

Ex-post evaluation

Maya Natural Forest I, Central America (SICA)

Title	Maya Natural Forest I		
Sector and CRS code	Biodiversity 41030		
Project number	2008 66 657		
Commissioned by	Federal Ministry for Economic Cooperation and Development (BMZ)		
Recipient/Project-executing agency	International Union for Conservation of Nature (IUCN)		
Project volume/ Financing instrument	EUR 8 million / budgetary grant		
Project duration	December 2016 (financing agreement) to December 2021 (final inspection report)		
Reporting year	2023	Year of random sample	2023

Objectives and project outline

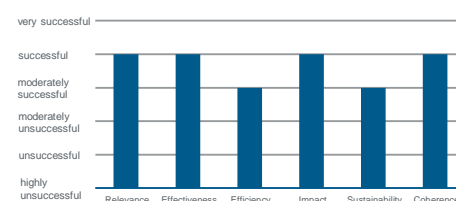
The objective at outcome level was to improve the management of the Selva Maya protected areas and to strengthen regional cooperation between Belize, Guatemala and Mexico for the conservation of natural resources. Promotion was given to 1) management effectiveness, 2) the connectivity of the protected areas and 3) the capacity for regional coordination of measures. At the impact level, the aim was to contribute to the maintenance of the ecosystem functions and cultural values of the Selva Maya, which secure the livelihoods of its inhabitants and provide environmental services of global importance.

Key findings

The project was effective in terms of developmental policy, but its sustainability is at considerable risk. The project has been rated “successful” for the following reasons:

- The high level of coherence is due to the close FC/TC cooperation, which made a significant contribution to strengthening partner capacities and to the development of the strategy document *Estrategia Integral Selva Maya 2030*. This was ratified by the Central American Environment Commission in 2021 as a regional planning instrument for implementing future nature conservation projects.
- The objectives at outcome level were achieved. However, it was not possible to achieve a substantial improvement in management effectiveness in all protected areas supported. Furthermore, the contribution of the project measures to the specific problem situation in the respective protected area was not always evident.
- The project is accredited with making a moderate contribution at the overarching development policy level. The securing of ongoing financing of protected areas during the COVID-19 pandemic and the contribution to the medium-term continuation of protective effects must be highlighted.
- The significant risks to the sustainability of the impacts achieved result from the scarce financial resources available for the protected areas. In addition, the lack of prioritisation of nature conservation projects at a higher political level is also a risk to sustainability.

Overall rating:
successful



Conclusions

- Synergies between FC and TC projects contribute to the success of regional approaches.
- The creation of regional planning instruments enables measures and projects to be strategically aligned in the long term.
- Demand-driven promotion based on transparent selection criteria contributes to promoting the most effective and sustainable programmes.
- Early definition of the monitoring methodology contributes to problem-oriented design and implementation.

Ex post evaluation – rating according to OECD-DAC criteria

General conditions and classification of the project

The Maya Natural Forest (Spanish: Selva Maya) lies on the border of Belize, Guatemala and southern Mexico, and is the largest continuous rainforest area in Central America with over ten million hectares. After the Amazon rainforest, it is the second largest area of forest on the American continent. This area is home to a wide variety of ecosystems and species, and is also the habitat of many iconic species such as the jaguar and the tapir. It is a culturally diverse region with a large indigenous population and important archaeological sites such as Caracol in Belize, Tikal in Guatemala and Calakmul in Mexico. Despite its importance, the Selva Maya is exposed to major, primarily anthropogenic threats (e.g. forest fires, unsustainable agricultural activities and logging, illegal trade in animals, plants and cultural goods).

The evaluated project was a regional project with the aim of maintaining the ecosystem functions and cultural values of Selva Maya, which secure the livelihood of its inhabitants and provide environmental services of global importance (impact). It was implemented as an open programme in the border area between Belize, Guatemala and Mexico. The partner of the German Federal Government in concluding the government agreement was CCAD, the environmental commission of the Sistema de Integración Centroamerica – SICA. The project was implemented with the International Union for the Conservation of Nature (IUCN) as the executing agency and in close coordination with German TC.

Brief description of the project

The project's target group was the protected area administrations and the local communities in a total of 16 prioritised protected areas (see Figure 2). **Three key components** were supported: 1) improving management effectiveness in the Selva Maya protected areas, 2) improving the connectivity of the Selva Maya protected areas and 3) improving the capacity to coordinate the conservation and sustainable management of the Selva Maya between Belize, Guatemala and Mexico.

To **improve the management effectiveness of the protected areas (component 1)**, the project financed equipment and means of transport for park staff, the provision of improved operational infrastructure and special monitoring equipment. The ecological functioning of the Selva Maya protected areas depends on stopping the fragmentation¹ of the areas and thereby preserving the connection between large areas of habitat. The financing of measures to prevent and combat forest fires and deforestation, as well as the promotion of agroforestry systems and the reconstruction of forest landscapes, contributed to **improving the connectivity (component 2)** of the protected areas. The project also promoted the development and use of instruments for **improving coordination at regional level** and for improving the regional experience exchange between the responsible institutions and organisations involved (**component 3**).

Breakdown of total costs

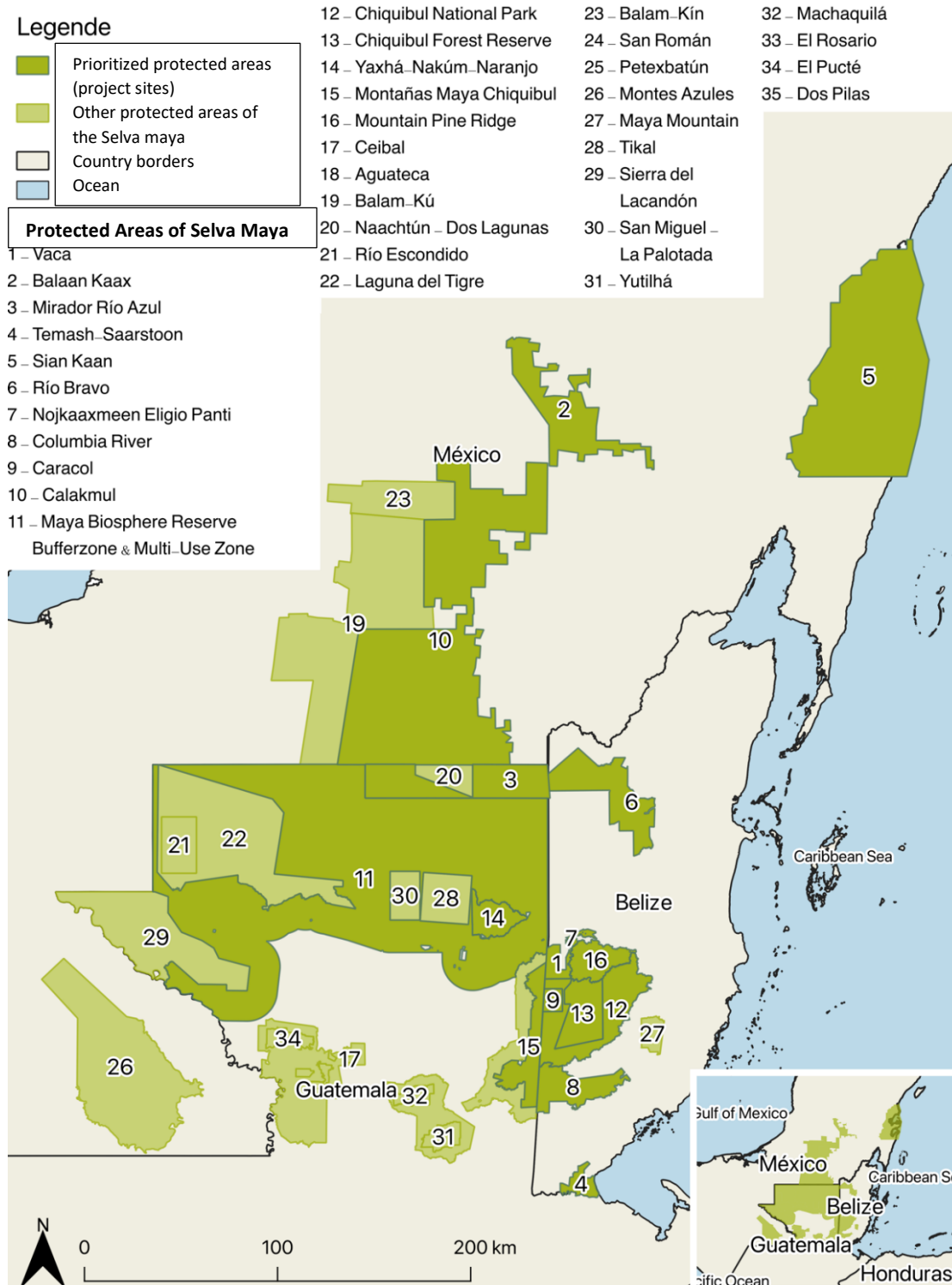
In EUR million	Inv. (planned)	Inv. (actual)
Investment costs (total) ²	12.8	14.44
Counterpart contribution	4.8	6.51
Debt financing	8.0	8.0
<i>of which BMZ budget funds</i>	8.0	8.0

¹ Fragmentation refers to the breaking up of previously connected habitats.

² Residual funds of EUR 66,902.45 were allocated to the BMZ project. No. 2017.68 864 (Enlazando Paisajes).

Map of the project region

Figure 2: Overview of the priority protected areas in Selva Maya I (own presentation)



Quellen: UNEP-WCMC, IUCN (2023). Protected Planet: The World Database on Protected Areas (WDPA). <https://www.protectedplanet.net/en/>; Global Administrative Areas (2023). GADM database of Global Administrative Areas [online] URL: www.gadm.org; Flanders Marine Institute (2018). IHO Sea Areas, version 3. Available online at <https://www.marineregions.org> <https://doi.org/10.14284/323>

Evaluation according to OECD-DAC criteria

Relevance

Policy and priority focus

The cooperation between the countries Belize, Guatemala and Mexico already existed before the project was designed. An important component in the creation of a common foundation was the signing of a memorandum for cooperation in the conservation of the Selva Maya protected areas in 2005. Since then, cooperation between the parties for the promotion of sustainable development and the appropriate management of natural resources has included the following modalities: protection and conservation of protected areas and biological corridors, ensuring connectivity of these areas, basic scientific research, biological monitoring, integrated management of ecosystems and knowledge exchange.

At the time of the project appraisal (2016), there was a bilateral agreement between Belize and Guatemala on environmental protection and the use of natural resources (2014). Moreover, the conditions for coordination of joint activities in the Selva Maya had been improved by the Chicanná Declaration signed³ by Belize, Guatemala and Mexico (2015). The regional coordination and steering committee of the three partner countries (**Grupo Estratégico de Coordinación, GEC**) was established on the basis of the Chicanná Declaration and is composed of the directors of the three national institutions responsible for the nature conservation areas and a representative of the **Central American Commission for the Environment and Development (CCAD)**. The relevant national institutions are **the forest authority in Belize (MSDRM)**, **the national council for protected areas (CONAP)** in Guatemala and **the national authority for nature conservation (CONANP)** in Mexico. The project was to contribute to supporting the newly established structure and strengthening the capacities of the actors involved.

The project was in line with the BMZ's Central America regional strategy, in particular with the focus on "Environmental and resource protection" and the action area "Protection and sustainable use of natural resources". In addition, the planned measures are in line with the priorities of the BMZ country strategies for Guatemala ("Environment and adjustment to climate change", 2016-2022) and Mexico ("Environmental policy and protection of natural resources", 2017-2022). There was no country strategy for Belize at the time of the evaluation, as this was not a partner country of the bilateral DC.

Focus on needs and capacities of participants and stakeholders

The core problem correctly identified during the project appraisal was the threat to the Selva Maya's natural resources from various, primarily anthropogenic factors.⁴ The main factor is the increasing amount of land used for agriculture, often in connection with illegal land-taking, deforestation and extensive livestock farming. Illegal logging to make room for farmland is made easier by weak environmental governance, which is characterised by a lack of governmental presence, insufficient forestry management and, in some cases, unclear responsibilities. A lack of regional planning presents another challenge. At the same time, the use of land and resources is sometimes not very productive (e.g. extensive livestock farming, unproductive forest management). The income generated is generally too low to permanently motivate a more sustainable use of resources.

With the consent of the three participating countries and the CCAD, the IUCN was selected as the project-executing agency. The project was to be implemented via the Regional Office for Mexico, Central America and the Caribbean (IUCN-ORMACC). The selection of the IUCN is also considered appropriate from today's perspective due to the organisation's high level of expertise and administrative competence as well as its political neutrality.

The selection of the prioritised protection areas should place at the start of the project in the context of several regional workshops involving the respective responsible national institutions (MSDRN, CONAP and CONANP),

³ The Chicanná declaration (Declaración de Chicanná) is a voluntary instrument that expresses the parties' commitment to working towards more effective cooperation at regional level.

⁴ Non-anthropogenic factors include the occurrence of the El Niño phenomenon. El Niño is a climatic event characterised by the periodic warming of sea surface temperatures in the central and eastern tropical Pacific. It has far-reaching effects on the weather all over the world and can lead to extreme weather conditions such as droughts, floods and other extreme events. El Niño is often associated with drought periods, which can lead to water shortages in some regions. This can adversely impact agriculture and lead to crop failures, which in turn jeopardises food supply. The elevated temperatures caused by El Niño also increase the risk of heatwaves and forest fires.

the IUCN-ORMACC and other organisations involved in the management of the protected areas. This was based on a list of ten evaluation criteria⁵ that reflected both project-specific objectives and area-specific priorities.

The planned investments in the protected areas should meet the requirements of the respective administrations and be implemented in accordance with the existing management plans. Investments were also planned whereby their operation was deemed to be ensured if a budget was available over the longer term. Investments to improve protected area connectivity should be made in line with the demand of the target group (i.e. protected area administrations and local communities). The existence of the technical skills of users for the operation of productive small projects was to be ensured by linking the measures to existing economic activities.

The self-commitment to gender equality is part of the IUCN's gender policy, but no in-depth analysis of gender-related impact potential was carried out in the project appraisal (2016). The predominantly poor population living around the protected areas was to benefit directly from the promotion of productive small-scale projects. These individual measures were planned to represent only a small part of the overall financing. Accordingly, it was already expected at the time of the audit that the small projects to be supported would only contribute to a small extent to the further development of the target group's (agricultural) potential. The project therefore did not have an explicit poverty orientation at the time of the project appraisal (DAC marker AO: 0).

Appropriateness of design

The Theory of Change (ToC) presented in Figure 3 describes the logic of the project with the target system adjusted at the time of the ex post evaluation (EPE). The core problem should be addressed by three essential components:

- **Component 1:** Under this component, investments should be made in equipment for the control and monitoring of the protected areas, as well as for staff training in their efficient use. Procurement for integrated protected area monitoring in a regional context was also planned as well as close coordination with the two ongoing TC projects. In addition, the implementation of existing management plans and their updating was to be supported. The planned outputs were generally suitable for promoting an improvement in management effectiveness in the protected areas. At the time of the appraisal, the importance of intercultural or gender aspects for updating the management plans was not addressed, nor was it a focus of German DC.
- **Component 2:** The ecological functioning of the Selva Maya protected areas depends on stopping the fragmentation⁶ of the areas and thereby preserving the connection between large areas of habitat. Measures to prevent forest fires and combat deforestation as well as the promotion of agroforestry systems and productive activities in the communities were intended to counteract progressive fragmentation and improve protected area connectivity. The proposed package of measures under component 2 appears to be expedient from the perspective of the time and today.
- **Component 3:** Investments should be made in the communication infrastructure for the regional exchange of information and for the logistical support of the strategic coordination group (GEC). The intended outputs were fundamentally suitable for strengthening the capacity to coordinate measures for the conservation and sustainable management of the Selva Maya in the three countries. Via the planned investment types, the project should make a contribution at several impact levels that are relevant for the long-term conservation of the Selva Maya's natural resources.

In accordance with the theory of change used here, the three components can plausibly contribute to *improving the management of the Selva Maya protection area and strengthening regional cooperation for the conservation*

⁵ Priority consideration of: 1) areas where cooperation between two or three countries or from adjacent areas is possible; 2) areas with strong threat factors that can be addressed directly by the project; 3) areas that create connectivity between protected areas; 4) areas with sufficient implementation capacities/resources to ensure KfW's investment; 5) areas where communities, authorities and civil organisations committed to conservation are represented; 6) areas of high cultural value (in the broadest sense, not just archaeology); 7) areas with regeneration potential and those that act as carbon sinks; 8) areas where no cooperation projects with a similar orientation to those of the KfW project are currently being implemented; 9) areas with high potential for sustainable economic activities (excluding tourism); 10) areas with high tourism potential.

⁶ Fragmentation refers to the breaking up of previously connected habitats.

of natural resources (adjusted outcome target).⁷ At the overarching development policy level, a *contribution should therefore be made to the maintenance of the ecosystem functions and cultural values of the Selva Maya (impact objective)*.⁸ Scientific meta-studies show that protected areas are in principle an appropriate approach to protect biodiversity and contribute to stabilising population sizes and their diversity. The few, contrafactual studies⁹ that are able to make causal statements about the effectiveness of protected areas by identifying suitable comparison groups via matching procedures also achieve positive results. The theory of change underlying the project and the formulated target system are therefore plausible. However, in view of the size of the Selva Maya and the comparatively low financing volume of the project (EUR 8 million planned), it must be noted that the project can realistically only make a modest contribution to the conservation of the Selva Maya and its ecosystem services. An important secondary objective of the project was the preservation of the cultural values of the Selva Maya, which was to be achieved by focusing on protected areas with cultural sites. In the theory of change, however, this goal is not illustrated via corresponding outputs or outcomes.

Sustainable practices in agriculture, forestry and infrastructure planning are also crucial to the comprehensive protection of the Selva Maya and its natural resources. In addition, protection against illegal activities and awareness-raising are of great importance for the preservation of this unique region. The dissemination of sustainable agricultural practices and raising public awareness of nature conservation concerns should be addressed in particular through component 2 of the evaluated project. Ideally, alternative sources of income will be promoted that lead to long-term behavioural changes at the municipal level due to economic benefits. However, scientific studies show that illegal activities and the associated degradation of natural resources (especially deforestation) in the Selva Maya are largely caused by organised crime. Organised drug dealers illegally clear areas of forest to make way for pasture for livestock farming. The money earned from this serves as funds for money laundering, drug trafficking and control of the area.¹⁰ Therefore, it is necessary to not only create positive incentives for the local population, but also negative ones, i.e. consistent law enforcement by sanctioning illegal activities. The financed outputs of component 1 should at least facilitate the identification of illegal activities through improved monitoring capacities (e.g. installation of SMART systems and remote sensing equipment). The causes of increased agriculture and illegal trade are not explicitly addressed by the project. This cannot be expected from a natural resources conservation project with this funding. Nevertheless, at the time of design, this already poses an inherent risk to the sustainability of any impacts.

There were limitations due to shortcomings of the previous feasibility study. The study did not sufficiently specify several aspects that were decisive for the subsequent implementation of the project: There was no selection of the protected areas eligible for funding and no determination of baseline data for the definition of the target values of the impact indicators. According to the final inspection report, the technical and financial details of the operational implementation structures had not yet been sufficiently developed, and there was a lack of information on the delegated cooperation and capacities of the GEC with regard to the management of the project.

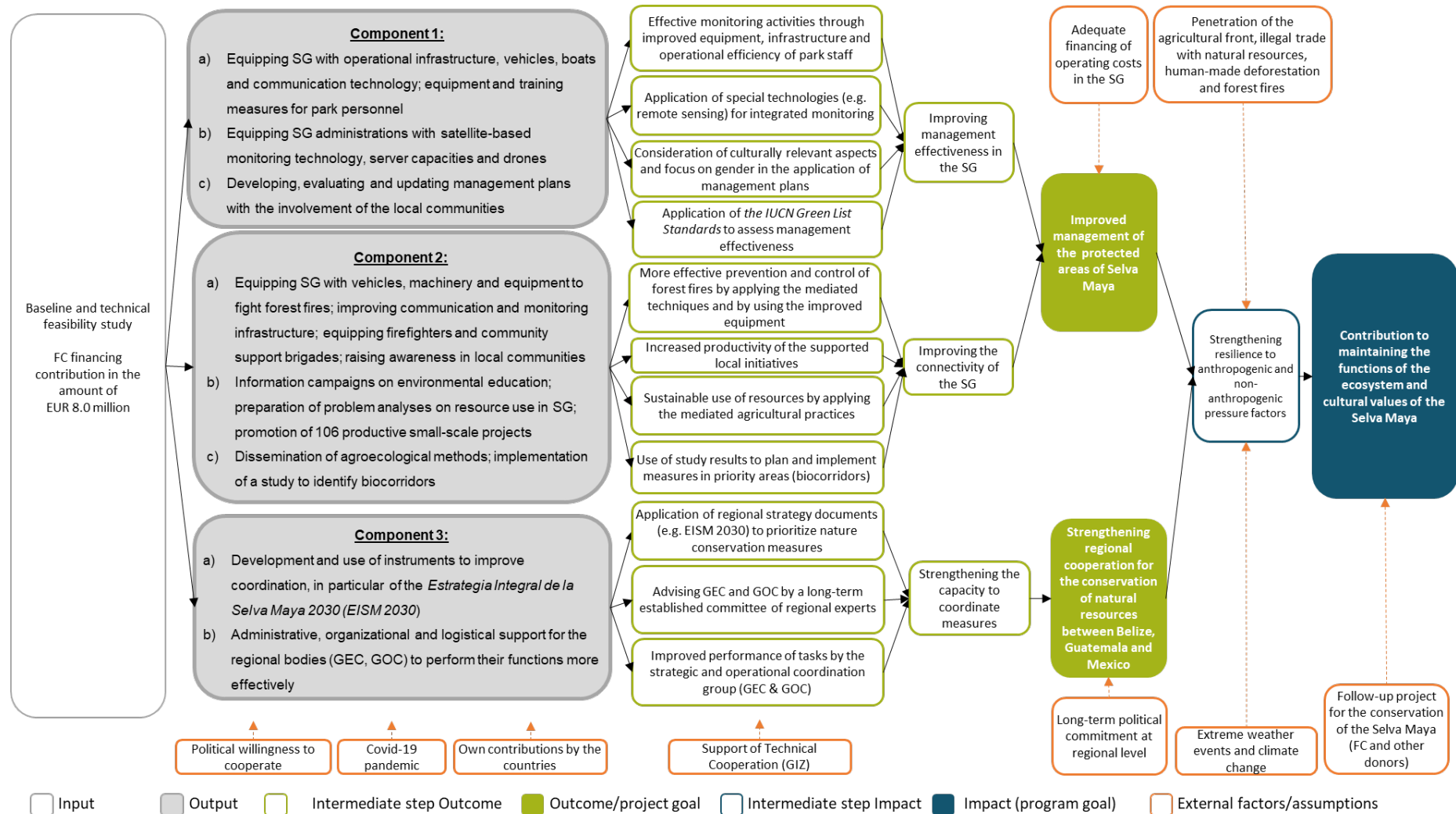
⁷ In some cases, a clear distinction between the financed outputs of components 1 and 2 is not possible. This applies in particular to the financed means of transport and equipment in the protected areas, which can be used both for monitoring activities and for forest fire fighting. This makes it difficult to clearly assign outputs to the intended impacts at outcome level.

⁸ The impact objective formulated here was still defined as an outcome-level objective (module objective) at the time of conception. Since the preservation of ecosystem functions and cultural values is more about an overarching developmental impact rather than the use of the outputs created (outcome), an adapted theory of change is used as a basis in the EPE.

⁹ Causal studies that use a suitable comparison group and a temporal before/after comparison to make statements about what would probably have happened without the evaluated intervention (i.e. forest conservation measures).

¹⁰ Source: Devine, J. A. Currit, N. Reygadas, Y. Liller, L. I. & Allen, G. (2020). Drug trafficking, cattle ranching and Land use and Land cover change in Guatemala's Maya Biosphere Reserve. *Land Use Policy*, 95, 104578.

Figure 2: Theory of Change (own presentation)



At outcome level, the availability of updated management plans in 80% of the prioritised protected areas was defined as an indicator at the time of the project appraisal. This is appropriate from today's perspective, although the usage component was missing in the formulation. The formulation of the indicator was adjusted at the time of the evaluation (see Effectiveness). Another outcome indicator was the reduction in the deforestation rate in the project area. The methodology for collecting data was not yet defined at the time of the project appraisal and the data used later on strictly does not represent a deforestation rate, but merely the increase or decrease in forest area in the region under investigation. In addition, the indicator is an impact measurement at impact level. For this reason, the indicator was moved to the impact level at the time of the EPE.

The project was designed to take a holistic approach to sustainable development, which should contribute to the conservation of environmental assets of global importance. According to the Global Sustainability Report, the conflict between economic and environmental interests is a major barrier to the protection of global ecological communal assets, as well as weak institutional capacities and increasing pressure on protected areas. These challenges were addressed in the design of the project through the planned involvement of the local population and the strengthening of capacities at protected area level or at the level of the nationally responsible institutions (governance). Due to the project's low degree of poverty orientation, only a limited contribution to tackling the conflict of objectives between environmental and economic interests could be expected.

The evaluated project was a stand-alone regional project and was not integrated into a DC programme (individual module). The impact levels described above are meaningfully linked to the BMZ strategy for Central America and had the potential to make an important contribution to the priority area Environmental and resource protection.

Response to changes/adaptability

The historical territorial conflict between Belize and Guatemala culminated in two referendums, held in 2018 in Guatemala and in 2019 in Belize. In both countries, the majority vote was for the settlement of their territorial, island and maritime differences before the International Court of Justice in The Hague, The Netherlands. This made the project particularly challenging from a political perspective. However, diplomatic relations between the partner countries were successfully continued in the area of conservation. Another unforeseen change in the world occurred due to the COVID-19 pandemic. In 2020/21, there were delays in the implementation of the project due to pandemic-related restrictions, but these could soon be compensated for (see Effectiveness).

Summary of the rating

The project was in line with the political priorities of the partner countries and with the BMZ's regional strategy. Protected areas of great importance on both a regional and global level were to be promoted. Regarding the focus on the capacities and needs of the target group, a stronger poverty orientation and the analysis of gender impact potentials in the design would have made sense at this point in time so that vulnerable groups could be more involved. The target system and the underlying theory of change are plausible with a few limitations. These concern the partly unclear delimitation of the content of the outputs from the respective components (particularly outputs of components 1 and 2) as well as the absence of outputs and outcomes that should directly contribute to the preservation of cultural values. Further conceptual weaknesses resulted from the lack of specification of some aspects relevant to the implementation in the feasibility study carried out at the beginning of the design. Weaknesses included the baseline survey and the method for valuing the defined indicators. It must be clearly emphasised that the project is of great importance for nature conservation and the ongoing financing of protected areas. Therefore, the relevance of the project is still rated as successful overall despite weaknesses in the theory of change and appropriateness of the design.

Relevance: 2

Coherence

Internal coherence

The long-standing involvement of German DC in Central America includes a range of nature conservation projects, particularly in Guatemala and Mexico. As early as the late 1990s, FC financed the "Integral Development Plan of the Petén" project, which enabled the first and most comprehensive implementation of integrated regional

planning in Guatemala. As part of the bilateral cooperation with Guatemala and Mexico, various FC projects promote national protected areas for the conservation of biodiversity and the sustainable use of natural resources.

There is a close content link, but no geographical overlap with the evaluated project, with the FC project “Biodiversity Programme for the Networking of Priority Ecosystems in Central America in SICA” audited in 2019. At the time of the EPE, the project is still in the implementation phase and promotes 1) the improvement of management effectiveness in 19 protected areas, 2) the restoration of connectivity and measures for the restoration of environmental integrity in five landscapes and 3) the establishment of an administrative structure in these landscapes. Another regional programme running at the time of the EPE is “Conservation of Marine Resources Central America III”, which builds on two predecessor phases already completed for the preservation of the ecological functions of the Meso-American coral reef. The objective of the project to be evaluated here is congruent with the different FC projects at national level. Its focus on the promotion of regional cooperation represents a meaningful addition to and further development of the FC involvement in the region.

The project also complemented TC projects. The TC project “Protection and Sustainable Use of the Selva Maya” was particularly relevant. This was implemented in the period 2011-2019 on behalf of the BMZ. The project worked in Belize, Guatemala and Mexico with the institutions responsible for the preservation of the protected areas as well as other relevant governmental and civil society organisations. To promote protection and sustainable use, the project implemented activities in four areas: 1) protected areas and biodiversity, 2) land use planning taking into account environmental protection, 3) sustainable alternatives to increasing income, 4) environmental governance in the Selva Maya region. Another TC project that was equally relevant was the “promotion of a monitoring system for biodiversity and climate change in the Selva Maya region”. The International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supported the project in the period 2016-2021. The project helped to effectively incorporate the results of the regionally coordinated monitoring of biodiversity and climate change in the Selva Maya into policy making. An important aspect during the implementation was the improvement of accessibility and maintenance of existing data as well as the communication of the monitoring results to various target groups.

Last but not least, the TC project “Strengthening Regional Cooperation at Strategic and Operational Level to Protect the Selva Maya” started in 2019. The project promotes the cooperation capabilities of the GEC and GOC. It also aims to improve the health of ecosystems, animals and people. The development of a regional dialogue platform is at the forefront in order to promote cross-disciplinary cooperation to reduce zoonotic risks.

The aforementioned TC projects meaningfully complemented the measures of the evaluated FC project. During the evaluation mission, the interviewees stated that all planning documents were comprehensively coordinated between the FC and TC during implementation. In addition, monthly exchange meetings took place between the IUCN and TC. The GEC was advised jointly by the FC and TC. This contributed to the development of a common strategic framework (EISM 2030). The TC was also closely involved in the planning and design of the FC follow-up project “Selva Maya II”, the implementation of which is expected to start in 2024. The TC is also set to support the GEC in carrying out regional deforestation monitoring as part of the FC follow-up project in coordination with the FC. Overall, we rate the cooperation within German DC as very good during the implementation of the evaluated project, so that synergies were successfully used.

The project was consistent with international norms and standards, in particular with the basic principles of the International Development Agenda 2030. The project takes into account the six quality characteristics of German DC, whereby it is particularly relevant for the quality characteristics “human rights and inclusion” and “environmental and climate compatibility”. The project ensured the inclusion of the local population in the implementation of the individual measures. Among other things, municipal aid brigades were supported in fighting forest fires through equipment and training, as well as productive small-scale projects and sustainable management methods on municipal land. Interculturality was taken into account in the dissemination of management plans. These were distributed to the local communities in simple English, Spanish and Q’equchí (Maya language). Gender equality played a role in the updating of management plans, as guidance on gender considerations was developed in parallel in the three countries (see Effectiveness). A project-related complaints mechanism for the local communities was not established. From today’s perspective, this is viewed critically, as a complaints mechanism is indispensable in order to identify adverse effects of the project on the municipalities and to initiate corresponding countermeasures in a timely manner. At the time of the evaluation, there was no evidence that the project had negative impacts at the level of local communities. By protecting forest areas as important carbon sinks, the project contributes to climate change adaptation and mitigation, and also meets German DC’s aspiration to combine climate and environmental protection.

External coherence

The FC project complemented the activities of other donors with a focus on the conservation of natural resources in Central America. In parallel to the implementation of the FC project, the Global Environment Facility (GEF) financed a project for the conservation and sustainable use of cross-border freshwater, coastal and marine resources in the Meso-American Reef System (MAR) ecoregion. In addition, the World Bank supported a project to strengthen Belize's participation in future REDD+ carbon payments through a participative process. The development and implementation of national and sub-national REDD+ strategies as well as the strengthening of institutions were also supported by USAID in cooperation with the Rainforest Alliance. USAID was also active with a project to build up national capacities for improving management and governance throughout the Guatemalan protected area system (SIGAP) as well as with pilot measures in the Maya Biosphere Reserve in the Petén department. The United Kingdom supported a project to combat organised trade in high quality timber species and poaching at the border between Guatemala and Mexico, focusing on the "Green Corridor" between the Maya Biosphere Reserve and the Calakmul Biosphere Reserve as well as the Balamkú Reserve in the state of Campeche.

The different approaches pursue the common goal of nature conservation and the conservation of the Selva Maya, and complement each other. However, there was no comprehensive programme and budgetary framework in consultation with regional donors. Donor coordination takes place via the GEC, to which all new projects are submitted for approval. As part of the follow-up project "Selva Maya II", plans are in place to set up a donor table under the leadership of the GEC. The evaluated project contributed to improving and harmonising biomonitoring through the promotion of Spatial Monitoring and Reporting Tool (SMART) systems in the three countries. In addition, the *IUCN Green List Standards* were introduced in the prioritised protected areas in order to enable an evaluation of management effectiveness in accordance with international standards. There were no other common systems for follow-up/evaluation during the implementation of the evaluated project. Regional deforestation monitoring is only to be promoted in the FC follow-up phase.

The European Union (EU) supported the Selva Maya in the department of Petén (Guatemala), in particular to improve the commercial performance and competitiveness of the community forestry companies of the Maya Biosphere Reserve, the Usumacinta river cooperatives and the producer groups in the forestry and agroforestry sector. Another EU project aimed to strengthen civil society organisations in southern Petén to increase their management and interest representation capacities as well as improve their involvement in the design and planning of territorial actions and in public policy supervision. Furthermore, the EU is promoting better management of the risk of forest fires in cooperation with the indigenous population of remote rural communities in Petén.

Further activities have been initiated in the Selva Maya region since the completion of the evaluated project. One example of this is the regional development initiative *Cinco Grandes Bosques de Mesoamerica*, which was launched in 2021 at the 26th climate conference in Glasgow (COP 26). The initiative is being supported by a Team Europe Initiative (TEI)¹¹ of the same name and which is currently under preparation, to which Germany is also making significant financial and content contributions. Another relevant TEI, to which the FC and TC make specific and substantial contributions, focuses on the Petén department in northern Guatemala.

The project supported the partner countries in providing their national climate contributions (Nationally Determined Contributions, NDCs) within the framework of the Paris Climate Agreement by financing climate protection measures (KLM 1). It also contributed to the Agriculture, Forestry, and Other Land Use (AFOLU) 2040 cross-sectoral climate initiative of the Central American Integration System (Sistema de la Integración Centroamericana, SICA), launched in 2019. The initiative aims to restore and preserve ten million hectares of degraded land and ecosystems as well as promote carbon neutrality in agriculture, forestry and other areas of land use in a sustainable and climate-friendly way by 2040. The project's objective was also in line with the implementation of the international Post-2020 Global Biodiversity Framework (GBF), in particular with strategic objective 1 (Reducing threats to biodiversity).

¹¹ Since 2020, the approach has pooled development policy contributions from the European Commission, EU Member States and EU financial institutions (European Investment Bank and European Bank for Reconstruction and Development). Within the framework of joint programming, the Team Europe Initiatives (TEIs) combine the concrete activities of the EU, its Member States and, where appropriate, other donors in a thematic area, thereby increasing the effectiveness and visibility of European foreign and development policy.

Summary of the rating:

Intensive coordination took place within the German DC, which promoted complementarity between the TC projects and the evaluated FC project. In addition, the TC supported the FC-supported process for preparing the regional strategy document EISM 2030 and worked closely with the IUCN, GEC and GOC. At the time of implementation, formalised donor coordination and harmonisation processes in cooperation with the executing agency and the GEC did not go beyond the coordination of the FC and the TC projects implemented in parallel. Due to the extensive coordination between the TC and FC and due to the complementarity of the evaluated project with the measures of other donors, the internal and external coherence of the evaluated project is assessed as successful.

Coherence: 2

Effectiveness

Achievement of (intended) targets

The objective adjusted as part of the EPE was: *Improve the management of the Selva Maya protected area and strengthen regional cooperation between Belize, Guatemala and Mexico to conserve natural resources.*¹²

The target achievement at outcome level is summarised in the table below¹³:

Indicator	Status during PA	Target value PA/EPE	Actual value at final inspection	Actual value at EPE
(1) A total of 80% of protected areas supported apply updated management plans that involve the communities within their sphere of influence	6 protected areas (38%)	12 protected areas (80%)	13 protected areas (81%)	Achieved (13 protected areas).
(2) Improved operational infrastructure and equipment in the protected areas is properly used and maintained.	n/a	Achieved.		Achieved (based on the visited project sites).
(3) The improved equipment for integrated monitoring of the protected areas is used and maintained properly	n/a	Achieved.	/	Achieved (based on the visited project sites).
(4) Early detection and fighting of forest fires is improved through the use of FC-financed infrastructure and equipment	n/a	Achieved.	/	Achieved (based on the visited project sites).

¹² The module objective “The ecosystem functions and cultural values of the Selva Maya are maintained” originally formulated at the appraisal was set at impact level and therefore too ambitious.

¹³ Indicators 2-6 were reformulated at the time of the evaluation in order to better map target achievement. Originally, the project’s impact matrix envisaged a further indicator for the direct determination of management effectiveness (increase in management effectiveness in protected area by 20% compared to the starting situation). Such an indicator would have been appropriate in terms of content, but was not explicitly included as an indicator in the context of this evaluation due to a lack of data and methodological weaknesses. The target value (20% increase) was defined before the selection of the protected areas and was therefore rather arbitrary. In addition, the necessary data on the current status prior to the implementation of the project was not determined. Data was collected for the first time in 2019, shortly before the end of the implementation phase. There is therefore no data available to compare the situation before and after the programme.

(5) The results of the regional study to identify biocorridors are used by the three countries to design and implement further actions	n/a	Achieved.	/	Achieved.
(6) The supra-regional coordination mechanism for developing and coordinating the strategic lines for joint management of the Selva Maya is established for the long term	Two meetings p.a.	Four meetings p.a.	Project-related meetings: 2018 (three), 2019 (six), 2020 (three), 2021 (three)	Partly achieved.

When evaluating the achievement of targets, it must be noted that these are mainly based on impressions from the on-site visits as part of the evaluation and the document research. For logistical and time reasons, only four of the 16 supported protected areas¹⁴ could be visited. The evaluation team sent a questionnaire to the unvisited protected area administrations to determine the use and current state of the supported outputs. The questionnaire was not completed by any of the protected area administrations.

Contribution to achieving targets

In total, the 16 protected areas supported are strategically important areas in the region. They are the largest in size, which facilitates connectivity between them. They are also iconic from a cultural perspective. Two protected areas were selected that are listed as UNESCO World Heritage Sites (Sian Ka'an Biosphere Reserve and Calakmul Biosphere Reserve). In addition, three protected areas were selected that are considered wetlands of international importance (Ramsar Sites; Sarstoon-Temash National Park, Yaxhá-Nakum-Naranjo National Park, Bala'an K'aax Flora and Fauna protected areas). Before the start of the project, these protected areas were not provided with sufficient human and financial resources in relation to the extent of the threat factors to which they are exposed. Against the background of the aforementioned factors and due to the (global) importance of the areas, the selection of the prioritised protected areas also makes sense from today's perspective and are developmentally worthwhile.

Component 1 (improving the management effectiveness of the Selva Maya protected areas): the outputs delivered focused on a) strengthening protected area management and monitoring, b) strengthening integrated protected area monitoring and c) developing, evaluating and updating management plans.

Management and monitoring of the protected areas was strengthened by improving the operational infrastructure, transport capacities and equipment for park staff. Buildings for protected area administrations were financed at the visited sites Yaxha-Nakum-Naranjo, San Miguel and Carmelita. At the first two locations, the infrastructure is used daily, as the rangers live there during their shifts and store their work equipment there. The financed facilities in the buildings (e.g. kitchen, beds, tiled showers) and kit (e.g. uniforms, radios) as well as the financed means of transport (e.g. pickups, quads) are used properly for the performance of management activities. The electricity supply is provided by project-financed solar cells. At the Carmelita site, the financed building is used as required: approximately every two weeks. Since the end of the project, minor repairs have been carried out on the financed infrastructure, e.g. the renewal of some wooden beams in San Miguel. Major repairs were not required according to the information provided by administrative staff. Some of the financed items, e.g. fireproof safety shoes, have a limited service life due to their intended use. As a result, some equipment was no longer in use at the time of the evaluation and had to be re-purchased. On the basis of the on-site inspections, it can therefore be stated that indicator 2 was achieved. The target achievement can be plausibly attributed to the investments made in infrastructure and equipment.

The technical equipment for **integrated monitoring** with special hardware and software, in particular in the area of satellite-based monitoring technology and GIS, is used by the protected area administrations (indicator 3). The financed hardware (e.g. computers) at the visited sites is in good condition and maintenance is generally not

¹⁴The following project areas were visited: Yaxha-Nakum-Naranjo National Park in Guatemala (7 September 2023), San Miguel and Carmelita protected area administrative units in the multiple-use zone in Guatemala (8 September 2023), Sian Ka'an Biosphere Reserve in Mexico (11 September 2023) and Bala'an K'aax (12 September 2023) in Mexico.

required, except for software updates. The strengthening of integrated monitoring was supported by the measures under the TC module “Promotion of a monitoring system for biodiversity and climate change in the Selva Maya region” (see Coherence).

The **overall quality of the outputs delivered** is considered satisfactory. In particular, the vehicles, equipment and furnishings at the visited project sites were of suitable quality when procured. The financed buildings are made of more durable materials than those previously used and enable staff to perform their duties and obligations well. At the San Miguel site, the protected area administration itself carried out the construction of the main accommodation building (i.e. the building for sleeping, cooking, eating). This is to be assessed positively against the background of the increased ownership. However, missing windows and larger gaps between the wooden battens of the base construction have reduced the quality of the building. This is a disadvantage during the wet season, as the façade is not watertight. For future projects, more comprehensive technical assistance and closer supervision of the construction process should be considered, especially if the beneficiaries carry out the work themselves. This would also contribute to the sustainability of the infrastructure, as the most suitable materials and construction methods would be used. On the other hand, the selection and procurement of building materials is limited due to the fact that access to the mostly remote areas is difficult. The procurement of more solid materials for the construction of buildings would therefore entail higher costs or would not always be logistically possible.

The financed measures directly contributed to improving the **working conditions** and **occupational safety** of the rangers and staff in the protected areas. Although these groups of people come from the neighbouring communities, they live in the protected area while they are working and only leave it if they have several days off at a time. The reason for this is the remoteness of the areas combined with a poor transport infrastructure (i.e. uneven dirt roads without street lighting). The daily journeys to and from the areas are too cumbersome and lengthy, especially since the routes between municipalities and protected areas pose a high risk of accidents in the event of extreme weather events such as heavy rain or heavy thunderstorms. Among other things, the project promoted the construction of communal buildings with separate kitchen and dining areas as well as dormitories (including beds) for the rangers. During the on-site evaluation visits, it was clear that these investments provided added value in that they enabled staff to carry out their duties effectively, something that was also clearly highlighted by the target group.

The update of the **management plans**, on the basis of which the annual work plans are formulated, was carried out for a total of six of the 16 protected areas with the involvement of the local communities. For the other protected areas, no update was required, e.g. because a review of the management plans with subsequent update had already taken place shortly before project implementation. In other cases, the update was not possible or expedient. In the case of the Calakmul Biosphere Reserve (Mexico), a border enlargement process was underway at the time of implementation, which needs to conclude before a renewed update of the management plan. The management plan in the El Mirador-Río Azul National Park (Guatemala) was also not updated. CONAP and the co-managers of the area were of the opinion that updating the plan would pave the way for mass tourism in the area, which would be incompatible with the protection objectives. Indicator 1 is therefore deemed to be achieved. It is worth mentioning that the local communities received versions of the protected area management plans in easy-to-understand language in English, Spanish and Q'eqchi (one of the most commonly spoken Mayan languages), in brochure format.

As part of the project, the IUCN Green List Standards were introduced across all the protected areas. Therefore, in addition to the existing national procedures, an internationally recognised and uniform framework and catalogue of criteria for evaluating protected area management and its effectiveness was created. The regional expert group also set up as part of the project found that management effectiveness in the protected areas improved within three years from an average of 66% in the fourth year of the implementation phase (2019) to 75% at the end (2021; according to the IUCN *Green List Standards*¹⁵). This development is generally rated as positive, as it reflects the improvement in the capacities for planning and implementing measures in the protected areas. However, since the applied criteria are to a significant extent aspects that are not project-related/were not addressed directly by the project, the improvements can only be traced back to the project to a limited extent. The significance of the observed change for the effectiveness of the project is also limited by the fact that no comparable data on management effectiveness is available for the period before the start of implementation (no baseline

¹⁵ The *IUCN Green List Standards* provided a uniform evaluation framework with regional indicators instead of the national standards for the evaluation of management effectiveness. The project also promoted the registration of the Mexican biosphere reserves Calakmul and Sian Ka'an on the *IUCN Green List*.

data), and therefore a clear before-after comparison is not possible. It should also be noted that management effectiveness was determined in accordance with the *IUCN Green List Standards* only for 12 of the 16 prioritised protected areas. The regional expert group made the decision to not take the remaining protected areas into account, mainly due to a lack of institutional presence (i.e. staff, equipment, management budget funds). If the remaining protected areas were taken into account, the value of the average management effectiveness would probably be lower both at the time the first data was gathered (2019) and at the end of the project (2021). The absence of four protected areas in the calculation of management effectiveness also reduces the informative value with regard to the project effects achieved.

Against the background of these limitations, it was found that seven of the 12 protected areas evaluated showed an improvement in management effectiveness over the period 2019-2021: The biggest value change was in Montañas Mayas Chiquibul (Guatemala), where management effectiveness improved from 47% to 74%, and Calakmul (Mexico), where it improved from 68% to 95%. Calakmul was therefore the protected area with the highest management effectiveness in 2021. The smallest changes in value were recorded in the Rio Bravo Forest Reserve (Belize), from 88% to 94%, and the Sian Ka'an Biosphere Reserve (Mexico) from 77% to 83%. For a total of five of the 12 protected areas evaluated, management effectiveness deteriorated over the period under review, with the Mountain Pine Ridge Forest Reserve (Belize) registering the biggest value change: from 58% to 43%. The Bala'an K'aax protected area (Mexico) also recorded a value of 43% in 2021, meaning that these two sites recorded the joint weakest values that year.

The development of guidelines on the inclusion of gender issues in the design and application of management plans should be highlighted positively. The identification of the relevant gender issues took place as part of participatory processes, including with the involvement of local communities. Although there were no measurable gender impacts at the time of the EPE, the guidelines in this regard created an important strategic basis in the three countries that did not exist before (structural effectiveness).

Due to restrictions that were enforced following the outbreak of the **COVID-19** pandemic, some investments and measures aimed at specific deficits could not be implemented as planned after March 2020.¹⁶

Component 2 (improving the connectivity of the Selva Maya protected areas): a) measures to prevent and fight forest fires in protected areas and their buffer zones, b) measures to combat deforestation and c) the promotion of agroforestry systems and the reconstruction of forest landscapes were implemented as a priority.

The improved communication (e.g. radios) and the use of suitable vehicles (pickups and quads) enable the brigades to respond more quickly to **forest fires** (indicator 4). This allows the emergency services to reach the source of the fire more quickly and to remain in contact with other support points. In Guatemala, the ability to respond to forest fires in 2017 was 29% according to CONAP records, with details of the criteria used for data collection unclear. With the output of the project, which provides for capacity building and investment in equipment, the ability to respond to forest fires was estimated at 47% effectiveness by 2020. This corresponds to an increase of 18 percentage points compared to the institutional baseline. This data is only available for Guatemala, so no comparison with the situation in Mexico or Belize is possible. In the Bala'an K'aax (Mexico) protected area visited, the use of the project-financed drones by the municipal brigade was particularly positively highlighted, as they enable real-time monitoring of forest fires. This makes it easier to determine the extent and direction of the fire in a timely manner, thereby making it possible to fight the fire more effectively. In Mexico, on the initiative of the "Comité de Gestión por Competencias de Sustentabilidad Comunitaria", an officially recognised competence standard for the municipal brigades involved in the protection and restoration of protected areas was created.

The measures to combat **deforestation** included in particular environmental education and training measures on biodiversity and protected areas in the local communities. In this context, the project also carried out several training courses for children and young people, so that the scope of the measures extended to particularly vulnerable parts of the target group.¹⁷ The awareness-raising measures contributed to increasing the nature conservation knowledge of the local population. This fosters support among the local communities for the implementation of nature conservation projects and thereby increases the sustainability of the measures. The knowledge

¹⁶ Residual funds of around EUR 66,000 were transferred to the "Enlazando Paisajes" project (BMZ no. 2017 68 864).

¹⁷ The project promoted summer camps in Belize (Orange Walk Town) as one of several activities aimed at raising awareness among the general public. Every year, hundreds of students aged 6 to 12 take part in a series of activities for a week. The Forest Department presented its role and responsibilities, and organised excursions to various protected areas. More precise data on the scope of the measures (i.e. number of training courses or children reached) is not available.

conveyed can favour long-term behavioural changes, so that the local population reduces its deforestation activities and unsustainable forms of land management.

Some local initiatives for the promotion of **agroforestry** systems and the **reconstruction of forest landscapes** had already been initiated by the TC and could be further expanded with the aid of FC funds. The evaluated project promoted joint ventures in the areas of tourism, catering, handicrafts, land and water transport services, and sustainable honey production in family businesses as well as financing equipment and sustainable resources for improving sustainable agricultural production. The evaluation mission visited one of the 106 small projects supported by the project. Among other things, steel tables and semi-automatic machines were purchased for production at the municipal apiary. In addition, the project financed new air conditioning systems in individual production rooms as well as furnishings for a conference room. By the time of the evaluation mission, knowledge of production methods had already been transferred to honey producers from Belize. The sharing of learning experiences points to the potential replicability of the supported approaches. The promotion of sustainable production methods stabilised income generation based on resource-conserving activities. Therefore, the local population is less likely to rely on other, possibly unsustainable practices to support their livelihoods.

The project financed the creation of a **regional study** to identify biocorridors that serve to improve connectivity between the Selva Maya protected areas. The results of the study have already enabled project proposals to be developed under the Global Environment Facility (GEF)-8 programme for critical forest biomes, with the IUCN as the implementing organisation. In addition, the results of the study served as the basis for the feasibility study for the planned FC follow-up project “Selva Maya II”. Indicator 5 is therefore also evaluated as achieved.

The prevention of deforestation activities and forest fires as well as the promotion of the reconstruction of forest landscapes prevented further fragmentation of the Selva Maya protected areas and contributed to improving the connectivity of the areas. With the regional study, a longer-term instrument for improving the connectivity of the Selva Maya protected areas was also created.

Component 3 (improving the capacity to coordinate measures for the conservation and sustainable management of the Selva Maya between Belize, Guatemala and Mexico): this component included in particular (a) strengthening the technological and organisational infrastructure for improving communication at regional level (between countries) and (b) improving the regional experience exchange between the competent institutions and the organisations involved.

The **development of instruments** focused on the development of a strategy document as the basis for a common policy to protect the Selva Maya. One of the most important results was the preparation and adoption of the “Estrategia Integral de la Selva 2030 Maya” (EISM 2030). This is a medium-term planning tool that presents a set of agreed guidelines for coordination and communication between the three governments, and defines a common vision and work objectives. This enables the implementation of regional cooperation programmes for the preservation and sustainable use of the natural and cultural resources of the Selva Maya. The FC and TC jointly supported the development of the strategy. It was submitted to the CCAD Council of Ministers in July 2021 and ratified by the CCAD as an official regional planning instrument.

The representatives of the responsible national institutions continue to meet regularly, with the 21st GEC meeting taking place in March 2023. In the meantime, the cross-cutting topics covered have been expanded so that, in addition to gender, the “One Health” initiative also plays an increasingly important role in the development of strategic priorities in protected area management. Strengthening the GEC is also a focal point of FC funding in the Selva Maya II follow-up project. The TC will additionally continue to support its long-term establishment.

Successful FC/TC cooperation is one of the key success factors of the project. The close coordination processes ensured that the DC measures complemented each other and build on previous projects in an expedient manner. Furthermore, the TC played a key role in the preparation of the regional strategy document EISM 2030 and in the successful implementation of component 3.

The selection of the politically neutral project- executing agency IUCN proved to be another success factor. The IUCN succeeded in ensuring trustful cooperation with national authorities and protected area administrations. In addition, the guidance on gender implications in the development and application of management plans are important outcomes that are related to IUCN involvement.

Quality of implementation

The IUCN provided the necessary advice for all three components of the evaluated project in order to implement the measures in consultation with the relevant partners and TC. Feedback from the national partners was obtained both during interviews as part of the feasibility study of the FC follow-up project “Selva Maya II” and during the evaluation mission. The result was a high level of satisfaction among partners with the implementation structure of the project and IUCN’s consultancy services.

However, the **technical and operational management** of the project had some weaknesses. When selecting priority measures in the protected areas with regard to the desired improvement in management effectiveness, the direct contribution to solving the specific problem situation in the respective protected area was not always evident. In addition, the impact-related **follow-up** by the project-executing agency revealed methodological weaknesses, in particular due to the significant delays in the creation of the baseline for deforestation monitoring, which was only determined in 2019 and therefore almost at the end of implementation. As a result, problem-oriented design and management of the project was only possible to a limited extent. This learning experience was used in the design of the follow-up project to coordinate the methodology of annual deforestation monitoring with the IUCN. The IUCN built up its own capacities for this purpose.

During implementation, the project-executing agency placed a particular focus on **gender impacts** and addressed relevant risks, particularly during the process of updating the management plans. The development of a guideline on gender inclusiveness in updating management plans is particularly noteworthy, which the IUCN proactively supported in all three countries.

The **GEC**, composed of the directors of the three protected area national institutions (MSDRM, CONAP and CONANP) and a representative of the CCAD, is responsible for developing and coordinating the strategic lines for joint management of the Selva Maya. This also includes the strategic management of donor projects. As part of the evaluated project, the GEC was responsible for selecting the priority protected areas, approving the planning instruments, follow-up of project progress and strategic coordination with other initiatives in the context of the Selva Maya protected areas. The IUCN provided the necessary administrative, organisational and logistical support to the GEC in an annual bill of exchange with the TC. The political changes in the individual countries and the associated high turnover of GEC representatives limited the ownership of the strategic coordination group. The expectations formulated at the time of the appraisal with regard to **the strategic and operational role of the GEC** were only met to a limited extent and with significant support from the IUCN and GIZ as well as from FC project funds. For this reason, the IUCN also took over the strategic management of the regional project to a significant extent, in addition to the administrative, financial and operational tasks.

The outbreak of the **COVID-19 pandemic** affected the joint activities, including the GEC and GOC meetings. However, it was possible to hold these virtually. The project quickly adapted to the changing circumstances through the introduction and use of virtual platforms and the establishment of virtual working groups, enabling coordination with the protected area authorities and the GEC to be continued.

Unintended consequences (positive or negative)

No unintended effects (positive or negative) could be identified during the evaluation.

Summary of the rating

The indicators defined at the time of the EPE were met, except for one indicator. The quality of the services and outputs provided is considered satisfactory based on the impressions on site. A before-and-after comparison of the existing operational infrastructure in the protected areas indicates a plausible improvement in capacities and thereby an improvement in the management of the protected areas. This impression is underpinned by the 2021 evaluation of management effectiveness by an independent regional group of experts, with methodological weaknesses limiting its validity. From today’s perspective, measures to prevent deforestation, prevent and fight forest fires, and promote productive activities make a positive contribution to protected area connectivity, as they combat the causes of increasing protected area fragmentation. However, it should be noted that these measures have an impact mainly at local community level and do not have an influence on the unsustainable (and possibly illegal) use of resources by organised crime syndicates (part of the core problem). The successful study on the identification of priority biocorridors and corresponding measures promises long-term contributions to improving connectivity. Overall, the project’s contribution to the sustainable management of the Selva Maya protected area

and strengthening regional cooperation for the preservation of natural resources between Belize, Guatemala and Mexico is rated as successful. The quality of implementation by the project-executing agency is reduced by the weaknesses mentioned in technical and operational management and follow-up. On the other hand, the IUCN made important contributions to the strategic management of the project and thereby supported the partners involved in the fulfilment of their tasks. For this reason, the quality of the implementation of the project is still rated as successful. It should also be noted that the weaknesses of the evaluated project were documented in detail and were already used in the design of the follow-up phase “Selva Maya II”. Overall, the results of the project still meet expectations, whereby its pilot nature is also taken into account positively.

Effectiveness: 2

Efficiency

Production efficiency

The total costs amounted to EUR 14.4 million (including contributions from national institutions and organisations in the three countries). The total costs were distributed among the individual components as follows: Component 1 “Improving the management effectiveness of the protected area”: EUR 7.3 million (51%); component 2 “Improving the connectivity of the protected areas”: EUR 4.1 million (29%); component 3 “Strengthening regional coordination capacities”: EUR 1.0 million (7%); IUCN management costs: EUR 1.9 million (14%). At EUR 8.0 million, the FC funds covered around 55% of the total costs of the project. Of this, EUR 6.0 million (75%) was spent on investment measures and EUR 1.9 million (25%) on implementation and management by the IUCN.

The total costs were around 13% above project appraisal estimate. The reason for this was the higher own contributions as part of the three investment components compared to the original estimate. The largest cost increase of 25% was for component 1. The majority of the costs borne by the FC (around EUR 1.6 million) was attributable to measures to strengthen control and supervision. Approx. EUR 1.1 million was spent on measures to improve follow-up and around EUR 1.0 million spent on improving and updating management plans.

The national bodies’ own contributions amounted to around EUR 6.4 million, significantly exceeding the agreed own contributions of originally EUR 4.8 million. However, this information is based solely on estimates made by the national bodies, which did not provide more detailed cost or financing details at the time of the final inspection. In principle, the high contribution of in-house services indicates a stronger ownership, even if the actual amount could not be verified at the time of the EPE. The administrative and consulting costs for the implementation by the IUCN were in line with the originally planned amount and comparable to other regional projects where the executing agency implements actions directly and provides consulting services.

A key challenge was the large number of contracts awarded for which the IUCN was directly responsible as executing agency. Since the IUCN only has a national representation in Guatemala, the project-executing agency in Mexico and Belize contracted non-governmental organisations (NGOs) to carry out this task on its behalf. The application of regulations and procedures of different organisations led to an over-regulated governance structure. Each country and organisation had its own, sometimes complex, procedures, which sometimes led to duplicate approvals and excessive bureaucracy. In addition, the provision of services by the NGO in the first three years of project implementation did not meet the project-executing agency’s expectations. However, the project-executing agency’s involvement ultimately enabled the timely outflow of funds, so that the project’s time efficiency remained at an appropriate level. The project concluded after four years as planned. Accordingly, the administrative and financial management of the project was still successful.

According to KfW’s operational department, the costs for the financed training, equipment and utility services in the protected areas are evaluated as appropriate. In the project’s final inspection, there is no evidence of disproportionately high costs for the financed components.

Allocation efficiency

The project laid the **foundations** for long-term cooperation between the three countries and contributed to the sustainable management of the prioritised protected areas at various levels. This is a pilot project. The project’s allocation efficiency could possibly have been increased by an alternative division of FC funds between the various components: on the basis of the available geodata (see Figure 3), activities that lead to the loss of forest

cover in the Selva Maya region take place predominantly outside the protected areas or in peripheral areas. This underlines the need for investments that contribute to the connectivity of the areas (component 2). According to this theory of change, increased promotion of component 2 could have increased the overarching developmental impact. However, component 2 was only funded at 29% of the total costs, whereas component 1 (management effectiveness) accounted for 51% of the total costs. The FC follow-up project “Selva Maya II” already envisages a more even division of funds between both components.

The **synergies** with the parallel TC projects are particularly positive from the perspective of allocation efficiency, as the use of existing structures and systems in the implementation of measures contributed to achieving the biggest possible impacts.

The promotion of **existing productive activities** in the local communities is also a positive example of the project’s allocation efficiency. The apiary visited as part of the evaluation mission has been in operation for over ten years and has been exporting its certified organic honey to Europe since 2016. The FC-financed equipment (e.g. steel tables, machines for filling and sealing honey bottles, air-conditioning systems) contributed to demand-oriented professionalisation of production and improved working conditions. A sustainable investment can be assumed, as the necessary framework conditions for the operation of honey production were already in place at the start of the project and the target group had sufficient specialist knowledge. The supported measures will therefore have positive long-term effects. The introduction of new forms of production or management, on the other hand, requires costly and time-intensive training of the target group beforehand and is subject to higher risks, as the influence of the local framework conditions is still unknown.¹⁸

According to the final inspection report, the final selection of protected areas also included those that did not meet the originally envisaged institutional **minimum requirements**¹⁹: according to the executing agency, the promotion of protected areas with a weak or non-existent institutional presence was accompanied resulted in a barely noticeable improvement in management effectiveness (i.e. no optimal ratio between input and outcome). This learning experience has already been taken on board in the design of the follow-up project “Selva Maya II” in order to define corresponding minimum criteria in the manual of procedures.

Summary of the rating

Production efficiency was reduced in particular due to the project’s over-regulated management structure and was therefore evaluated as satisfactory. The allocation efficiency of the project is evaluated as satisfactory.

Efficiency: 3

Impact

Overarching developmental changes (intended)

The impact-level objective adjusted as part of the EPE was to contribute to the maintenance of the ecosystem functions and cultural values of the Selva Maya, which secure the livelihoods of its inhabitants and provide environmental services of global importance. The achievement of the impact objective can be summarised as follows:

¹⁸ The ex post evaluation of a nature conservation project in Laos and Vietnam (CarBi I, https://www.kfw-entwicklungsbank.de/PDF/Evaluierung/Ergebnisse-und-Publikationen/IKI-Evaluierungen/IKI_Vietnam_Laos_2021_E.PDF, last accessed on 4 October 2023) explains that measures to increase agricultural and animal production (e.g. poultry, pigs and fish tanks) in the beneficiary villages failed due to external factors. Most of the funded measures were not sustainably continued because the Laotian government did not support the production systems of the village residents. Moreover, there were no adequate local veterinary services, so many animals died following flooding and outbreaks of animal diseases.

¹⁹ The evaluation team does not have information on which and how many protected areas are affected by this.

Indicator	Status PA	Target value at PA	Actual value at final inspection	Actual value at EPE
(1) Reduction of the deforestation rate in the project area*	Base value 2013-2016: 0.4%	Target value 2017-2020 < 0.4%	Actual value 2017-2020: 0.4%	Partly achieved. 0.24% (2021) 0.23% (2022), cumulatively the value is slightly above the target value of 0.4%

* The values refer to the reduction in gross forest area, based on Hansen et al., High-Resolution Global Maps of 21st Century Forest Cover Change via Global Forest Watch. Due to differences in data evaluation, the actual values at EPE are only comparable with the analyses carried out by the IUCN to a certain extent: 1) Slightly deviating shape files (surface area of the protected areas, see main body of text) were used to analyse the remote sensing data. 2) Due to the data availability, the analysis period at the time of the EPE only spans two years, so that no longer-term trend is discernible.

The development of the deforestation rate is generally a suitable indicator for drawing conclusions about the state of ecosystem functions. At the end of the project implementation, the IUCN carried out an analysis using satellite data to show the **development of the existing forest** in the Selva Maya. Two different datasets were used to determine deforestation rates: 1) Hansen et al., High-Resolution Global Maps of 21st Century Forest Cover Change via Global Forest Watch and 2) Landsat (TM8) via Google Earth Engine. Due to methodological limitations, Global Forest Watch can only reliably determine the²⁰ gross deforestation rate. In order to improve the robustness of the results, the net deforestation rate²¹ was also determined by analysing the Landsat remote sensing data. In the reference period before the start of the project (2013-2016), the Hansen dataset showed a total reduction of 0.4% in gross forest area in the prioritised protected areas, while the Landsat satellite images showed a total increase of 1.2% in net forest area. During the project period (2017-2020), the Hansen dataset also showed a total reduction in gross forest area of 0.4% in the prioritised protected areas, while the Landsat data suggests a total increase in net forest area of 0.4%. In the areas outside the protected areas, the study shows a comparable scenario with regard to the development of forest areas: in the period 2013-2016 (baseline), a total increase of 2% in net forest area is reported on the basis of satellite data and a total minor decrease of 0.7% is reported for the project period (2017-2020). Overall, the forest area in the Selva Maya has remained relatively constant since 2013. Significant differences between the forest areas within and outside the protected areas, as well as before and during the implementation phase, cannot therefore be determined based on the data presented above for the period of the implementation phase. The deforestation situation has remained relatively constant.

At the time of the EPE, Global Forest Watch data was used again, which recorded a further decline in the gross forest area in the project areas of 0.24% (2021) and 0.23% (2022) compared to the respective previous years.²² The loss of gross forest area in the Selva Maya region is shown in Figure 3 in kilo-hectares (kha):²³ prior to project implementation (2001-2016), the reduction in gross forest area in the later prioritised protected areas was around 17 kha per year. Since the start of implementation until today (2017-2022), the average value decreased and was around 13.7 kha per year. During the entire period under review (2001-2022), the 16 prioritised protected areas lost around 355 kilo-hectares (kha) of tree stock, which corresponds to a 13% reduction since 2000 (gross). By way of comparison: In the other Selva Maya protected areas, the gross forest area reduced by around 14.4 kha per year in the period 2001-2016 (before project implementation). In the period 2017-2022 (since project implementation), the annual average value was slightly higher at 15.3 kha. During the entire period under review (2001-2022), the non-prioritised protected areas lost around 322 kha of tree stock, which corresponds to a 19% reduction in gross forest area since 2000.

Overall, the data suggests that the prioritised protected areas have lost a relatively lower proportion of their total forest area than the comparison areas since 2000. In addition, the average annual loss of forest area in the

²⁰Gross deforestation is the process of anthropogenic transformation of forests into other landscape forms and land uses, without taking into account the areas regenerated in the same period.

²¹Net deforestation is the difference between the loss and gain of forest area over a given period.

²² The polygons used for the calculation in the EPE differ slightly from the areas used by the IUCN during project implementation to calculate the gross deforestation. These differences are related to data availability. Protected area no. 11 (see Figure 3), consisting of the "multi-use zone" and the buffer zone, is shown in the EPE. In the IUCN's calculation, however, the buffer zone was not included. Rather, only a polygon of the "multi-use zone" was used. This was no longer available online at the time of the EPE. The polygons come from the World Database on Protected Areas (WDPA), which is a joint project of the United Nations Environment Programme (UNEP) with the IUCN and is updated monthly.

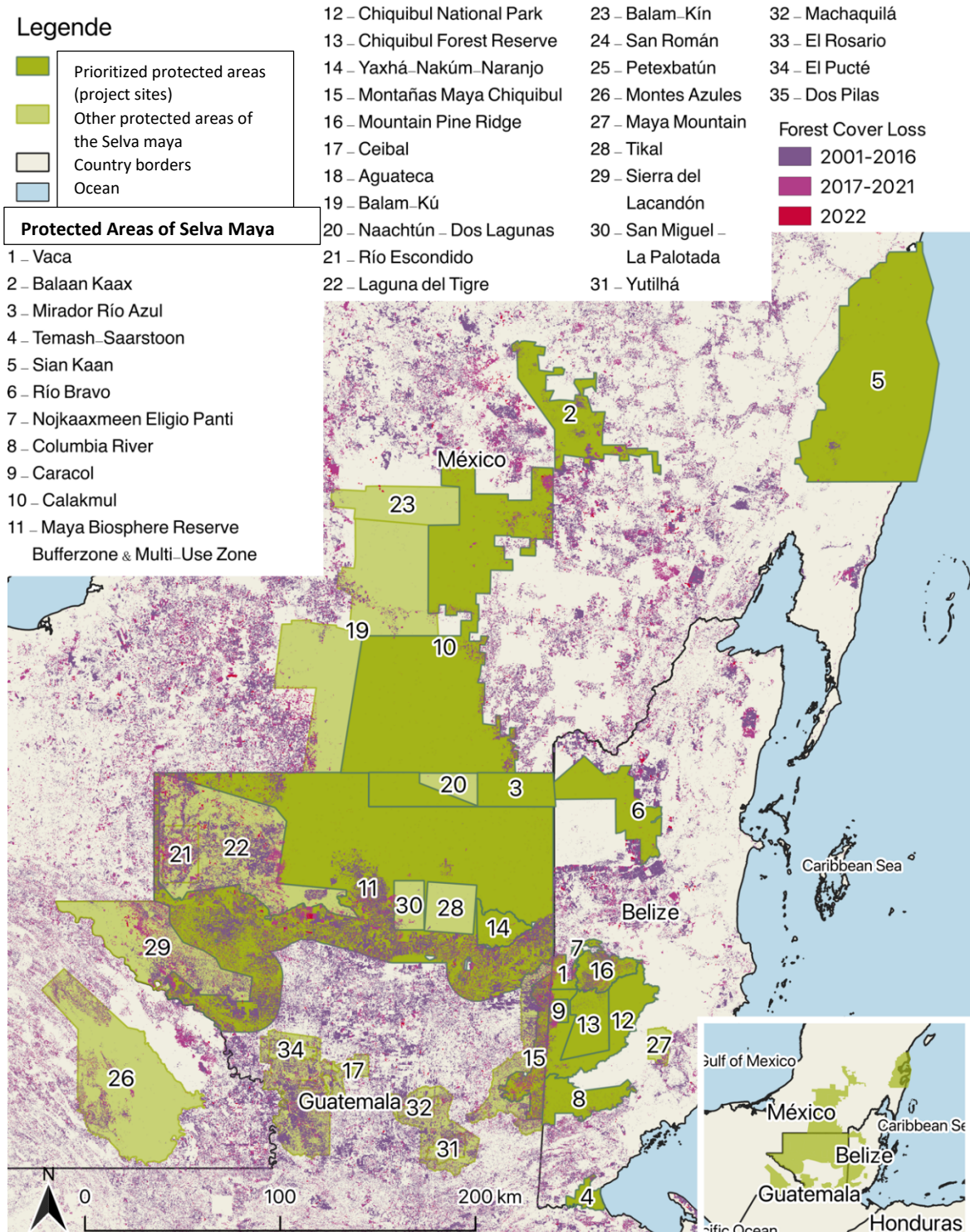
²³ One kha corresponds to 10 km².

project areas has been lower since 2017 than before. In comparison areas, on the other hand, there has been a slight increase in the annual loss of forest area since 2017. This could be an indication that the pressure on natural resources in the non-prioritised protected areas is higher than in the prioritised protected areas. However, it is also possible that the effectiveness of the protective activities in the prioritised protected areas is (now) higher than in the comparison areas.²⁴ However, this interpretation must be made with caution, as 1) the loss of forest cover is not necessarily due to (illegal) deforestation activities and 2) any increase in forest cover since 2000 (e.g. due to restoration/reforestation) cannot be included in the calculation due to methodological data restrictions.²⁵

²⁴ Even if there is no concrete evidence for this, improved management effectiveness in promoted areas can also lead to negative spillover effects and increase the pressure of use in unprotected or less protected protected areas (leakage). However, the available data does not allow reliable analysis of any spillover effects.

²⁵ Due to methodological differences in data collection, Global Forest Watch advises against offsetting forest gain against forest loss. Furthermore, data on forest growth can only be downloaded for visualisation purposes up to 2012. The presentation would not cover the entire observation period and would therefore be misleading.

Figure 3: Overview of gross forest loss in the Selva Maya protected areas (forest cover loss)



Quellen: UNEP-WCMC, IUCN (2023). Protected Planet: The World Database on Protected Areas (WDPA). <https://www.protectedplanet.net/en>; Global Administrative Areas (2023). GADM database of Global Administrative Areas [online] URL: www.gadm.org/; Flanders Marine Institute (2018). IHO Sea Areas, version 3. Available online at <https://www.marinerregions.org/> <https://doi.org/10.14284/323>; Hansen, M. C., P. V. Potapov, R. Moore, M. Hancher, S. A. Turubanova, A. Tyukavina, D. Thau, S. V. Stehman, S. J. Goetz, T. R. Loveland, A. Kommareddy, A. Egorov, L. Chini, C. O. Justice, and J. R. G. Townshend. 2013. High-Resolution Global Maps of 21st-Century Forest Cover Change. *Science* 342 (15 November): 850-853. Data available on-line from: <https://glad.earthengineapp/view/global-forest-change>

Contribution to overarching developmental changes (intended)

The impacts of the project can only be assessed on the basis of limited data availability and plausibility considerations. Due to the size of the protected areas, the diverse factors affecting the ecosystems and the limited project funds, the impact of the project activities on the reduction of the deforestation rate can only be limited. A counterfactual analysis is not possible on the basis of the available data. It must also be noted that for some of the financed measures, the direct contribution to solving the specific problem in the corresponding protected area was not always clear (see Effectiveness).

However, the impressions gained during the visit to the project sites and the discussions with the people interviewed on site are positive overall. From the evaluation team's perspective, a positive contribution to the conservation of natural resources and ecosystem functions can be plausibly derived from the achieved improvement in management effectiveness and connectivity of the protected areas. Important achievements are also the improved prevention and control of forest fires, but also the generally improved transport and communication options for carrying out activities to protect natural resources. The evaluated project created foundations that can contribute to slowing down the degradation of natural resources in the Selva Maya region in the long term and counteracting the deforestation trend more effectively. From the evaluation team's perspective, the project's potential was therefore exploited to the greatest extent possible (see restrictions on allocation efficiency), although it is not possible to quantify environmental impacts.

The project had a significant impact on **structural development** at institutional level and had a direct impact on the development of important regulatory frameworks that will be used to shape future conservation measures and the development of common strategies in the countries.

The promotion of **participation** and the **empowerment** of vulnerable groups is a central starting point for a stronger focus on human rights in development projects. The project promoted the participation of the diverse indigenous communities in the Selva Maya region in nature conservation, e.g. by providing the communities with the protected area management plans in both Spanish and an indigenous language, as well as in easily comprehensible language. Raising awareness of nature conservation issues among local communities through training and workshops can result in greater support for measures to conserve natural resources. However, there is no objective data that could prove this fundamentally plausible impact relationship for the project context. The beneficiary communities around the Selva Maya protected areas participate in the protection activities (e.g. forest fire-fighting by municipal brigades). The supported training courses have helped them improve their knowledge of the establishment of multi-layered silvopastoral systems, the cultivation of mixed crops and sustainable livestock farming. On the one hand, the implementation of the farming practices taught conserves natural resources and can also improve the **security of food supply** for the target group. However, there is no data that allows reliable conclusions to be drawn about the nutritional situation of the target group.

Quantitative or extensive qualitative data that allow objectively reliable conclusions to be drawn about the effects of the 106 small projects supported in total on living conditions does not exist. Anecdotal evidence indicates that the promotion of productive small projects in the municipalities had a positive effect on **living conditions** and on strengthening ownership, although only a small proportion of the project funds went to local community promotion.²⁶ Women also work in the honey production area visited; in the hives as opposed to in the production facility itself. As a result, the project also contributed to securing women's livelihoods. However, this contribution cannot be quantified as there is no data to measure income effects and it is also unclear how high the proportion of women was in general in the small projects supported.

Although the project did not explicitly aim to combat poverty, the local communities are predominantly very poor population groups in rural areas. Especially in view of the lack of alternative financing options²⁷, it can be assumed that the project has contributed to the **resilience** of local businesses and to preventing a worsening of the target group's economic situation.

Contribution to (unintended) overarching developmental changes

²⁶ A total of around EUR 0.5 million pro rata was spent on the 106 productive and income-generating small projects under "Combating deforestation" as part of component 2 (see Table 1).

²⁷ In the worst case scenario, the lack of financing could have resulted in production methods no longer functioning adequately (e.g. due to defective machines), so that the manufacture and sales of products would have had to be restricted or discontinued

In the context of the **COVID-19 pandemic**, protected areas, which typically generate revenue from admission fees, tourism and other activities, have faced significant revenue losses due to travel restrictions and lockdowns. This led to a lack of financial resources for the protection and maintenance of ecosystems. In Guatemala, 2020 was one of the years in which the least funds were spent on the protection of the environment and natural resources in relation to GDP (see Sustainability). In Mexico, the overall budget for protected areas was cut so drastically between 2016 and 2021 that it more than halved from 2020 compared to 2016. As a result, individual budget items such as species and ecosystem conservation lost a significant amount of budget (more than 70%) from 2020 onwards. In Belize, the state budget for nature conservation was increased slightly for the years 2016-2018, before remaining relatively constant between 2018 and 2021.²⁸

The project helped to reduce the aforementioned **financing gaps** in Belize, Guatemala and Mexico, so that important measures in favour of nature conservation could be continued despite difficult conditions. During the visits to the project sites, the interviewees reported that some Selva Maya protected areas were affected by particularly severe forest fires during the pandemic. In this context, the project ensured, among other things, the ongoing financing of equipment and training to prevent and fight forest fires. Looking back, it seems unlikely that these components would have been financed in other ways. In addition, part of the FC funds were redirected promptly to deal with the health crisis, so that emergency kits with hand disinfectants and face masks could be made available to the administrations of the protected areas. Accordingly, the project contributed to stabilising the **health situation** of the target group (unintended positive developmental change).

Summary of the rating

Data on the change in the gross forest area in the Selva Maya suggests that the average annual loss of forest area in the project areas has been lower than in previous years since the start of implementation. In view of the enormous and diverse threat situation, this can already be assessed as a success. However, no causal relationship between the project measures and the deforestation trend in the prioritised protected areas can be established on the basis of the available data. Due to the low financing volume and the spread of FC funds over 16 protected areas, a positive but not substantial contribution to the maintenance of the ecosystem functions and cultural values of the Selva Maya can be assumed. Particular emphasis should be placed on the contribution to structural development at the level of the national institutions and to maintaining the protective effects and health situation of the target group after the outbreak of the COVID-19 pandemic. These are significant achievements that have a positive effect on the evaluation outcome. Anecdotal evidence also points to a selective improvement in the living conditions of those people who were reached by the small projects supported. Given the pilot nature and the limited funds of the project, the impacts achieved are in line with expectations. The impact is therefore rated as successful.

Impact: 2

Sustainability

Capacities of participants and stakeholders

The IUCN is the oldest and largest nature conservation organisation in the world. The main objectives of the IUCN are the protection and sustainable use of natural resources through the development of scientific foundations for conservation, international exchange and advice to governments and NGOs. The regional office based in San José, Costa Rica (IUCN-ORMACC) has extensive personnel, technical and operational capacities as well as a professional management with a high level of technical and regional expertise. The monitoring and evaluation department of the IUCN-ORMACC is responsible for the portfolio at regional level and reports to the evaluation and risk unit at the headquarters in Switzerland. In 2015, the IUCN developed and institutionalised a new Environmental and Social Management System (USMS) that complies with international standards. The IUCN-ORMACC is very well networked in the region and a partner known and valued by SICA and the target group. In

²⁸ Source: Belize Forest Department via IUCN (2023). It should be noted that while the Forest Authority has the mandate for the protected areas in Belize, it operates only in the forest reserves that are of commercial interest and in which logging concessions are permitted. Most national parks have co-administration agreements with NGOs who are liable for the financing of their own activities and are heavily dependent on contributions from international organisations.

2022, the IUCN-ORMACC was responsible for implementing a total of 25 projects with 12 donors and a total volume of USD 123.59 million. Therefore, the total volume has almost doubled since 2020 (USD 65.3 million).

The cooperation between Belize, Guatemala and Mexico for the conservation of the Selva Maya is carried out through specially established coordination mechanisms. Since 2015, cross-border cooperation at strategic level has been carried out via a strategic coordination group (GEC) set up with German support. It is composed of representatives of the government institutions responsible for protected areas in Belize, Guatemala and Mexico (MSDRM, CONAP and CONANP) and meets regularly. An Operational Coordination Group (GOC) is responsible for implementing measures at the operational level. It is composed of the leaders of the Selva Maya protected areas and representatives of civil society. In addition to these two central structures for the coordination of a common nature conservation policy and corresponding measures in the Selva Maya, a regional expert group was set up as part of the evaluated project, which acts as an advisory body for the GEC and GOC. Since the GEC and GOC have so far only been able to carry out their tasks with considerable external support, the sustainability of these structures has not yet been secured. The further expansion of capacities is therefore necessary in order to maintain the structures and ensure the medium-term continuation of the positive results already achieved.

The limited funds available to the protected areas represent the greatest risk to the sustainability of the investments. The funds for the operation and maintenance of transport and infrastructure remain close to budget. During the on-site visits, the protected area administrations expressed an urgent need for an increased budget for operation and maintenance financing. Overall, there is a high dependency on external grants, as the Selva Maya protected areas, like many other protected areas worldwide, are severely underfinanced.

Contribution to supporting sustainable capacities

The actors involved in implementation underwent important learning processes as part of the evaluated project and strengthened their capacities for planning and implementing follow-up projects. The project supported the consolidation of regional governance through the working groups (GEC and GOC) formed by the three countries, thereby promoting better coordination and integration of activities into the three countries' political priorities. The project helped to more clearly define the delineation of responsibilities and roles between the GEC and the GOC by optimising the dynamics of coordination in the three countries. The regional expert group set up as part of the project will continue its support as an advisory body to support the GEC and GOC after the end of the project and provide technical assistance to improve management effectiveness in the Selva Maya protected areas. Based on this development, it can be assumed that the project contributed to increasing the attractiveness of the Selva Maya protected areas for financing by other donors. In addition to German DC, a number of other donors (e.g. DEFRA, EU, GCF, GEF, JICA) are active in the sector at the time of the evaluation and are planning to implement biodiversity conservation projects soon. Most initiatives are in preparation and are to be implemented in 2024 – at the same time as Selva Maya II.

The interviews with the target group conveyed a high willingness to ensure that the positive effects remain over time. The project facilitated access to suitable technologies and equipment for the monitoring and protection of the Selva Maya that are easy to use for beneficiaries. The trusting relationship that the project-executing agency has established with the protected area administrations and institutions at national level increases the readiness of the target group and partners for future cooperation with the IUCN.

Durability of impacts over time

The strengthened structures at national level as well as at protected area administration level will continue to be used in the course of the FC follow-up project as well as in the context of other regional projects, which at least favours their sustainability in the medium term. The institutional framework (GEC and GOC), the existence of a common strategy (EISM 2030) and the study on the identification of biocorridors are also important foundations for medium-term donor financing. Further similar projects are therefore needed that build on the successes achieved in order to make a measurable contribution to the conservation of natural resources in the long term.

The aim of the FC follow-up project "Selva Maya II" is to build on the positive effects of the project and expand the components already supported. The three central components addressing the different dimensions of the core problem in the Selva Maya are therefore continued. The close cooperation with German TC is also to be continued. The experiences from the evaluated project have already been successfully used for the design of Selva Maya II, so that an optimised concept and more efficient implementation modalities can be assumed. The strategic planning instruments supported in the evaluated project (e.g. study on the identification of biocorridors

and EISM 2030) will serve to identify areas of action for the conservation of the Selva Maya in the long term. The project also strengthened regional coordination between the countries and, with its investments in the protected areas' communication, transport and monitoring capacities, promoted their resilience and created important foundations for effective management.

Nevertheless, prioritising conservation measures at a higher political level remains a challenge in the long term. The general reduction in national budgets for the protected areas of the Selva Maya poses a risk to the long-term sustainability of the impacts. The downturn in available funds was particularly noticeable after the COVID-19 pandemic, as governments prioritised health, safety, trade and education as part of budgetary adjustments. The Belize economy was severely affected in 2019 and the two following years by drought and the COVID-19 pandemic. Public debt has exceeded 125% of GDP and has worsened the country's economic situation. This situation is likely to restrict the public and private sectors from making substantial investments in environmental and climate action in the future.²⁹ In Guatemala, 2020 was one of the years in which the least funds were spent on the protection of the environment and natural resources in relation to GDP. According to the relevant government institutions, less than 1% of the total budget was spent on this.³⁰ The government budget made available to CONAP for the administration of the protected areas in Guatemala in 2022 amounts to around EUR 15 million, with 61% of this amount intended to cover administrative costs. The protected areas themselves received a contribution of around EUR 0.12 per hectare, which is clearly insufficient to ensure the protection of natural resources.³¹ In Mexico, too, the budget funds allocated to protected areas have been reduced in recent years, resulting in a 59% decrease in approved expenditure in 2022 compared to 2016.³² Therefore, the protection and conservation of the Selva Maya will continue to depend to a significant extent on the availability of international funds in the future. The unique biodiversity of the Selva Maya and its ecosystem services – including the storage of greenhouse gases – are public assets of global importance. The (partial) financing of its protection from international development funds is therefore justifiable and appropriate.

Some developments in the countries are detrimental to nature conservation, e.g. the Maya Train Project (Tren Maya) in Mexico, which was initiated in 2018. The Maya train is a five-part railway line through the Yucatan peninsula and is scheduled to be put into operation in early 2024. The railway line is set to connect tourist destinations in the Caribbean with lesser-known locations in the interior, including historic Maya sites. The Maya train will mostly run along existing routes, but for other sections, areas have been or are to be cleared. This has already led to fierce protests by indigenous communities, local residents and environmentalists.³³ In parallel to the Maya Train project, the Tulum International Airport "Felipe Carrillo Puerto" is being built. In 2024, the first year of operation, up to 4 million passengers are set to board flights leaving this airport, with numbers set to reach a peak of up to 12.1 million passengers in 2053. The construction covers an area of 1,200 hectares and has an access road covering 321.19 hectares of a medium sized natural forest area. The airport complex therefore covers a total area of 1,500 hectares. The airport will have fast access to the Maya train and road network.³⁴ Airport construction and the Maya train project are contributing to the progressive fragmentation of the area.

Summary of the rating

The project made an important contribution to strengthening regional structures and local capacities, thereby strengthening the target group's resilience. However, in order to preserve and secure the effects in the long term, greater protection efforts are required in the partner countries as well as long-term (international) financing. The project evaluated here has laid important foundations for this and demonstrated its connectivity with the successful approval of the follow-up project "Selva Maya II". However, at present, the sustainability of the project is still not guaranteed, as financial resources available to the protected areas are scarce. In addition, the lack of prioritisation of nature conservation at a higher political level – which is partly reflected in the insufficient financing – poses a risk to the sustainability of nature conservation measures. Sustainability is therefore rated as moderately successful.

²⁹ Source: Climate Finance Strategy of Belize 2021-2026

³⁰ Source: <https://www.prensalibre.com/guatemala/comunitario/estado-gasta-poco-en-proteccion-y-conservacion-del-mediambiente/> (last accessed on 6 October 2023)

³¹ Source: IUCN, based on information from a CONAP report on the implementation of the 2022 budget.

³² Source: <https://ciep.mx/M0zc> (last accessed on 6 October 2023)

³³ See e.g. <https://www.deutschlandfunk.de/tourismus-oder-naturschutz-mexikos-umstrittener-maya-zug-100.html> (last accessed on 6 October 2023)

³⁴ Source: <https://www.eleconomista.com.mx/estados/Se-reserva-Sedena-costo-del-Aeropuerto-Internacional-de-Tulum-20220902-0086.html> (last accessed on 6 October 2023)

Sustainability: 3

Overall rating: 2

Overall, the project was characterised by its high importance for conservation of nature in Central America, which suffers from a severe lack of funding. The project is therefore to be classified as relevant despite weaknesses in the theory of change and appropriateness of the design. Due to the extensive coordination between the TC and FC and the high complementarity of the evaluated project with the measures of other donors, the coherence of the project is also assessed as successful. The outputs produced were of satisfactory quality and contributed to the sustainable management of the Selva Maya protected areas as well as strengthening regional cooperation for the conservation of natural resources. The quality of the implementation is rated as successful due to the extensive consulting services of the project-executing agency and the support of the partners in strategic management. However, the bureaucratic administrative structure and the lack of minimum requirements in the selection of the supported protected areas reduced the efficiency of the project. At the overarching development policy level, a moderate contribution to the maintenance of the ecosystem functions and cultural values of the Selva Maya is attributed to the project on the basis of plausibility considerations. The expectations of the pilot project are met. There are various risks to the sustainability of the impacts achieved, including the scarce financial resources in the protected areas and the inadequate prioritisation of nature conservation at a higher political level. Despite the existing risks to sustainability, the project is still rated as successful overall.

Contributions to the 2030 Agenda

Shared responsibility: The protection of the Selva Maya secures the material and cultural livelihoods of the people who live there. In addition, this region is of global importance as a biodiversity hotspot and CO₂ sink. The project therefore contributes to the achievement of Agenda 2030 – in particular to SDGs 13 (Climate action) and 15 (Life on land) – as well as the goals of the United Nations Convention on Biological Diversity and the Kunming-Montreal Global Biodiversity Framework. By strengthening cooperation between Belize, Guatemala and Mexico, the regional project promoted the achievement of SDG 17 (Partnerships for the goals). It also made a small contribution to SDG 1 (No poverty) through the promotion of productive small projects in local communities. Last but not least, it made a moderate contribution to SDG 5 (Gender equality) by developing gender consideration guidelines for updating management plans. Agenda 2030 and SDGs are anchored in the national development plans of the three countries of the regional project (Belize, Guatemala, Mexico). The project measures complement the measures of other international donors and are in line with the national objectives of the partner countries. However, common reporting and monitoring systems are not used.

Interaction of ecological, economic and social development: The project primarily promotes ecological development through protective measures. There is an interaction between the conservation of natural resources and social and economic development in partner countries. Preserving the ecosystem functions of the Selva Maya is necessary in the long term so that the local communities can continue to support themselves on the basis of natural resources. At the same time, sustainable management methods on municipal land and resource-conserving production methods are essential in order to preserve natural resources. The promotion of productive, income-generating initiatives in combination with local awareness-raising measures was able to contribute to strengthening support for nature conservation issues among the communities. Sustainable nature conservation is only possible with the involvement of local communities. With regard to social development, the project supported dialogue between protected area administrations and the local population, in particular in updating management plans, fighting forest fires and implementing productive initiatives.

Inclusiveness/leave no one behind: The project promoted the inclusion of vulnerable population groups with a focus on women and indigenous groups. Particular emphasis should be placed on the development of guidelines on taking gender into consideration in the preparation of management plans and the distribution of brochures in the most commonly spoken Mayan language (Q'equchí).

Project-specific strengths and weaknesses as well as cross-project conclusions and lessons learned

The project had the following strengths and weaknesses in particular

- The design of the project was based on global, regional and country-specific policies, and was tailored to the needs and capacities of the target group.
- The close cooperation between FC and TC was decisive for strengthening (coordination) capacities at partner level and contributed to the successful development of the EISM 2030 strategy document, which is a milestone of the regional project.
- Problem-oriented management of the project was difficult due to methodological ambiguities and the late collection of baseline data for several indicators (deforestation and management effectiveness).
- The prioritised protected areas were selected without taking into account institutional minimum requirements, so that a substantial improvement in management effectiveness could not be achieved in all project areas. In addition, the contribution of the supported measures to the specific problem situation in the respective protected area was not always evident. Nevertheless, the outcome targets were achieved. In addition, a positive contribution of the project to reducing deforestation and better forest fire protection can be plausibly derived at impact level.
- The institutional framework (GEC and GOC), the existence of a common strategy (EISM 2030) and the study on the identification of biocorridors are important foundations for medium-term donor financing.
- The sustainability of the impacts is currently not secured due to still insufficient financing, infrastructure projects that are detrimental to nature conservation and a lack of political prioritisation.

Conclusions and lessons learned:

- The use of synergies between FC and TC projects contributes to the successful implementation of regional approaches.
- Early definition of the methodology and regular data collection during impact monitoring contribute to problem-oriented design and implementation as well as early identification and feedback on risks.
- Demand-driven promotion of priority protected areas on the basis of transparent selection criteria (calls for projects) contributes to the promotion of measures that are expected to be most effective and sustainable.
- The creation of regional planning instruments contributes to the strategic orientation of measures in follow-up projects.

Evaluation approach and methods

Methodology of the ex post evaluation

The ex post evaluation follows the methodology of a rapid appraisal, which is a data-supported qualitative contribution analysis and constitutes an expert judgement. This approach ascribes impacts to the project through plausibility considerations which are based on a careful analysis of documents, data, facts and impressions. This also includes – when possible – the use of digital data sources and the use of modern technologies (e.g. satellite data, online surveys, geocoding). The reasons for any contradicting information are investigated and attempts are made to clarify such issues and base the evaluation on statements that can be confirmed by several sources of information wherever possible (triangulation).

Documents:

Internal project documents, secondary specialist literature, BMZ strategy papers, comparable evaluations.

Data sources and analysis tools:

Remote sensing data and its analysis/visualisation with the QGIS software, inspection of the project sites, monitoring data of the project-executing agency.

Interview partners:

Project executing agency, target group (a local community and protected area administrations at the visited project locations), KfW operational department, German TC, nationally responsible institutions and partners, CCAD.

The analysis of impacts is based on assumed causal relationships, documented in the results matrix developed during the project appraisal and, if necessary, updated during the ex post evaluation. The evaluation report sets out arguments as to why the influencing factors in question were identified for the experienced effects and why the project under investigation was likely to make the contribution that it did (contribution analysis). The context of the development measure and its influence on results is taken into account. The conclusions are reported in relation to the availability and quality of the data. An evaluation concept is the frame of reference for the evaluation.

On average, the methods offer a balanced cost-benefit ratio for project evaluations that maintains a balance between the knowledge gained and the evaluation costs, and allows an assessment of the effectiveness of FC projects across all project evaluations. The individual ex post evaluation therefore does not meet the requirements of a scientific assessment in line with a clear causal analysis.

The following aspects limit the evaluation:

Late collection of baseline data limited scope to draw meaningful conclusions on the change in management effectiveness and deforestation due to the project measures.

Methods used to evaluate project success

A six-point scale is used to evaluate the project according to OECD DAC criteria. The scale is as follows:

- Level 1** very successful: result that clearly exceeds expectations
- Level 2** successful: fully in line with expectations and without any significant shortcomings
- Level 3** moderately successful: project falls short of expectations but the positive results dominate
- Level 4** moderately unsuccessful: significantly below expectations, with negative results dominating despite discernible positive results
- Level 5** unsuccessful: despite some positive partial results, the negative results clearly dominate
- Level 6** highly unsuccessful: the project has no impact or the situation has actually deteriorated

The overall rating on the six-point scale is compiled from a weighting of all six 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 (“impact”) and the sustainability are rated at least “moderately successful” (level 3).

List of abbreviations:

	Final inspection
GDP	Gross domestic product
BMZ	German Federal Ministry for Economic Cooperation and Development
CCAD	Central American Commission for the Environment and Development
DAC	Development Assistance Committee
EU	European Union
EUR	Euro
EPE	Ex post evaluation
FC	Financial cooperation
FC E	FC evaluation
GBF	Global Biodiversity Framework
GEC	Grupo Estrategico de Coordinación
GEF	Global Environment Facility
HDI	Human Development Index
IUCN	International Union for Conservation of Nature
PA	Project appraisal
PAR	Project appraisal report
PP	Project proposal
SG	Schutzgebiet
SICA	Sistema de Integración Central America
TEI	Team Europe initiative
ToC	Theory of Change
TC	Technical cooperation
USD	US Dollar

Publication details

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List of annexes:

Target system and indicators annex

Risk analysis annex

Project measures and results annex

Recommendations for operation annex

Evaluation questions in line with OECD DAC criteria/ex post evaluation matrix annex

Target system and indicators annex

Project objective at outcome level				Rating of appropriateness (former and current view)		
At project appraisal (module objective): The ecosystem functions and cultural values of the Selva Maya, which provide its inhabitants with their livelihood as well as environmental services of global importance, are maintained.				The preservation of ecosystem functions and cultural values is more of an overarching developmental effect, i.e. an impact. Outcome, on the other hand, refers to the use of the outputs created. From the evaluation team's point of view, the formulated objective at outcome level is therefore set too high and is adjusted as part of the evaluation.		
During EPE (if target modified): <i>Improve the management of the Selva Maya protected areas and strengthen regional cooperation between Belize, Guatemala and Mexico to conserve natural resources.</i>						
Indicator	Evaluation of appropriateness (appropriate; partially appropriate; not appropriate)	Rationale of appropriateness (for example, regarding impact level, accuracy of fit, target level, smart criteria)	PA target level Optional: EPE target level	PA status (year)	Status at final inspection (year)	Optional: EPE status (year)
Indicator 1 (PA): Reduction of the deforestation rate in the project area	Not appropriate at outcome level.	Forest loss or forest coverage in supported protected areas is a classic impact indicator for nature conservation projects. The indicator is therefore changed and used in the evaluation to measure the overarching developmental impact.	n.a., a separate analysis should take place as soon as the FC funds are available. Later, the target level was set to < 0.4%	0.4% (2013-2016)	< 0.4% (2017-2020)	See status at final inspection
Indicator 2 (PA): In total, 80% of protected areas supported by the project have updated management plans that involve the communities within their sphere of influence Adapted formulation: In total, 80% of protected areas	Appropriate content at outcome level. The formulation is adapted in the EPE.	From today's perspective, the indicator is also appropriate in terms of content for showing management effectiveness. The formulation is supplemented in the evaluation by the usage component (see adapted wording).	PA: 80% (12 protected areas)	38% (6 protected areas)	81% (13 protected areas)	See status at final inspection

supported by the project apply updated management plans that involve the communities within their sphere of influence.						
Indicator 3 (PA): Increase in management effectiveness in protected area	Partially appropriate at outcome level.	The indicator is appropriate in terms of content, but has only limited informative value due to methodological weaknesses. The target value was defined before the selection of the protected areas and the baseline was only determined towards the end of project implementation (2019). There is no data available to allow a comparison between before and after the programme. The available values should be used for triangulation in the EPE, but the indicator as such is not retained.	PA: 66% (Baseline 2019) + 20%	Baseline not determined	75% (2021)	See status at final inspection
Indicator 4 (PA): Regional study to identify biocorridors to establish connectivity between Selva Maya protected areas Adapted formulation: The results of the regional study to identify biocorridors are used by the three countries to design and implement further actions	Appropriate content at outcome level. The formulation is adapted in the EPE.	The existence of the study alone does not yet have any significance in terms of how the results are used. The formulation is supplemented in the evaluation by the usage component (see adapted wording).	PA: Study available EPE: Use of study results (evaluation through interviews)	Study not available	Study available	The results of the study were used (see main section).
Indicator 5 (PA): At least four GEC meetings p.a.		The Grupo Estratégico de Coordinación (GEC),	PA: Four meetings p.a.	Two meetings p.a.	Project-related meetings:	See status at final inspection

<p>Adapted description: The cross-border coordination mechanism for developing and coordinating the strategic lines for joint management of the Selva Maya is a long-standing organisation</p>		<p>established in 2015 (before the PP), is responsible for the development and coordination of the lines for joint management of the Selva Maya. The project promoted the following aspects: 1) development and use of instruments for improving coordination and 2) administrative, organisational and logistical support. This was intended to strengthen Belize, Guatemala and Mexico's capacities to coordinate measures for the conservation and sustainable management of the Selva Maya.</p> <p>The indicator records the long-term continuation and activities of the GEC, measured by the frequency of annual meetings (outcome).</p>			<p>2018 (three), 2019 (six), 2020 (three), 2021 (three)</p>	
<p>NEW: The improved operational infrastructure and equipment for the supervision of the protected areas is properly used and maintained</p>		<p>The indicator serves as a proxy for management effectiveness. The use of the outputs created is recorded (outcome).</p>	<p>EPE: proper use and maintenance (on-site evaluation, four protected areas)</p>	<p>n/a</p>	<p>n/a</p>	<p>Achieved (see main section)</p>
<p>NEW: The improved technological capacities for integrated monitoring of the protected areas is used and maintained properly</p>		<p>The indicator serves as a proxy for management effectiveness. The use of the outputs created is recorded (outcome).</p>	<p>EPE: proper use and maintenance (on-site evaluation, four protected areas)</p>	<p>n/a</p>	<p>n/a</p>	<p>Achieved (see main section)</p>

<p>NEW: Early detection and fighting of forest fires is improved through the use of FC-financed infrastructure and equipment</p>		<p>The outputs created (infrastructure, equipment, forest fire prevention/fighting training) should contribute to improved connectivity of the protected areas. The indicator shows the result of the use of the financed infrastructure/equipment (outcome).</p> <p>If no data is available for the specified periods, the usage component can be assessed on site as part of a discussion with administrative bodies for the protected areas.</p>	<p>EPE: the financed equipment for the prevention and fighting of forest fires is used (on-site assessment, four protected areas)</p>	<p>n/a</p>	<p>n/a</p>	<p>Achieved (see main section)</p>
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Project objective at impact level		Rating of appropriateness				
<p>At project appraisal (preliminary DC programme objective): The protection of natural resources and their sustainable use secure the livelihoods of the population of Central America, especially the poor and disadvantaged population groups. The population in Central America is more resilient to changes related to global warming.</p> <p>Unchanged at the final inspection. However, this is not a DC programme, but a regional approach.</p>	<p>The formulated objective aligns with the content of the evaluated project, but from today's perspective seems to be too ambitious. The poverty reference of the target formulation is too prominent for the evaluated project. In the PP this was assigned the DAC poverty orientation marker AO: 0 ("the target group is predominantly classified as poor, but will not be able to improve its poverty situation as a result of the project"). Income-generating measures should be linked to existing economic activities, which should be consolidated due to their positive environmental impact. Alleviating poverty was therefore not an explicit objective of the project. Creating resilience among the population to changes related to global warming is also a very clear goal.</p> <p>For these reasons, the target formulation of the module objective in the PP appears more appropriate for presenting the impacts of the project. The formulation is adopted with a slight adjustment.</p>					
<p>During EPE (if target modified): Contribute to the maintenance of the ecosystem functions and cultural values of the Selva Maya.</p>						
Indicator	Evaluation of appropriateness (appropriate; partially)	Rationale of appropriateness	Target level PA / EPE (new)	PA status (year)	Status at final inspection (year)	Status EPE (year)

	appropriate; not appropriate)	(for example, regarding impact level, accuracy of fit, target level, smart criteria)				
Indicator 1 (PA)	Indicator 1 (PA): /	No impact indicators were formulated in the PP.	/	/	/	See status at final inspection
Indicator 2 (PA)	NEW: Reduction of the deforestation rate in the project area	<p>Forest loss or forest coverage in supported protected areas is a classic impact indicator for nature conservation projects.</p> <p>The period 2021-2023 is also to be considered in the EPE. Freely accessible data (open source) from Global Forest Watch is used.</p>	n.a., a separate analysis should take place as soon as the FC funds are available. Later, the target level was set at < 0.4%. From today's perspective, the target value is appropriate. However, the interpretation must take into account the fact that multiple (project-external) factors affect the loss of forest cover, so that a direct correlation with the project is hardly possible.	0.4% (2013-2016)	< 0.4% (2017-2020)	

Risk analysis

Risk	Relevant OECD-DAC criterion
None of the previously identified risks had materialized by the time of the evaluation	/

Project measures and their results annex

An overview of the project locations (prioritised protection areas of the Selva Maya) can be found in the main part of the EPE. Prioritisation of the protection areas in the Selva Maya was based on the following criteria:

No.	Criterion	Weighting
1	Priority consideration of areas where cooperation between two or three countries and adjacent areas is possible	2
2	Priority consideration of areas with strong threat factors that can be addressed directly by the project	1.5
3	Priority consideration of areas that create connectivity between protected areas	1
4	Priority consideration of areas with sufficient implementation capacities/resources to ensure KfW's investment	2
5	Priority consideration of areas where communities, authorities and civil organisations committed to protection are represented	1.5
6	Priority consideration of areas of high cultural value (in the broadest sense, not just archaeology)	1
7	Priority consideration of areas with regeneration potential and those that act as carbon sinks	1
8	Priority consideration of areas in which no cooperation projects with a similar orientation to those of the KfW project are currently being implemented.	1
9	Prioritisation of areas with high potential for sustainable economic activities (excluding tourism)	1.5
10	Priority consideration of areas with high tourism potential	1.5

The following overview outlines the funded components and their main results (based on the final presentation by IUCN):

Component 1: Improving the management effectiveness of the protected areas

- a) *Strengthening the control and supervision of the protected areas;*
 - Equipping of 406 rangers with uniforms, work shoes, backpacks, special headwear and vests.
 - Improvement of working conditions in 41 camps (administrative units) through bunk beds, solar cells, water pumps and furniture.
 - Provision of a total of 76 vehicles (mainly pickups, quads, motorbikes, boats and off-road vehicles).
- b) *Strengthening integrated monitoring of the protected areas*
 - Provision of 67 pieces of equipment for remote sensing.
 - Carrying out 270 flyover hours (monitoring).
 - Provision of 340 pieces of equipment for improved integrated monitoring.
 - Installation of 129 SMART systems.
 - Training of a total of 2,389 people.
- c) *Developing, evaluating and updating management plans.*
 - A total of 13 management plans in force and six updated management plans.
 - A total of three national guidelines with a gender perspective and cultural relevance for the management of protected areas.
 - A total of four videos on the social participation of men and women in the administration and maintenance of protected areas.
 - Development and distribution of 14 public versions of the management plans for the priority areas in three languages: Spanish, English and Q'eqchí. A total of 6,600 copies were printed.

Component 2: Improving the connectivity of the protected areas

- a) *Preventing and fighting forest fires in protected areas and their buffer zones*
 - Acquisition of nine drones and training of 52 people.
 - Purchase of two fire-fighting vehicles.
 - Coverage of 1.2 million ha. with communication infrastructure.
 - Financing of 2,026 pieces of equipment for fighting forest fires and 1,074 fireproof uniforms.
 - A total of 467 staff training courses on the prevention and fighting of forest fires.
 - Implementation of seven infrastructure projects to improve forest fire monitoring.
 - A total of 600 people from local communities support the fight against forest fires.
 - Distribution of 3,698 emergency kits.
- b) *Combating deforestation*
 - Conducting 1,137 community training sessions and knowledge sharing between communities.
 - Support of 106 productive income-generating activities.
 - Acquisition of 62 machines for productive activities.
 - Certification of a total of six locally grown products.
→ Support for a total of 241 families.
- c) *Promotion of agroforestry systems and regeneration of forest landscapes.*
 - A total of 38 kha of communal land will be included in the voluntary nature conservation programme.
 - Support for conservation and protection measures on 94 kha of municipal land.
 - Dissemination of proven agroecological methods for the regeneration and restoration of 140 kha.
 - Restoration of ten water sources and bodies of water for use by animals and communities.

Component 3: Strengthening capacities to coordinate actions

- a) *Strengthening the technological and organisational infrastructure to improve communication at regional level*
- b) *Improving the regional experience exchange between the competent institutions and the organisations involved.*
 - A total of 14 strategic meetings of the GEC and nine meetings of the GOC (jointly with GIZ) took place. In addition, 15 meetings were held with the GEC to coordinate the Selva Maya project.

Recommendations for operation annex

No recommendations for operation were made in the final inspection.

Evaluation questions in line with OECD-DAC criteria/ex post evaluation matrix annex

Relevance

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / 0 / +)	Rationale for weighting
Evaluation dimension: Policy and priority focus			2	0	
Are the objectives of the programme aligned with the (global, regional and country-specific) policies and priorities, in particular those of the (development policy) partners involved and affected and the BMZ?	<p>To what extent did the objectives of the project correspond with the national priorities of the partner countries Belize, Guatemala and Mexico?</p> <p>Was and is environmental protection a priority objective of the Federal Ministry for Economic Cooperation and Development (BMZ)? Is the chosen approach in line with the BMZ sector strategy?</p>	Project documentation, interviews with the operational department and partners, BMZ strategy papers			
Do the objectives of the programme take into account the relevant political and institutional framework conditions (e.g. legislation, administrative capacity, actual power structures (including those related to ethnicity, gender, etc.))?	To what extent is the project set to further strengthen the existing coordination mechanisms (GEC) between the countries? (Component III)	Project documents, interviews with operational department			
Evaluation dimension: Focus on needs and capacities of participants and stakeholders			3	0	

<p>Are the programme objectives focused on the developmental needs and capacities of the target group? Was the core problem identified correctly?</p>	<p>How was the selection of the eligible protected areas made?</p> <p>Was the necessary capacity already available at institutional level and in the protected area administrations?</p> <p>How is the operation and maintenance of the financed investments to be ensured?</p>	<p>Interviews with executing agency, partners and, if necessary, target group (protected area administration)</p>			
<p>Were the needs and capacities of particularly disadvantaged or vulnerable parts of the target group taken into account (possible differentiation according to age, income, gender, ethnicity, etc.)? How was the target group selected?</p>	<p>To what extent were measures in favour of particularly vulnerable parts of the local population promoted?</p>	<p>Project documentation, interviews with operational department and executing agency</p>			
<p>Would the programme (from an ex post perspective) have had other significant gender impact potentials if the concept had been designed differently? (FC-E specific question)</p>	<p>/</p>	<p>Question of minor relevance for this nature conservation project</p>			
<p>Evaluation dimension: Appropriateness of design</p>			2	0	
<p>Was the design of the programme appropriate and realistic (technically, organisationally and financially) and in principle suitable for contributing to solving the core problem?</p>	<p>To what extent did the feasibility study at the start of the project contribute to its conceptual orientation?</p> <p>Were the responsibilities for the implementation of the project clearly defined (at institutional level and in the protected areas)?</p>	<p>Project documentation, interviews with operational department and executing agency</p>			

<p>Is the programme design sufficiently precise and plausible (transparency and verifiability of the target system and the underlying impact assumptions)?</p>	<p>Which aspects of the core problem were addressed in the design of the project and which were not?</p>	<p>Project documentation, interviews with operational department and executing agency</p>
<p>Were the selected indicators and their value allocation appropriate in their entirety (select one of the following to answer: indicators and values were appropriate / partially appropriate / not appropriate)? The rationale is differentiated according to indicators in Appendix 1. (FC-E specific question)</p>	<p>The indicators and value allocation were partially appropriate (see Appendix 1).</p>	
<p>Please describe the theory of change, incl. complementary measures, if necessary in the form of a graphical representation. Is this plausible? As well as specifying the original and, if necessary, adjusted target system, taking into account the impact levels (outcome and impact). The (adjusted) target system can also be displayed graphically. (FC-E specific question)</p>	<p>The theory of change (ToC) is described in a graphic, which will be supplemented at a later point in the EPE.</p>	<p>/</p>
<p>To what extent is the design of the programme based on a holistic approach to sustainable development (interplay of the social, environmental and economic dimensions of sustainability)?</p>	<p>To what extent did the project contribute to achieving the national objectives and those of Agenda 2030?</p>	<p>Project documentation, BMZ strategy papers, country strategy papers</p>
<p>For projects within the scope of DC programmes: is the programme, based on its design, suitable for achieving the objectives of the DC programme? To what extent is the impact level of the FC module meaningfully linked to the DC programme (e.g. outcome impact or output outcome)? (FC-E specific question)</p>	<p>/</p>	<p>The project was not part of a DC programme, so the question cannot be further specified.</p>

<p>Evaluation dimension: Response to changes/adaptability</p>			2	–	<p>The adjustments during the COVID-19 pandemic primarily concern the implementation of the project and are therefore included in the evaluation in the Effectiveness section.</p>
<p>Has the programme been adapted in the course of its implementation due to changed framework conditions (risks and potential)?</p>	<p>To what extent was an adjustment of the project necessary due to the COVID-19 pandemic or political changes?</p>	<p>Project documentation</p>			

Coherence

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / 0 / +)	Rationale for weighting
<p>Evaluation dimension: Internal coherence (division of tasks and synergies within German development cooperation):</p>			2	0	
<p>To what extent is the programme designed in a complementary and collaborative manner within the German development cooperation (e.g. integration into DC programme, country/sector strategy)?</p>	<p>To what extent did the project align with the BMZ's country and sector strategy?</p>	<p>Project documentation, BMZ strategy papers; country strategy papers</p>			
<p>Do the instruments of the German development cooperation dovetail in a conceptually meaningful way, and are synergies put to use?</p>	<p>To what extent were there synergies with TC projects?</p> <p>How did the coordination between FC and TC activities take place?</p>	<p>Project documentation, interviews with GIZ</p>			

<p>Is the programme consistent with international norms and standards to which the German development cooperation is committed (e.g. human rights, Paris Climate Agreement, etc.)?</p>	<p>To what extent did the project contribute to achieving the goals of the Paris Agreement?</p> <p>To what extent does the project take into account the interests of indigenous groups? And of women?</p>	<p>Project documentation, plausibility considerations</p>					
<p>Evaluation dimension: External coherence (complementarity and coordination with actors external to German DC):</p>					2	o	
<p>To what extent does the programme complement and support the partner's own efforts (subsidiarity principle)?</p>	<p>To what extent did the FC project complement the work of the IUCN and the partner countries in the Selva Maya?</p> <p>What added value did the cooperation with KfW have for the IUCN and the partner countries?</p>	<p>Interviews with the project-executing agency and representatives of partner governments as well as interested members of civil society (NGOs, cooperatives, etc.), reports from the project-executing agency.</p>					
<p>Is the design of the programme and its implementation coordinated with the activities of other donors?</p>	<p>To what extent did the FC project complement the activities of other donors in the Selva Maya?</p> <p>How did the IUCN coordinate with other donors?</p>	<p>Interviews with the project-executing agency and the operational department (possibly also with representatives of the partner governments)</p>					

Was the programme designed to use the existing systems and structures (of partners/other donors/international organisations) for the implementation of its activities and to what extent are these used?	To what extent was there already cooperation between the respective responsible national institutions (MAFFESD, CONANP, CONAP) at the time of project planning?	Interviews with the project-executing agency, the national institutions and the operational department
Are common systems (of partners/other donors/international organisations) used for monitoring/evaluation, learning and accountability?	Are there common monitoring or evaluation systems used by the IUCN and donors or other international organisations?	Interviews with the project-executing agency

Effectiveness

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / 0 / +)	Rationale for weighting
Evaluation dimension: Achievement of (intended) targets			2	0	
Were the (if necessary, adjusted) objectives of the programme (incl. capacity development measures) achieved? Table of indicators: Comparison of actual/target	--				
Evaluation dimension: Contribution to achieving targets:			2	0	
To what extent were the outputs of the programme delivered as planned (or adapted to new developments)? <i>(Learning/help question)</i>	To what extent has the management effectiveness of the protected areas of the Selva Maya been improved (output 1)?	Project documentation, visit to project locations, data evaluations Reports from national protected area authorities			

	<p>To what extent has the connectivity of the protected areas in the Selva Maya been improved (output 2)?</p> <p>To what extent has the capacity to coordinate measures for the conservation and sustainable management of the Selva Maya between Belize, Guatemala and Mexico been strengthened (output 3)?</p> <p>To what extent did the IUCN-ORMACC provide technical, organisational and administrative support in the coordination and implementation of the project (output 4)?</p>	
<p>Are the outputs provided and the capacities created used?</p>	<p><u>Output 1:</u> What is the state of the operational infrastructure and equipment in the protected areas?</p> <p>Are the financed equipment and means of transport (e.g. vehicles and boats) being used?</p> <p>Is the integrated monitoring of the protected area being used (satellite-assisted monitoring technology and GIS)?</p>	<p>Visit to the project sites, interviews with the target group and the project-executing agency, project documentation</p>

	<p>To what extent are the management plans being implemented (i.e. degree of implementation of annual work and cost plans)?</p> <p>Are management plans regularly updated?</p> <p><u>Output 2:</u> To what extent are prevention and control measures for forest fires being implemented?</p> <p>Are the productive and income-generating small projects of the local population still active/are the taught techniques still being used?</p> <p>What form of agroforestry systems was promoted and will this continue to be used?</p> <p>Were the priority areas and measures identified in the regional study supported by corresponding follow-up projects (KfW or other donors)?</p> <p><u>Output 3:</u> Will the technological and organisational infrastructure continue to be used to improve communication at regional level?</p>	
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	<p>To what extent is the regional experience exchange between the competent institutions and the organisations involved permanently improved?</p> <p>Are the GEC and GOC still active and do they perform their tasks? How often do the actors meet?</p>	
<p>To what extent is equal access to the outputs provided and the capacities created guaranteed (e.g. non-discriminatory, physically accessible, financially affordable, qualitatively, socially and culturally acceptable)?</p>	/	<p>This aspect is covered below.</p>
<p>To what extent did the programme contribute to achieving the objectives?</p>	<p>To what extent did the project contribute to the maintenance of the ecosystem functions and cultural values of the Selva Maya?</p>	<p>Plausibility considerations</p>
<p>To what extent did the programme contribute to achieving the objectives at the level of the intended beneficiaries?</p>	<p>To what extent did the measures reach the local population?</p>	<p>Interviews with target group (local population) and executing agency</p>
<p>Did the programme contribute to the achievement of objectives at the level of the particularly disadvantaged or vulnerable groups involved and affected (potential differentiation according to age, income, gender, ethnicity, etc.)?</p>	<p>To what extent were women and ethnic minorities also able to benefit from the measures? (incl. involvement in planning and decision-making processes as well as in the framework of micro-projects and of the Selva Maya 2030 strategy)</p>	<p>Interviews with target group (local population) and executing agency</p>

Were there measures that specifically addressed gender impact potential (e.g. through the involvement of women in project committees, water committees, use of social workers for women, etc.)? (FC-E specific question)	/	Covered in more detail above.			
Which project-internal factors (technical, organisational or financial) were decisive for the achievement or non-achievement of the intended objectives of the programme? (<i>Learning/help question</i>)	What technical and organisational factors adversely impacted the achievement of the goals? What would you do differently today?	Interviews with the project-executing agency and the operational department			
Which external factors were decisive for the achievement or non-achievement of the intended objectives of the programme (also taking into account the risks anticipated beforehand)? (<i>Learning/help question</i>)	To what extent did the parallel implementation of TC projects contribute to the target achievement? Was there financing from other donors with similar objectives? To what extent did the COVID-19 pandemic adversely impact the achievement of the goals?	Interviews with the project-executing agency and GIZ			
Evaluation dimension: Quality of implementation			2	0	
How is the quality of the management and implementation of the programme to be evaluated with regard to the achievement of objectives?	To what extent did implementation by the IUCN contribute to achieving the outcome-level objectives?	Interviews with the operational department			
How is the quality of the management, implementation and participation in the	How is the IUCN's administrative capacity to be assessed?	Interviews with the operational department and national institutions			

<p>programme by the partners/sponsors evaluated?</p>	<p>Was the IUCN able to provide the national institutions and project stakeholders with the necessary consultancy services?</p> <p>How is the quality of implementation to be assessed by the responsible national institutions (MAFFESD, CONAP and CONANP)?</p> <p>How should the cooperation of the Strategic Coordination Group (GEC) with the involvement of the national institutions be assessed?</p> <p>Has the IUCN been able to promote political dialogue between countries and contribute to cross-border cooperation?</p>				
<p>Were gender results and relevant risks in/through the project (gender-based violence, e.g. in the context of infrastructure or empowerment projects) regularly monitored or otherwise taken into account during implementation? Have corresponding measures (e.g. as part of a CM) been implemented in a timely manner? (FC-E specific question)</p>	<p>To what extent did the IUCN ensure a comprehensive follow-up of the regional programme's impact?</p> <p>Was there follow-up on gender impacts and relevant risks?</p>	<p>Interviews with the operational department and the project-executing agency</p>			
<p>Evaluation dimension: Unintended consequences (positive or negative)</p>			<p>n/a</p>	<p>/</p>	

Can unintended positive/negative direct impacts (social, economic, ecological and, where applicable, those affecting vulnerable groups) be seen (or are they foreseeable)?	/	Not applicable to date as no unintended effects were observed.
What potential/risks arise from the positive/negative unintended effects and how should they be evaluated?	/	Not applicable to date as no unintended effects were observed.
How did the programme respond to the potential/risks of the positive/negative unintended effects?	/	Not applicable to date as no unintended effects were observed.

Efficiency

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / o / +)	Rationale for weighting
Evaluation dimension: Production efficiency			3	o	
How are the inputs (financial and material resources) of the programme distributed (e.g. by instruments, sectors, sub-measures, also taking into account the cost contributions of the partners/executing agency/other participants and affected parties, etc.)? (Learning and help question)	<p>How are the total costs distributed among the various components of the project?</p> <p>How high was the FC contribution to the overall financing?</p> <p>To what extent were the intended national contributions made and why were there deviations?</p>	Project documentation			
To what extent were the inputs of the programme used sparingly in relation to the outputs produced (products, capital goods and services) (if possible in a	To what extent were the originally calculated costs of the project kept to?	Project documentation			

comparison with data from other evaluations of a region, sector, etc.)? For example, comparison of specific costs.				
If necessary, as a complementary perspective: To what extent could the outputs of the programme have been increased by an alternative use of inputs (if possible in a comparison with data from other evaluations of a region, sector, etc.)?	What alternative measures could have been financed to increase management effectiveness in the protected areas?	Similar evaluations, interviews with the operational department		
Were the outputs produced on time and within the planned period?	To what extent did the COVID-19 pandemic influence the project's time efficiency?	Interviews with the operational department, project documentation		
Were the coordination and management costs reasonable (e.g. implementation consultant's cost component)? (FC-E specific question)	Were the management costs for control and implementation by the IUCN appropriate?	Interviews with the operational department, project documentation		
Evaluation dimension: Allocation efficiency			3	0
In what other ways and at what costs could the effects achieved (outcome/impact) have been attained? (<i>Learning/help question</i>)	/	This aspect is covered below.		
To what extent could the effects achieved have been attained in a more cost-effective manner, compared with an alternatively designed programme?	/	This aspect is covered below.		
If necessary, as a complementary perspective: To what extent could the positive effects have been increased with the resources available, compared to an alternatively designed programme?	To what extent could the FC funds have been used elsewhere, e.g. to close long-term financing gaps in covering operating costs in the protected areas?			

Impact

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / o / +)	Rationale for weighting
Evaluation dimension: Overarching developmental changes (intended)			3	o	
Is it possible to identify overarching developmental changes to which the programme should contribute? (Or if foreseeable, please be as specific as possible in terms of time.)	What is the trend in the conservation of the natural resources of the Selva Maya for the period 2017-2021 and beyond?	Data evaluations			
Is it possible to identify overarching developmental changes (social, economic, environmental and their interactions) at the level of the intended beneficiaries? (Or if foreseeable, please be as specific as possible in terms of time)	How did deforestation rates develop in the supported protection areas in the period 2017-2021? What is the trend in the prevalence of endemic species in the period 2017-2021?	Data evaluations			
To what extent can overarching developmental changes be identified at the level of particularly disadvantaged or vulnerable parts of the target group to which the programme should contribute? (Or, if foreseeable, please be as specific as possible in terms of time)	To what extent have the living conditions for the local population changed in the period 2017-2021?	On-site visits and interviews with the target group			
Evaluation dimension: Contribution to overarching developmental changes (intended)			2	o	
To what extent did the programme actually contribute to the identified or foreseeable overarching developmental	To what extent did the project (Phase 1) contribute to the	Plausibility considerations based on impressions on site and the project documentation			

changes (also taking into account the political stability) to which the programme should contribute?	conservation of the natural resources of the Selva Maya?	
To what extent did the programme achieve its intended (possibly adjusted) developmental objectives? In other words, are the project impacts sufficiently tangible not only at outcome level, but also at impact level? (E.g. drinking water supply/health effects).	/	This question has already been covered in the line above.
Did the programme contribute to achieving its (possibly adjusted) developmental objectives at the level of the intended beneficiaries?	To what extent did the local population benefit from the conservation of the natural resources of the Selva Maya? To what extent did the project contribute to strengthening the target group's resilience to changes related to global warming?	Interviews with target group
Has the programme contributed to overarching developmental changes or changes in life situations at the level of particularly disadvantaged or vulnerable parts of the target group (potential differentiation according to age, income, gender, ethnicity, etc.) which the programme was intended to help?	To what extent did the project have gender-related impacts?	Interviews with the project-executing agency
Which project-internal factors (technical, organisational or financial) were decisive for the achievement or non-achievement of the intended developmental objectives of the programme? (<i>Learning/help question</i>)	/	Cannot be further specified.
Which external factors were decisive for the achievement or non-achievement of	/	Cannot be further specified.

<p>the intended developmental objectives of the programme? (<i>Learning/help question</i>)</p>					
<p>Does the project have a broad-based impact?</p> <ul style="list-style-type: none"> - To what extent has the programme led to structural or institutional changes (e.g.in organisations, systems and regulations)? (Structure formation) - Was the programme exemplary and/or broadly effective and is it reproducible? (Model character) 	<p>To what extent did the project contribute to initiating structural changes at the level of national institutions? Are the outcomes long lasting?</p> <p>To what extent could more effective structures be created in the protected area administrations in the long term?</p> <p>To what extent were the lessons learned from the project used to design other, similar projects? (Phase II)</p>	<p>Interviews with project-executing agency and operational department</p>			
<p>How would the development have gone without the programme (developmental additionality)?</p>	<p>How would the protected area management have developed without the programme and what impact would this have had on the conservation of natural resources?</p>	<p>Interviews with target group and project-executing agency</p>			
<p>Evaluation dimension: Contribution to (unintended) overarching developmental changes</p>			2	0	
<p>To what extent can unintended overarching developmental changes (also taking into account political stability) be identified (or, if foreseeable, please be as specific as possible in terms of time)?</p>	<p>To what extent did unintended positive or negative development policy changes occur in the period 2017-2021?</p>	<p>Project documentation, interviews with operational department, project-executing agency and target group</p>			

Did the programme noticeably or foreseeably contribute to unintended (positive and/or negative) overarching developmental impact?	To what extent did the COVID-19 pandemic impact the efforts to conserve the natural resources of the Selva Maya?	Plausibility considerations
Did the programme noticeably (or foreseeably) contribute to unintended (positive or negative) overarching developmental changes at the level of particularly disadvantaged or vulnerable groups (within or outside the target group) (do no harm, e.g. no strengthening of inequality (gender/ethnicity))?	How did the unintended positive or negative development policy changes affect particularly vulnerable sections of the population within the target group (e.g. women)?	Interviews with target group

Sustainability

Evaluation question	Specification of the question for the present project	Data source (or rationale if the question is not relevant/applicable)	Rating	Weighting (- / 0 / +)	Rationale for weighting
Evaluation dimension: Capacities of participants and stakeholders			3	0	
Are the target group, executing agencies and partners able and willing (ownership) to maintain the positive effects of the programme over time (after the end of the promotion) on an institutional, personnel and financial level?	<p>Are the competent national institutions still able and willing to cooperate with each other (institutionally, in terms of staff) for the conservation of the Selva Maya?</p> <p>Do the protected areas supported have sufficient financial and human resources to ensure effective management?</p>	Interviews with the operational department, national institutions and project-executing agency			

	Are the coordination groups GEC and GOC still active?			
To what extent do the target group, executing agencies and partners demonstrate resilience to future risks that could jeopardise the impact of the programme?	To what extent does the availability of sufficient funds continue to be a challenge for partner countries?	Interviews with the operational department, national institutions and project-executing agency		
Evaluation dimension: Contribution to supporting sustainable capacities:			2	0
Did the programme contribute to the target group, executing agencies and partners being institutionally, personally and financially able and willing (ownership) to maintain the positive effects of the programme over time and, where necessary, to curb negative effects?	<p>To what extent did the project strengthen the ownership of the three partner countries and protected area administrations?</p> <p>To what extent did the project contribute to greater prioritisation of protected areas at political level?</p>	Interviews with the operational department, national institutions and project-executing agency		
Did the programme contribute to strengthening the resilience of the target group, executing agencies and partners to risks that could jeopardise the effects of the programme?	<p>To what extent did the programme contribute to increasing the attractiveness of the protected areas for further financing from other donors?</p> <p>To what extent did the project contribute to strengthening local capacities for planning and implementing follow-up projects?</p>	Interviews with the operational department, national institutions and project-executing agency		
Did the programme contribute to strengthening the resilience of particularly disadvantaged groups to risks that	To what extent was the project able to contribute to raising	Interviews with target group		

could jeopardise the effects of the programme?	awareness among the local population of nature conservation concerns?				
Evaluation dimension: Durability of impacts over time				3	0
How stable is the context of the programme (e.g. social justice, economic performance, political stability, environmental balance)? (<i>Learning/help question</i>)	<p>To what extent can cooperation between the three partner countries for the preservation of the Selva Maya be expected to be maintained in the long term?</p> <p>What long-term financing strategies are available for the protected area and how are they to be assessed?</p>	Interviews with the operational department, national institutions and project-executing agency			
To what extent is the durability of the positive effects of the programme influenced by the context? (<i>Learning/help question</i>)	To what extent does the development of mass tourism (including Tren Maya) pose a risk to the conservation and management objectives of the protected areas?	Interviews with the operational department, national institutions and project-executing agency			
To what extent are the positive and, where applicable, the negative effects of the programme likely to be long-lasting?	<p>To what extent can a long-term improvement in the management effectiveness of the protected areas be assumed?</p> <p>To what extent can follow-up projects build on the positive effects of the evaluated project (connectivity and expansion of</p>	Interviews with the operational department, national institutions and project-executing agency			

	the measures already implemented)?	
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