CarBi provides several valuable lessons learned for similar projects and a continuation of selected activities alike.

Highlights: Implementation of a Payments for Forest Ecosystem Services scheme with strong community participation in Vietnam. Cooperation with research institutions to develop and test innovative approaches for biodiversity monitoring and patrolling assessments. Effective reduction of poaching threats in at least two of the four protected areas. Rediscovery of the Saola.



Rating according to DAC criteria

Overall Rating: 2 (Vietnam), 4 (Laos)

Lessons Learned

- Complex conservation projects with multiple stakeholders and many different activities tend to be more difficult to manage, generate comparatively higher costs, and are less likely to achieve longstanding impacts. Nevertheless, CarBi demonstrates that, in addition to a couple of notable outcomes, complex projects may serve as an excellent scoping effort to get a foot on the ground, test innovative approaches and create new conservation opportunities, which may generate longstanding impacts if successful activities are maintained and extended in the future. Outstanding in this regard is CarBi's support of and co-operation with scientific institutions such as IZW to generate more robust data and knowledge on the projects.
- This evaluation suggests that professional park rangers' monitoring activities seem more likely to reduce wildlife poaching than community-based approaches. Nevertheless, community-based approaches can be successful if there are a clear incentive system and an external auditing mechanism to monitor the activities. Interestingly, CarBi provides lessons learned about successful community-based approaches (in Vietnam) and less successful ones (in Laos).
- CarBi tried to implement a compensation mechanism for reduced emissions from deforestation and forest degradation (REDD+). However, such a scheme's implementation was not feasible because of low initial deforestation levels in the core protection zones and low carbon prices on the voluntary markets. Assessing the feasibility for REDD+ through baseline-studies should therefore be realized already during project preparation of REDD+ related projects in the future.
- Nevertheless, CarBi helped to implement a financing mechanism called Payments for Forest Ecosystem Services (PFES) in the buffer zones of protected areas in Vietnam. The successful implementation of PFES is an outstanding example to involve local communities by creating direct financial incentives to engage in conservation. As such, CarBi sets an interesting example of sustainable finance in the conservation sector.
- In terms of CO₂ emissions and biodiversity loss, Laos' shifting cultivation is currently a more urgent problem than selective logging in and outside protected areas. It might be valuable to explore how land-use and land-cover change-related emissions can be addressed in conservation and agriculture-related projects on a strategic level. The support of less land-demanding agricultural practices, including agricultural intensification measures or commercial tree plantations, should be considered to avoid encroachment of surrounding communities into protected areas.
- Regarding the transformation of land-use practices, CarBi's challenges to provide sustainable livelihood alternatives to poaching in Laos show that agricultural support systems need to be tied and coordinated much tighter with existing rural development activities and their stakeholders from the agricultural sector.
- Avoiding conservation leakage is a complex challenge. Even in a successful avoidance scenario where regional conservation leakage is accounted for by design, as in CarBi, global leakage effects may still offset local safeguards on the impact level. In the case of CarBi, most avoided timber exports from Laos to Vietnam had likely been substituted by African exports with a dubious origin. To avoid such effects, supply-side measures, e.g.,

to increase sustainable timber production in Vietnam might be an additional option, which should be explored in further detail.

The general methodological approach of this ex-post evaluation

Ex-post evaluations represent an expert judgment and apply mainly the methodology of contribution analysis. An ex-post evaluation attributes outcomes and impacts of the project by plausibility considerations based on the careful analysis of data, facts, and impressions. Causes of potentially contradictory information are investigated, trying to eliminate such contradictions, basing conclusions – wherever possible – on several different data sources (triangulation). The analysis is based on hypotheses, presumed result chains, and interdependencies, described in the project appraisal (PA) and reviewed during the ex-post evaluation (EPE). This evaluation report sets out arguments as to why which factors influence the identified outcomes and impacts and why the project under evaluation was likely to provide the contribution that it did. Since the original project proposal did not include a logical framework, an alternative is presented in this evaluation report. An evaluation conception represents the reference frame for the evaluation and is based on international DAC criteria for evaluating development projects. An evaluator of the independent evaluation unit of KfW (FZ E) visited Vietnam and Laos from 19/09/2019 to 01/10/2019 to conduct interviews with project stakeholders and sector experts in forestry conservation. Several project sites were visited in Vietnam, and Laos and interviews with local conservation staff and villagers in the surrounding buffer zones of supported, protected areas were conducted. Besides, relevant project documents, feasibility studies, scientific studies, and technical reports were assessed to elaborate on this document. To analyze conservation outcomes, a consulting firm was contracted to analyze forest cover change with data from Global Forest Watch and Landsat Images classification to assess forest disturbances.

Vietnam and Laos at a glance

	Vietnam	Laos
Area (sqkm)	331,212	237,955
Forest Cover in 2000	45 % ¹⁾	83 % ¹⁾
Population and growth rate (2019)	Population: 96.4 Mio Growth rate: 1.0	Population: 7.1 Mio Growth rate: 1.57
Gross domestic product (GDP) per capita 2019	2,082 USD	1,840 USD
Human Development Index (2018)	0.687	0.457
CO2 emissions per capita (2015)	2.058	2.595

Sources: <http://databank.worldbank.org/data/> and The Global Forest Watch.

Notes: 1) Forest definition includes areas with >30% tree canopy

General context, project classification, and project measures

Vietnam's timber and timber products industry experienced record growth during the last two decades. The exports of timber products grew steadily from about 1.2 US\$ billion in 2004 to 6.8 US\$ in 2016. This industry demand is partly matched by Vietnam's growing forestry sector, whose production is estimated to have reached 11.5 million m³ in 2017, and partly through imports from the US, Africa, and Southeast-Asian countries, which totaled 2.7 million m³ in 2017. In the same year, Vietnam became the second-largest tropical log importer worldwide (ITTO, 2018). Timber production and processing industries are centered in the southern part and the central highlands of Vietnam. The central highlands are part of a larger geological formation called Annamese mountains, which range through Northern Cambodia, Vietnam, and Laos. The Annamese mountains contain montane forests and moist forests, which are habitat to several endemic and endangered animal species such as the antelope-like Sao La, the Douc langurs, and the Chinese pangolin. The high demand from the Vietnamese timber industry causes increased pressure on natural forest resources. Selective logging and subsequent forest degradation lead to increased CO₂ emissions, contributing significantly to global climate change and biodiversity loss through habitat destruction.

In 2010, before the CarBi project, around 323,676 m³ of timber were exported from Laos to Vietnam, and exports peaked in 2014 during project implementation with 803,800 m³ (see Appendix A). At that time, Laos was the main timber supplier to Vietnam, and studies estimated that a considerable share (30 to 80 %) of imported logs from Laos had been linked to illegal logging outside of recognized timber concession areas (EIA, 2011; Hoare, 2014; Saunders, 2014).

CarBi's first impact goal was, therefore, to reduce CO₂ emissions from illegal logging and restore fragmented landscapes by:

- improving timber supply chain monitoring through capacity building at forest departments in Laos;
- fostering transboundary cooperation of forest departments from Xekong and Salavan provinces (Laos) with their Vietnamese counterparts from Quảng Nam and Thừa Thiên-Huế provinces through joint workshops and Memorandums of Understanding (MOUs);
- capacity building to improve protected area management and patrolling of forests in the Bach Ma National Park, the two Sao La Nature Reserves in Quảng Nam and Thừa Thiên-Huế provinces and Xe Sap National Park in Laos;
- financing patrolling infrastructure and patrolling utilities as well as management tools for the aforementioned PAs.

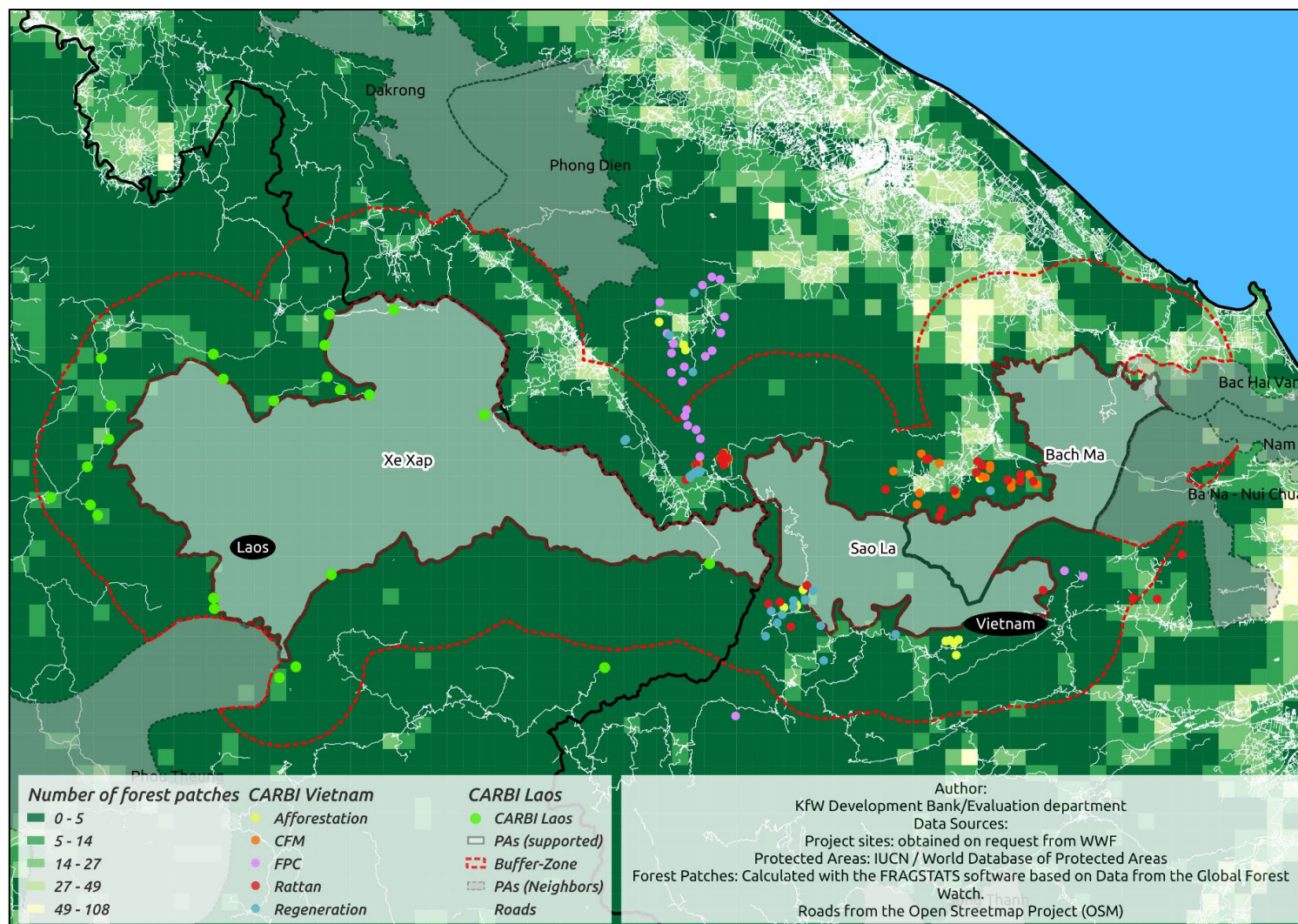
Besides habitat loss, poaching of bush meat is another major threat to the unique and endangered mammal biodiversity in the Annamese mountain range. Poaching is traditionally practiced for self-consumption by the local population but is increasingly organized as a professional business to supply bushmeat for urban restaurants and markets. CarBi's second impact goal was, therefore, to reduce poaching (and thereby protect endangered mammal species) with several activities including:

- capacity building and supply of equipment for community forest patrols;
- Establish biodiversity conservation agreements with communities in the buffer zones of Protected Areas (PAs) to provide livelihood and income opportunities conditional on reduced poaching and increased forest patrols to detect and deter outsiders from (mis-) using community forest resources.

Project implementation began in July 2011, and the CarBi project was originally scheduled to run for four years, ending in December 2014. A cost-neutral extension was granted until December 2016 and again until April 2017, with activities continuing only in Vi-etnam until 2017 and ending in Laos as early as 2014.

Map of the project area

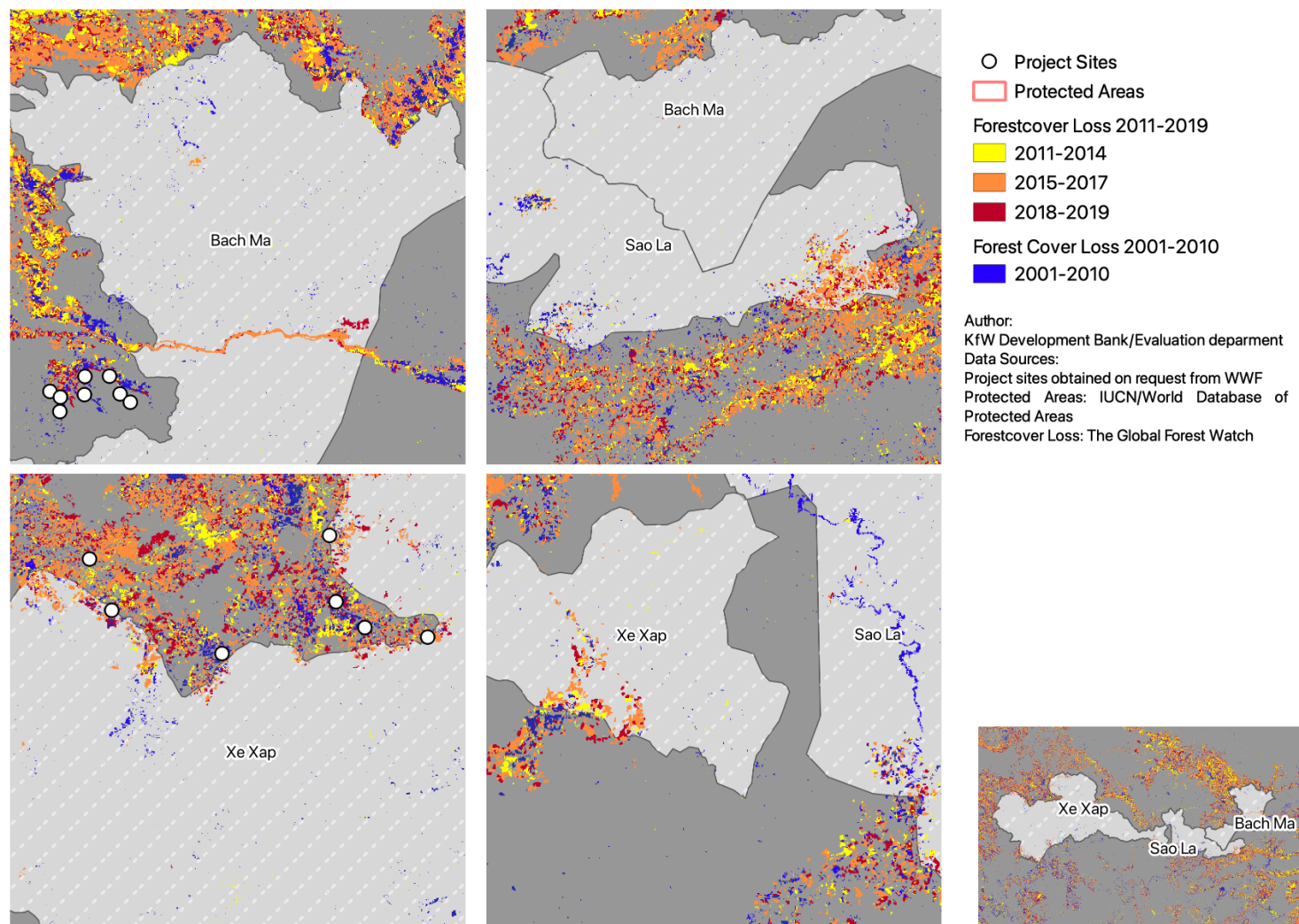
Figure 1: CarBi project sites and Forest Fragmentation in 2011



Notes: Forest Patches are areas of relatively uninterrupted and homogenous forest units. CFM: Community Forest Management, FPC: Forest Protection Guards. CarBi Laos refers to supported villages during the CarBi Project in Laos. PAs refers to Protected Areas either supported or not.

Map of the project area II

Figure 2: CarBi Project Sites and Forest cover Loss before CarBi (2001-2010) and after CarBi start (2011 onwards)



Relevance

CarBi's project concept is in line with SDGs 13 and 15 and several IKI criteria, specifically with the goal to reduce emissions and protect critically endangered habitats of high plant and species biodiversity. CarBi furthermore cooperated outstandingly with and facilitated international research projects in the intervention area to quantify faunal biodiversity via camera traps and DNA analysis, which is following IKI's goal of fostering innovative monitoring approaches and SDG 17 to partner with other projects for the achievement of SDGs. CarBi's livelihood components, although not specifically designed for poverty reduction, can be regarded as an attempt to combat poverty (SDG 1), especially in the poorer buffer areas of Xe Sap PA in Laos.

CarBi's project goals are also in line with national climate mitigation and biodiversity strategies in Laos and Vietnam. Furthermore, there was high ownership of the Vietnamese government for the activities that started during CarBi. This contrasts significantly with Laos, where the government has less interest in working with NGOs in general. In contrast to Vietnam, Laos's implementation structure was also less adequate to support livelihood activities because of insufficient agricultural and veterinary experts during the project and the absence of an adequate support structure to guarantee the sustainability of project outcomes after project completion.

CarBi addressed a trans-boundary landscape problem by promoting cooperation amongst Vietnamese and Laotian authorities through joint workshops and MoUs. This approach is very well suited for the purpose since ecosystems and ecosystem threats are not bound to national borders. However, a lack of appropriate long-term funding to implement joint enforcement activities on the ground and specific legislative obstacles for such cooperation in the border area was not entirely anticipated at the project start.

The lack of appropriate funding to continue project activities is not only limited to trans-boundary cooperation but in some way or another affects a larger amount of activities that were financed through CarBi. The assumption that with REDD+, an adequate long-term financing mechanism would be found to guarantee financial sustainability was (in hindsight) the biggest inaccuracy before the project start. Furthermore, the goal to establish only one sustainable financing mechanism in either of the two countries without an alternative strategy in the absence of such a mechanism in the other was not considered carefully enough in the initial project proposal.

Local communities participated in conservation activities through community patrols and participatory land-use planning. Furthermore, livelihood activities were financed to safeguard the conservation model. While the targeted villages showed great interest in livelihood programs, it is less clear if they are keen on reducing wildlife poaching in return, as, e.g., foreseen in the biodiversity conservation agreements that are concluded between x and y in Laos. This is especially the case if the livelihood compensation is too low and unreliable (Laos) or if patrolling staff in PAs come from the same social group as poachers (both countries), which may constitute a clear conflict of interest. Furthermore, there is a high likelihood of moral hazard to protect wildlife and forest resources on Laos' community level because the project planned too few reliable mechanisms of external monitoring and verification.

The choice of project sites for interventions was good from a landscape ecology perspective. Project sites for livelihood activities are located close to the parks and serve as a buffer for the intrusion by outsiders. The project also cooperated with and raised the needs of the local population. More specifically, patchy forest areas were targeted (Figure 1), where land-cover change dynamics should be reduced to decrease landscape fragmentation. From a purely ecological perspective, there is still some

optimization potential, e.g., by investing stronger in the eastern part of Xe Sap, where a road separates the last ecological corridor between the two larger forest areas and where forest intrusion and rapid forest cover change is prevalent.

CarBi addressed multiple direct and indirect causes of deforestation and wildlife hunting, namely the lack of law enforcement, missing livelihood alternatives, low institutional capacity, low problem awareness, missing community ownership, and lack of objective data and evidence about the ecosystem's state and its stressors. While this holistic concept proves a deep understanding of the complex nature of ecosystem degradation in the target area, it also posed challenges to conceptualizing multiple activities and their financial and institutional sustainability. In very general terms, limited funds in combination with a large portfolio and several project sites decrease any project's ability to achieve deeper impacts and financial and institutional sustainability (if there is no follow-up on the activities through external assistance). However, it can also be argued that this aspect has a lower weight than usual because CarBi pioneered several activities that provide new conservation opportunities in the central Annamites. Furthermore, WWF worked partly in new intervention areas under difficult institutional conditions (Laos), and besides, the innovative aspect of projects was essential in the International Climate Initiative IKI, which financed the project.

Neither the CarBi project proposal nor the monitoring reports by KfW or monitoring and evaluation reports by WWF include a logical framework (logframe) that structures the intervention logic in activities, outputs, outcomes, and impacts. The documents provide an overarching "project goal," five "specific results instead," and an extensive list of expected "intermediate results." Although this structure is comparable to impact, outcomes, and outputs in the classical logframe, we observe a lack of clarity in several cases and a missing strategy to measure all targets with indicators that follow the SMART logic. This lack of clarity poses a challenge to monitor project progress and evaluate the project results after implementation. We discuss some of these shortcomings in the text and propose a simplified logframe that serves as our baseline for evaluating project effectiveness and impacts in appendix B.

Relevance rating: 2 (both countries)

Effectiveness

We propose four outcome goals to measure CarBi outcomes and indicators that are assembled from different parts of the CarBi documentation (for details, see Appendix B).

Outcome 1: Protected areas are effectively managed in Laos and Vietnam

This target on the outcome level is a combination of specific results 1 and 2 of the CarBi project proposal. CarBi uses scores from the Management Effectiveness Tracking Tool (METT scores) to indicate the management effectiveness of protected areas. Scores are created with an extensive external assessment of the protected area covering topics along the lines of legal status, existing regulations, demarcation, PA design, threat level, external stressors, monitoring of the ecosystem, work scheduling, planning processes, staff numbers, training, as well as community involvement and adaptation to climate change (for details see: Stolton & Dudley, 2016). METT scores are a recognized standard in the conservation arena, but it is important to mention that they do not differentiate clearly between outputs and outcomes of the intervention and that some changes in METT scores might be exogenous to the project (e.g., the stress level). CarBi's goal was to achieve a METT score of at least 70 in all four PAs. The following table summarizes the results per PA for three different points in time:

PA	Baseline (2010)	Project End (2016)	Ex-post (2019)
(1) Bach Ma NP	66	71	72
(2) Sao La NR – TT Hue	38	67	67
(3) Sao La NR – Quang Nam	33	70	67
(4) Xe Sap (Laos)	17	50 (2014)	42

METT-Scores for the four PAs supported by CarBi with METT reports taken out in the context of CarBi phases 1 and 2.
Note: Target Score was 70 for all 4 PAs until the project end.

According to the table above, we can observe considerable increases in management effectiveness during the implementation of CarBi. Especially pronounced and sustainable increase in the two Sao La Natural Reserves. During the field visits, it was observed that despite some difficulties regarding sustainable funding, the PA staff in Vietnam appears to be very well organized, following up on several processes and rules from the PA management plans. Patrolling activities are conducted regularly, and SMART reports about infractions are submitted and examined by the park authorities. Park management plans are approved and updated regularly, and senior management staff shows strong interest and professional care to fulfill PA management's duties and coordinate their work with forest conservation departments at the regional level. We, therefore, conclude that the three protected areas in Vietnam are managed effectively. Two issues that were discussed during the visits were: (1) the lack of properly trained technical staff to deal with and analyze the data from the internal management systems such as GIS data, as well as from the monitoring systems and the related data, which were still operated externally at the time of the evaluation. Therefore, we suggest increasing institutional capacity building and developing a concept to maintain more trained personal in the PAs. (2) The lack of proper funding to fulfill all duties limit the possibilities for innovations and/or new initiatives in PA management. Therefore, we suggest working on more sustained concepts to finance the ongoing activities in the protected areas, especially in the two Sao La reserves, which did not benefit from tourism income at the time of the evaluation (October 2019).

In contrast to Vietnam, METT scores in Laos have not developed as well, and several problems persist:

- At the time of this evaluation, there was no significant organizational and/or financial engagement/ownership of Laotian counterparts for the management of Xe Sap. PA management duties such as assessing the patrolling reports (SMART reports) and planning of patrolling activities were essentially conducted by WWF at the local and national level and financed by the organization.
- Patrolling was limited in 2019 to very few irregular activities in the east of the park, and the local presence of patrolling staff is very far from the initially envisaged target of a minimum of 20 days patrolling presence per month at 75 % of the posts. The last SMART report was submitted at the end of 2016, and current patrolling is limited to a few days every couple of months in the year.
- Working conditions for patrolling staff are difficult, with low salaries and missing equipment such as protective gear and ropes, and other climbing equipment.

Therefore, there is considerable staff fluctuation amongst rangers, translating into an operational risk because of missing training for new patrolling units.

- Patrolling activities results mainly in the removal of snares. Poachers are, nevertheless, not fined because of a missing legal mandate of the rangers to detain or fine them.
- The management plan that was initially elaborated during the project was not yet ratified (status end of 2019) at the national forest department; hence project stakeholders have limited formal support for their work, which puts a serious burden on fundraising to maintain the activities. During interviews, the national forest department showed minimal interest in advancing the status of Xe Sap and the work there.
- Protected Area regulations are only disseminated/communicated in a small part of the villages in the buffer zone due to difficulties in access and missing resources to cover the entire area.

Based on the project documentation, it is quite clear that Xe Sap had the biggest and most difficult task of all supported PAs. Therefore, it would have been adequate to set a more modest target for this PA in hindsight. In conclusion, we are not convinced that Xe Sap PA is managed effectively by the legally responsible bodies in Laos. The project goals were, therefore, not achieved in this regard.

Outcome 2: At least one country has implemented a sustainable financing mechanism

This goal was cited as an intermediate result in the CarBi documentation, and several activities of the project were implemented to guarantee the financial sustainability of protected area management in Vietnam and Laos. The initial project proposal foresaw to prepare both countries for receiving payments through voluntary carbon compensation schemes for reducing emissions from deforestation and forest degradation (REDD+). However, during project execution, it became apparent that REDD+ would not be a feasible option in both countries. The two main reasons were: 1) not enough emission certificates could be issued due to low initial deforestation baseline levels inside the PAs and 2) low carbon prices on the voluntary carbon markets compared to the transaction costs associated with the documentation and certification of emission reductions.

However, in 2010, the Government of Vietnam was the first country in Asia to institutionalize a nationwide policy to finance the protection of forest environmental services. Government Decree No. 99 instituted the possibility to charge users of environmental services, such as hydropower plants and tourism enterprises, to financially compensate suppliers of these services - a scheme called Payments for Forest Environmental Services (PFES).

After becoming aware of the difficulties of REDD+, CarBi management took the chance to become one of the first projects in Vietnam to put Decree No. 99 into practice. PFES was implemented via an approach called Community Forest Management – CFM (4450 hectares in 30 communities) and Forest Protection Contracts – FPC, which set up rules and responsibilities in using and monitoring the communal forest areas (5320 hectares in 60 communities). The implementation of PFES was achieved through capacity building on the communal level (e.g., forest monitoring and reporting) and their governmental counterparts (e.g., supervision) through the development of guidelines and training.

PFES implemented by the project compensate communities on a per-hectare basis with 220,000 VND per ha/year (8.76 EUR per ha/year as of March 2020). The communities participating in CFM were responsible for 150 ha on average. This results in an average payment of 1,300 EUR per community per year, - or 31 EUR per family per year (1,268 families). In the communities, all households participate in patrolling activities 3-4 times per year, meaning that the compensation for patrols is higher than the Vietnamese minimum salary (5.18 EUR/day on average, 2017-2019) and thus constitutes an adequate incentive. As for FPC, communities receive, on average, only 777 EUR per year; however, due to the lower number of families (572), this amounts to 81- EUR per family per year. During this evaluation, Villagers interviewed showed high satisfaction with the payments and a strong motivation to comply with the patrolling obligations. In two villages, random bookkeeping checks proved that the system was highly functional with regular monitoring activities based on a direct financial benefit.

Regarding the scope of the financial contribution of PFES, it must be mentioned, however, that the park budget in all three Vietnamese PAs is largely financed by other sources than PFES and, according to PA managers, partly insufficient to achieve all management goals fully. Since there was no clear definition of how big the contribution of a financing mechanism should be before the project started, we think that the outcome goal of merely implementing a sustainable financing mechanism as a first step could be fully achieved. Nevertheless, such a mechanism should always be connected to achieve some specific goal. Missing financial sustainability is probably one of the greatest problems in conservation finance, and CarBi achievements with PFES in Vietnam are truly outstanding in this regard. For the future, we recommend to extent PFES payments and carefully think for an equivalent in Laos.

Outcome 3: Villagers in the buffer zones contribute to and benefit from PAs' protection in Vietnam and Laos.

This outcome indicator is supposed to reflect the need to create a clear incentive for villagers in the buffer zones to contribute to the area's protection. CarBi worked to achieve this outcome by offering villagers livelihood and financial benefits in return for agreeing to reduce poaching and patrolling the PAs against poachers and loggers from outside. In Vietnam, Community Forest Management schemes were set up with protection contracts that work well until today (see outcome 2). During field visits, we had the impression that forest patrols were conducted regularly and that the villagers had a clear incentive to report incidents to the local forest boards, which audited the villages from time to time. As shown above, the direct financial contributions to household income are considerable in light of the national minimum salary. Villagers reported that they did not poach the animals anymore, nor did they deforest the trees. Because of these clear incentives and external audits by the forest authorities, we conclude that this protection scheme works quite well in Vietnam. Our recommendation would be to extend these PFES-schemes to more villages around the park to avoid conservation leakage. Livelihood activities in Vietnam, such as rattan plantations, did not yet achieve any yields, and villagers reported difficulties in engaging their people to care for the plantations.

Also, CarBi supported afforestation and regeneration activities at several project sites. In total, an area of 206 has been afforested, 951 ha have been regenerated with enrichment planting, and 591 ha without enrichment planting, also triggering the issuance of formal land-use rights (Redbooks) and wage payments to the villagers that participated in the plantings (for details see Appendix D).

As for the Laotian side, so-called Biodiversity Conservation agreements were set up to engage local communities in conservation and compensate them for their patrolling work and for renouncing to hunt bush meat. Compensations consisted of food donations and activities to increase agricultural and animal production, such as poultry, pigs, and fishponds. Although well-thought-through conceptually, we find that these agreements did not produce the desired effects in practice for several reasons. First and most importantly, the benefits ended after project completion in 2014, and most Biodiversity Agreements were not signed until the very end of the project, i.e., most villagers already had received their compensation before a contract was put in place. This implies that the compensation was not conditional on written commitments to biodiversity conservation. Second, there was no external auditing process to assure compliance with the regulations and fulfillment of patrolling duties. As opposed to Vietnam, villagers in Laos did not have any proof of patrolling activities. Although they claimed to patrol the areas up until today, we think that this is very unlikely given that there is no direct benefit from patrolling the areas, and villagers would have to take time off from other work duties that they have to fulfill to maintain their livelihoods. Moreover, most financed activities could not be sustained because there was no follow-up engagement by the Laotian government to assist villagers in their production systems. Consequently, fishponds had been destroyed (during a flood), and poultry and pigs decreased because of the flu and other animal diseases that cannot be prevented without proper veterinary assistance. Given that the Laotian authorities do not properly inform villagers about the risks of consuming deceased animals, we argue that these activities could even pose a health risk to the local community and conclude that this outcome goal was not achieved in Laos.

Outcome 4: Vietnamese and Laotian authorities cooperate in monitoring and controlling timber and wildlife trade

There were several activities, such as joint workshops on the political level and the signing of MoUs to increase the cooperation between the two countries. The idea was to enable both parties to quickly exchange information on illegal trade and even have a joint monitoring and ranger patrol system. During CarBi's implementation period, there had been different workshops with both parties, and MoUs were signed at the end of the project. However, they did not appear to materialize in a concrete collaboration after project completion for several reasons: First, timber trade was effectively reduced to almost zero by the Prime Minister Decree No. 15 and its ban on timber trade (see also impact section), reducing the need to establish a joint timber tracking system (at least in the short run). Second, there are practical and legal barriers to collaboration. Those comprise communication problems because of different languages, legal obligations to not engage in direct communication with a foreign government without former consent from the national institutions that deal with foreign affairs, funding issues to hold joint workshops, military exclusion zones along the border that cannot be patrolled easily and the prohibition to enter the other country carrying firearms for ranger patrols. Moreover, during the field visit, no party expressed a concrete intrinsic need/incentive to engage more with the other side. We, therefore, conclude that the project did not fully achieve this outcome goal.

Effectiveness rating: 2 (Vietnam), 4 (Laos)

Overarching impacts on biodiversity and forest preservation

We measure CarBi's impacts regarding three different goals, based on the original project documentation. Indicators and utilized methods are summarized in the table below:

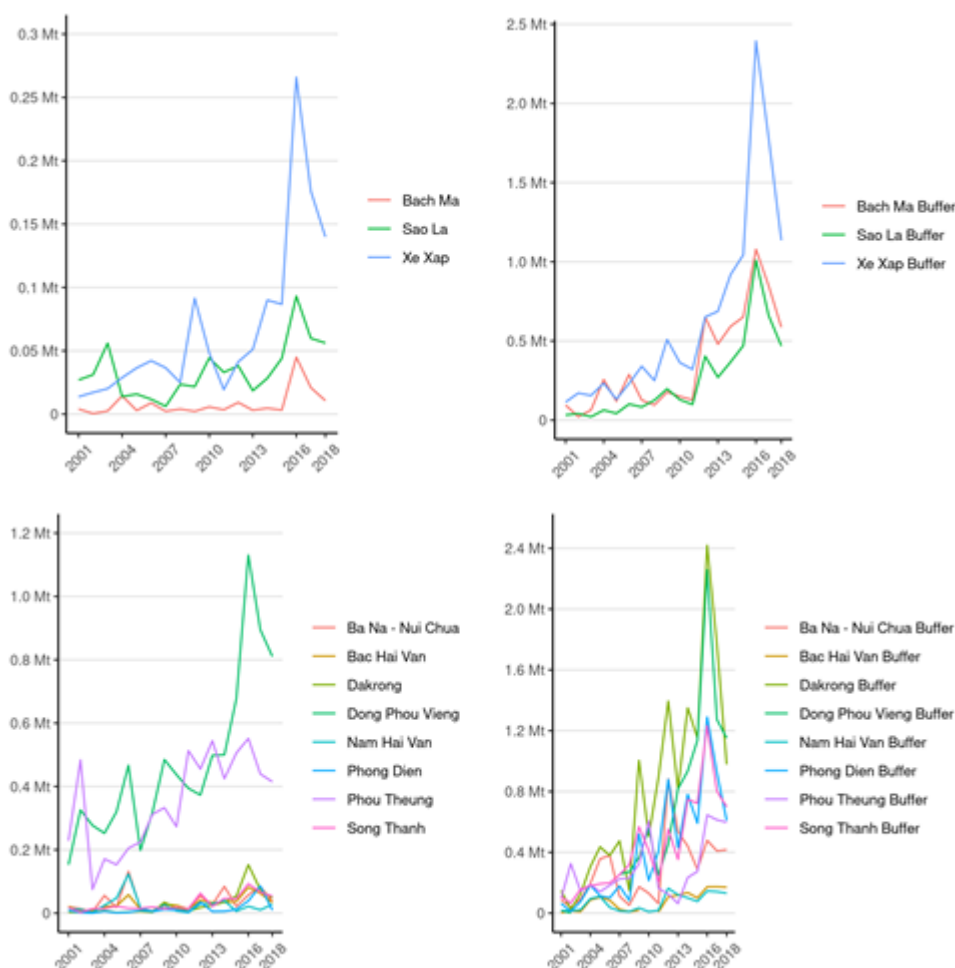
Objective	Indicator	Source of verification
(1) Reduced Emissions from Deforestation and Forest Degradation.	<p>Indicator 1: Metric tons of CO₂ emissions from deforestation from 2011 onwards.</p> <p>Goal: Reduction by 1.8 Mt within five years from the project start?</p>	Data from Global Forest Watch (GFW), using country-specific forest definitions obtained from the FAO.
(2) Increased protection of threatened animal species in the CarBi Landscape.	<p>Indicator 2: Occupancy estimates for animal traps in the PAs from 2011 onwards (hunting pressure perspective).</p> <p>Baseline: No baseline available</p> <p>Indicator 3: Reduced landscape fragmentation dynamics (habitat perspective)</p> <p>Baseline: 2001-2011</p>	<p>Occupancy measurements calculated by IZW based on SMART Patrolling reports in Sao La NR.</p> <p>Forest Landscape Fragmentation was calculated with the FRAGSTATS toolbox based on GFW forest cover maps.</p>
(3) Contributions to the ongoing conservation policy processes in Laos and Vietnam.	<p>Indicator 4: Contributions to national policies and/or other conservation initiatives that are likely attributable to project activities.</p>	Field interviews with different stakeholders.

Impact 1: Reduced Emissions from Deforestation and Forest Degradation

One of the main impact goals from CarBi was to reduce emissions from deforestation and forest fragmentation by 1.8 Mt within five years from project start (or project appraisal?). We use data from the GFW and country-based forest definitions to assess forest cover loss and associated CO₂ emissions. Because we cannot use a counterfactual design to compare treated and non-treated areas, we compare the CarBi supported PAs to the surrounding PAs to get a general idea of emission trends in the area. Figure 3 shows that emissions from forest cover loss increased during and after CarBi on an accelerated scale. The project was, in this regard, not successful in achieving its ambitious goal. Figure 3 also shows that emission increases were even more pronounced in the buffer zones. Our forest cover loss map (Figure 2 above) shows several encroachment sites in all PAs that need closer surveillance. Comparing the CarBi PAs to the most proximate protected areas in central Vietnam and southern Laos, we can also see that emissions rose everywhere, suggesting that macro-

economic and climatic factors might be at play and possibly exert a strong influence on the local developments.

Figure 3: Emissions from forest cover loss in CarBi supported and neighboring PAs



Author: KfW Development Bank/Evaluation Department. Based on data from the Global Forest Watch.

Notes: Emissions are given in Megatons (Mt), equivalent to 1 million tons CO₂ eq.

Upper Left: Supported PAs, core protection zone. **Upper right:** Supported PAs, 10 km buffer zone. **Bottom left:** Neighboring PAs (not supported), core protection zone. **Bottom right:** Neighboring PAs (not supported) 10 km buffer zone.

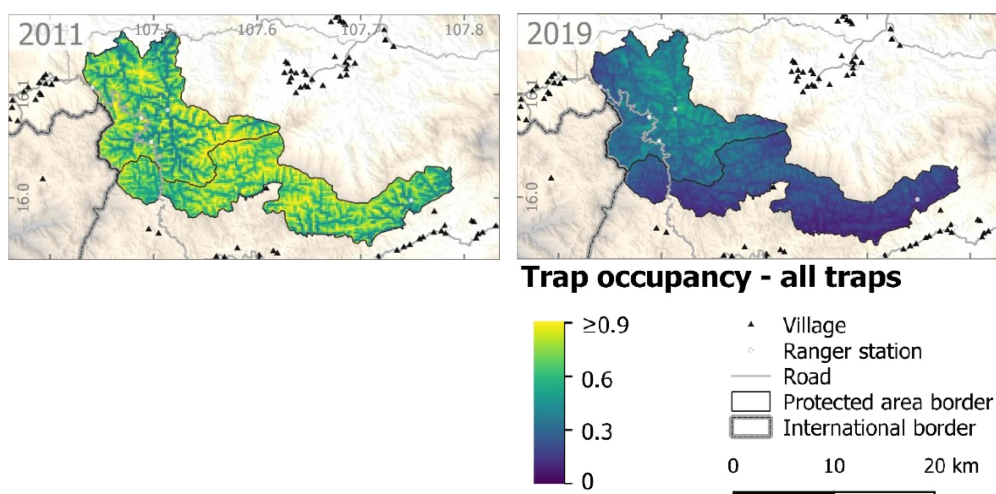
It is important to mention that the GFW estimates are based on a methodology optimized for large scale assessments and does not include several local sources and sinks of CO₂. Therefore, the presented statistics should be interpreted as trends, not hard numbers.

Impact 2: Increased Protection of Threatened Animal Species in the CarBi Landscape

CarBi provided extensive support to improve the existing ranger patrol system in the four supported areas. A study conducted by Tilker and colleagues from the IZW tries to quantify and rigorously assess snaring trends from 2011-2019 (Tilker et al., 2020). The study covers the two Sao La reserves and is based on an analysis of GPS tracked patrol data from the SMART system. The data covers ranger patrol efforts, detected snares and other traps, as well as encounters with hunters. The study uses this data to predict the occupancy probability of traps, controlling for different

covariates, and using spatial regression techniques to decrease estimation bias. Results are shown in Figure 3, comparing 2011 and 2019.

Figure 4: Snare Occupancy Trends in Sao La



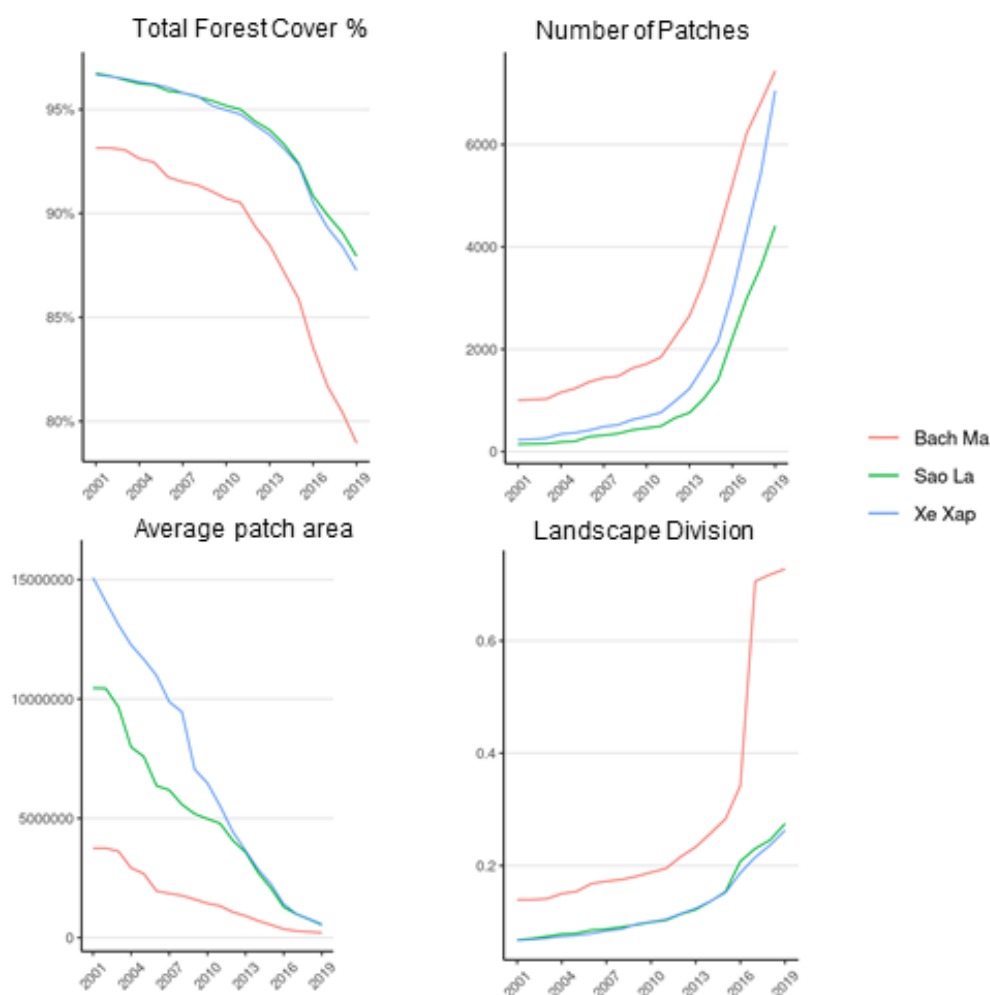
Author: Slightly adapted from Tilker et al. 2020

The results from Tilker et al. provide clear evidence for the positive effects of CarBin terms of reducing hunting pressure in Sao La. We think it is very likely that the occupancies decreased because of increased monitoring and patrolling and not because of external factors. They utilized methods that also present a very innovative approach to defining appropriate indicators to measure and assess patrolling activities. As such, the methodology provided by Tilker et al. should be further developed, and its utilization explored not only in the CarBi but also in other PAs and projects beyond. The presented results above are furthermore likely to be used as a baseline measurement of CarBiL. Unfortunately, for the other two PAs, no comparable assessment is available, but at least for Xe Sap, we assume that the impacts are not likely to be of similar nature because of the low patrolling activities after the project end (see Outcome 1).

We use landscape fragmentation metrics to capture the habitat perspective to assess forest fragmentation dynamics in the last 20 years. Forest fragmentation measures the compactness of a forest area with relatively homogenous conditions. The main results are captured in Figure 4. All indicators show relatively serious landscape integrity developments, which is not surprising given the results from the forest cover analysis. In general, we observe that the forest cover decreases in the protected areas by about 10-17 percentage points, with the most pronounced decreases in the last five years. Forest cover loss is not geographically concentrated in a single spot (see also forest cover loss maps in Figure 2), and therefore the patchiness of the forest increases (total number of forest patches), and the average size of those patches decreases. As a result, habitat integrity suffers, captured by the landscape division index, which describes the likelihood that two forest areas do not fall within the same large forest patch. Figure 4 shows that this is the case in all three areas, but especially in Bach Ma, the division index showed a pronounced increase in 2015-2017. This strong effect is due to a highway constructed at that time, dividing the park into two separate areas (see also photo documentation in Appendix F). Because of the steep slopes and heavy precipitation patterns, strong erosion occurs near the highway leading to large areas of bare soil between the two now divided forests. Infrastructure construction is an increasing problem in the CarBi area because of landscape fragmentation, and the highways offer easy access for hunting and illegal deforestation into the forest,

undermining the ranger patrol efforts. While not every species is negatively affected by landscape fragmentation (predators might, in fact, even prefer patchy landscapes), the effects are especially detrimental for medium to large mammals (such as the rediscovered Sao La) and birds.

Figure 5: Forest Fragmentation Metrics in the supported PA and their surrounding buffer zones



Author: KfW Development Bank/Evaluation Department. Based on data from the Global Forest Watch, calculated with the FRAGSTATS framework.

Regarding CarBi's efforts to restore the landscape via afforestation and enrichment plantings, we do not consider it realistic that they have been able to counterbalance the forgone losses given the sheer size of losses (38,380 ha only inside PAs) against the total number of restored areas (1,748 ha).

Impact 3: Contributions to the ongoing conservation policy processes in Laos and Vietnam

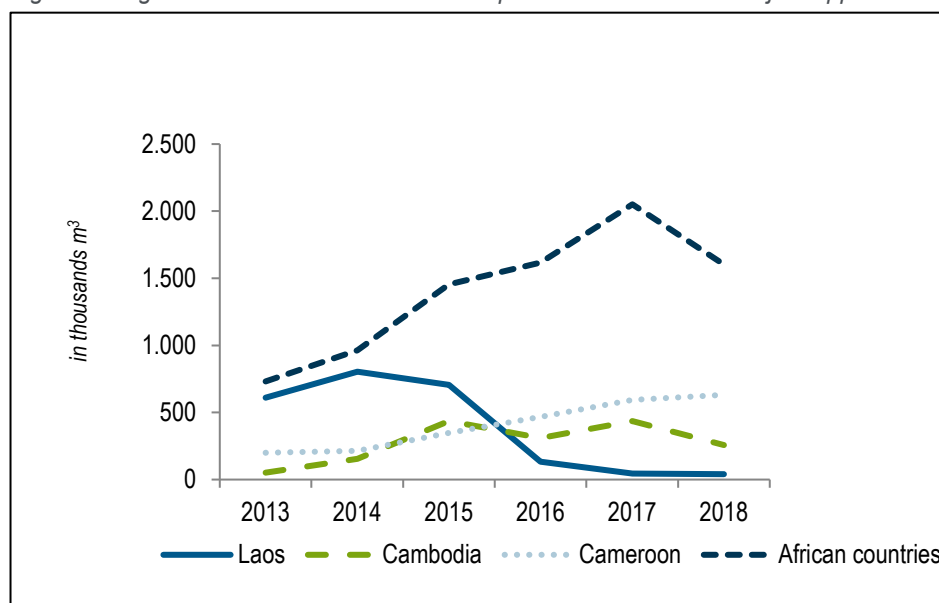
One of the most frequently discussed outcomes of CarBi was the contribution of the so-called "Timber Leakage Study" which was financed by the project and elaborated by the CarBi project team with the help of an external consultancy. The report was initially intended to serve as an input for developing a timber supply chain monitoring system in Laos, which was supposed to be developed together with the local forest authorities.

The study was able to clearly detect and describe ways in which illegally logged timber was washed into supposedly legal concession quotas of mining and construction companies that operated in the Laotian provinces of Xekong and Salavanh. After being harvested outside legal concession areas, illegally logged trunks were mixed with legal timber and exported on commercial routes to Vietnam. The study's findings were based on investigative field research and the analysis of high-resolution satellite images, which enabled the authors to pinpoint specific concession areas and companies where fraud and environmental crimes were committed. The timber leakage study was the first of its kind to provide concrete evidence on these kinds of practices, which had been long discussed within the FLEGT trade negotiations between the EU and Laos but always lacked hard evidence. Because of its sensitive findings, the study was treated as confidential between the project stakeholders.

Local forest authorities in Laos challenged the study results at first and did not cooperate to share its findings with a broader audience, although, according to project staff, there was an agreed roadmap for publication. Furthermore, it was mentioned in several interviews that the authorities showed no interest in using the developed and proposed methodology to create a supply chain monitoring system for timber in Laos.

Weeks before the general elections in Laos, the study leaked to a larger group of people engaged in the FLEGT negotiation process between Laos and the European Union and later to a broader audience via the internet. According to several people involved in the FLEGT process, the Timber Leakage Study provided a strong argument to better control timber exports and thus most probably contributed to a decree signed by the new prime minister after he won the elections. Prime Minister Decree No. 15 eliminated all former exemptions from an export ban for unprocessed timber from Laos to other countries. Consequently, exports of timber from Laos to Vietnam (and other countries) fell drastically in late 2015, as can be observed in Figure 6 below.

Figure 6: Log/round timber and sawn wood imports to Vietnam from major suppliers.



Author: KfW Development Bank/Evaluation Department. Assembled from forest-trends.org & FAO.

Figure 6 shows a strong reduction in timber exports from Laos since 2016. It is a remarkable trend that surely translated into a reduction of illegal logging in Laos. At the same time, it demonstrates that Laotian exports had most probably been substituted by increased exports from Cambodia, Cameroon, and several African countries that

suffer themselves from illegal logging and a lack of proper forestry law enforcement (Singh 2013, Hoare 2015, Hoare 2015b, Phuc et al. 2016, ITTO 2018).

The timber leakage study was certainly important to advance the fight against illegal logging in Laos. Nevertheless, we would like to briefly stress two risks that might have emerged as an outcome as well: First, the export ban effectively stopped almost all timber trade between Laos and Vietnam (-95 %), and by this, potentially also such trade that was, in fact, legal before the Prime Minister Decree 15 (between 20-70 % according to EIA, 2011; Hoare, 2014; Saunders, 2014), and second: The fact that the study leaked to a broader audience might have hurt the challenging relationship between Laotian authorities and NGOs in general. Nevertheless, we think that the impacts far outweigh the taken risks in this specific case.

As for Vietnam, we conclude that CarBi made important contributions to implementing PFES payments by setting up an organizational scheme to implement these types of payments that were developed with the authorities and shared with other conservation stakeholders in different workshops. Therefore, CarBi activities had important impacts on the national conservation process.

Regarding impacts on the cross-boundary conservation policy cooperation, we do not see that CarBi has achieved pronounced impacts yet, as discussed in outcome 4 in the effectiveness section of this evaluation. Nevertheless, the signing of MoUs might be the first step in a longer strategy to engage both parties with each other.

Overarching climate and environmental impacts rating: 3 (both countries)

Efficiency

From a general standpoint, we consider it remarkable how many different activities were financed by CarBi with a relatively moderate budget. Nevertheless, we also think that efficiency might have suffered from the multitude of different activities in two different countries, at very different places that required two local offices, more staff with a diverse skillset, and a greater managerial effort during implementation, monitoring, and reporting.

It is important to mention that WWF was able to secure additional funding from other donors to continue work on CarBi, as shown in Appendix E and that with the implementation of PFES, additional funds for conservation were raised for all subsequent years after project end. As for Vietnam, there was also a contribution of the partners in terms of working days from PA staff, government administration, and logistical support, while in Laos, there was no considerable participation from the local government to support the project.

The landscape restoration activities in Vietnam were reported to have been less efficient compared to other afforestation initiatives by KfW due to increased complexity for WWF to work with the government on this issue, low staff resources, lack of suitable land, and a lower interest of the local population to work with native trees instead of Acacia. Also, a comparison of forest cover loss areas and restored areas suggests that restoration is a much less efficient strategy to improve or restore landscape integrity than essential protection of remaining forest resources (see discussion on impact 2). In general, the project was delayed by three years, resulting in additional costs on the donor side. Although it is not possible in this evaluation's scope to clearly quantify all costs and effects in the scope of this evaluation mission, we conclude that the overall efficiency was still satisfactory.

In terms of efficiency, we recommend prioritizing landscape protection via forest protection contracts and increased ranger patrols over restoration in the CarBi areas in the future. This could also further increase the benefits for local villagers.

Efficiency rating: 3 (both countries)

Sustainability

We see considerable differences regarding the sustainability prospects of different components and between the two participating countries, Laos and Vietnam. While PA management enjoys high government priority in Vietnam and is partly financed through PFES, it has de facto no ownership by the government on the Laotian side and is currently in a very precarious financial situation. At the time of the ex-post evaluation, there was no funding for monitoring activities inside Xe Sap left, and the remaining voluntary staff complained about insufficient ranger patrol gear, which poses a risk for the rangers. Also, rangers in both countries do not have a legal mandate to deter and fine people, which creates a low enforcement signal in the long run.

In Laos, protected area management should be under the supervision of the Department of Forestry. However, Xe Sap PA is currently financed, organized, and monitored by WWF. In this regard, it became apparent that there was (and is) no clear exit strategy for the future conservation of Xe Sap without continuous external assistance. In conversations with WWF staff, it was made clear that the organization has a medium to long-term perspective on conservation and rightly argues that there is no necessity to pull out of a certain area after just a couple of years of project implementation. Nevertheless, there should be an exit strategy to pull out certain activities (e.g., PA management or livelihood improvements) and hand over the responsibility to those parties with a legal mandate (and duty) to engage. Therefore, we suggest developing a clear exit strategy for different components/activities (e.g., livelihood activities) of future projects and negotiating them with the partner country.

In contrast to Laos, PFES payments on the Vietnamese side contribute considerably to the sustainability of community patrols in the three PAs buffer zones, and they are financed by water companies who use the rivers for hydropower generation. We consider the successful implementation of PFES probably the most important outcome of the project and a truly remarkable achievement in the conservation sector that often relies on ongoing fundraising or government support.

Regarding the sustainability of livelihood improvements, it is not easy to provide a detailed statement about the individual activities without a field visit to all villages, which was out of this evaluation's scope. On the Laotian side, we observed that the supported livestock activities are extremely difficult to maintain, given the lack of proper veterinary assistance through the government and almost annual animal epidemics such as foot and mouth disease, chicken flu, and swine pest. All of these problems do not only appear in the final evaluation report of the implementing NGO VFI in 2015 but were also reaffirmed by several people from the two visited villages Dup and Pale, which are relatively easy to access along the paved road. Besides diseases, natural weather extremes such as flooding and droughts put a considerable burden, especially on the fish ponds.

It appears from the final evaluation of VFI that some of the supported agricultural activities, NTFPs, and gardening were implemented more successfully. However, we also see these activities at risk without a proper follow-up commitment from government extension services. The VFI report notes that "There have been many previous

projects working in some of the villages, but nothing was continued after project end” and stresses the importance of ongoing government support.

On the Vietnamese side, it is too early to make statements about livelihood activities that are not related to PFES. Because of low growth rates, villagers were not able to harvest rattan plantations yet as well as timber from afforestation and enrichment plantings. Reported survival rates of seedlings are around 60-80 %, which is slightly below expectations.

As for the control of timber exports from Laos to Vietnam, several interview partners confirmed that, in the mid-term, there is no threat for a reversal of the timber export ban in Laos. Longer-term sustainability will depend largely on factors outside of the influence of CarBi project stakeholders. Political negotiations and future policy priorities will determine whether the timber industry is held accountable for the origin of unprocessed wood in Laos or not.

Sustainability rating: 2 (Vietnam), 4 (Laos)

Coherence, complementarity, and coordination

The project was coordinated and discussed with relevant government stakeholders to obtain formal permission for the implementation. According to WWF, there is also frequent exchange of information and lessons learned with other donors in Vietnam who regionally engage in similar topics, such as the World Bank (Green Anamites) and USAID. Despite this exchange being rather occasional than institutionalized, it contributes to improving new project concepts and, according to WWF, also leveraged the interest and investment from other donors into the central Anamites region.

Despite that very positive aspect, we were unable to identify a broader donor strategy to develop a joint program for the region or strategically align activities, e.g., to reduce administrative costs and divide the labor tasks based on each institution's best capacity. We think that such cooperation could be very fruitful if, e.g., a classical development institution focuses on livelihood activities and WWF on their lifelong experience in managing protected areas. This would allow for a greater focus and reduce costs and increase efficiency in project implementation. Cooperation seems to be, however, up to this point, limited to improve funding concepts and guarantee no overlaps in the treatment villages. Donor coordination and coordination amongst implementing agencies also seem to be less frequent in Laos, where the complementarity of rural development programs and conservation efforts would be of utmost importance in the context of minimal financial support.

WWF's support in CarBi was the first major external assistance for the two Sao La NR and Xe Sap in Laos. We consider this seed funding essential for all three PAs for a long-term professionalization of PA management. In contrast, Bach Ma PA has had longstanding support from the central government and other external donors.

From a policy perspective, CarBi has produced valuable inputs for the EU's FLEGT negotiations with Laos and Vietnam. The logging ban in Laos can speed up the introduction of a timber legality control system in Laos because it increases the pressure on the export industry to act quickly and contribute to a solution to the problem. On the Vietnamese side, timber import controls will be necessary through FLEGT, which will contribute positively to the timber trade's sustainability between Laos and Vietnam.

Coherence, complementarity, and coordination rating: 3 (overall rating)

Project management

Given (1) that there was a weak definition of outcomes and impacts without adequate indicators, (2) the sheer multitude of project activities, different in nature and with multiple stakeholders and project sites, and (3) the multiple unforeseen risks and obstacles, as well as (4) the absence of a clear exit strategy for some project activities, we argue that the project design put a considerable challenge to the successful implementation of the project.

We do think, however, that the local project team did an excellent job in quickly adapting to these challenges by identifying opportunities, new partners, and pragmatic solutions to bring most of the proposed activities and outputs to an end and achieve at least some longer-lasting impacts, wherever this was possible (e.g., PFES and timber trade). The project was, however, on several occasions bound to adhere to the original proposal from the donor side, which was, in hindsight, not always the best possible strategy to achieve a deeper impact in all areas of conservation action. More flexibility from the donor side in this regard could help the implementation agencies to work more efficiently.

In general, we observe a considerable inconsistency between proposed and monitored success indicators in the initial project proposal, the accepted project adjustment proposal from 2014 (submitted by KfW to BMU), the final evaluation report that was conducted by an external consultant for WWF, and the final inspection report that was submitted by KfW to BMU. Both final evaluation reports do not follow up on several proposed success indicators to achieve specific project results from the change proposal in 2014 and, at times, rather report on new indicators to prove the project's success. An example of this is the very detailed discussion of camera trap results in both final reports, which was neither proposed as a success indicator to be monitored for CarBi nor is it completely attributable to the project alone. It is rather a result of the cooperation between the BMBF funded ScreenForBio project implemented by IZW and CarBi.

According to WWF staff, using an adaptive management tool with monthly progress reports to catch up on emergencies and steer the activities was essential to achieve CarBi's results. Staff reported that the management's ability to motivate people and effectively manage human resources was important to guarantee low staff fluctuation and motivate the employees. Also, positions with high responsibilities, such as the country director, could be filled quickly when they became vacant during project implementation. A proper handover period of the responsibilities and briefing of the new managerial staff was also guaranteed, and some of the CarBi forest guards were taken up as permanent employees of the Forest Protection Departments, which reflects how the counterparts value them.

Nevertheless, several activities were delayed during the project, which came to an end only three years later than originally planned. Delays were more common in project components, where coordination with the Laotian and Vietnamese governments was necessary, e.g., to apply for official permits from the authorities to go to the field. This issuance of permits was often lengthy, which was also because some activities were new to the government (and WWF). Another factor that delayed the project was the lengthy response process by BMU to change some original project targets and implementation strategies at the end of 2014.

In general, WWF does an excellent job of promoting the project outcomes and lessons learned in several workshops with the government, other conservation actors, and development institutions. According to different people interviewed during the evaluation mission, other PAs in Vietnam are interested in CarBi's forest guard model and its

participatory approach and the usage of the SMART system, which was presented in a national workshop in Vietnam.

WWF attracted considerable media attention, especially through the rediscovery of the highly endangered Sao La after 15 years of disappearance with targeted camera traps from WWF. This rediscovery raised interest in the matter of biodiversity conservation among local politicians and the wider public.

Project management rating: 3 (overall)

List of Abbreviations

EPE	Ex-post evaluation
BMU	Bundesministerium für Umwelt und Reaktorsicherheit (German Ministry for the Environment)
CFM	Community Forest Management
GFW	Global Forest Watch
IZW	Leibnitz Institute for Zoo and Wildlife Research
NGO	Non-Governmental Organization
NTFP	Non-Timber Forest Products
PFES	Payments for Forest Environmental Services
PA	Protected Area
REDD+	Reducing Emissions from Deforestation and Forest Degradation
VFI	Village Focus International (NGO)

Notes on the methods used to evaluate project success (project rating)

Projects (and programs) are evaluated on a six-point scale, and the criteria are relevance, effectiveness, efficiency, overarching developmental impact, coherence, complementarity, coordination rating, and project management. The ratings are also used to arrive at a final assessment of a project's overall developmental efficacy. The scale is as follows:

Level 1	Excellent result that clearly exceeds expectations
Level 2	Good result, fully in line with expectations and without any significant shortcomings
Level 3	Satisfactory result – project falls short of expectations, but the positive results dominate
Level 4	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
Level 5	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
Level 6	The project has no impact or the situation has actually deteriorated.

Rating levels 1-3 denote a positive assessment or successful project, while rating levels 4-6 denote a negative assessment.

Sustainability is evaluated according to the following four-point scale:

Sustainability level 1 (outstanding sustainability): The project's developmental impact (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 2 (good sustainability): The project's developmental impact (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected).

Sustainability level 3 (satisfactory sustainability): The project's developmental impact (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the ex-post evaluation time but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.

Sustainability level 4 (inadequate sustainability): The project's developmental impact is inadequate up to the time of the ex-post evaluation and is very unlikely to improve. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

The overall rating on the six-point scale is compiled from a weighting of all seven individual criteria as appropriate to the project in question. Rating levels 1-3 of the overall rating denote a "successful" project while rating levels 4-6 denote an "unsuccessful" project. It should be noted that a project can generally be considered developmentally "successful" only if the achievement of the project objective ("effectiveness"), the impact on the overall objective ("overarching developmental impact"), and the sustainability are rated at least "satisfactory" (level 3).