

# Ex post evaluation

## Phong Nha-Ke Bang National Park, Vietnam



|                                            |                                                                                                                                          |                              |      |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------|
| <b>Title</b>                               | Cooperative programme: Integrated conservation and sustainable management of natural resources in Phong Nha-Ke Bang National Park region |                              |      |
| <b>Sector and CRS code</b>                 | Biodiversity (CRS code: 41030)                                                                                                           |                              |      |
| <b>Project number</b>                      | BMZ no.: 2004 65 989                                                                                                                     |                              |      |
| <b>Commissioned by</b>                     | BMZ                                                                                                                                      |                              |      |
| <b>Recipient/Project-executing agency</b>  | Provincial People's Committee Quang Binh                                                                                                 |                              |      |
| <b>Project volume/financing instrument</b> | KfW financing, EUR 7.92 million                                                                                                          |                              |      |
| <b>Project duration</b>                    | Implemented between 2009 and 2016                                                                                                        |                              |      |
| <b>Year of report</b>                      | 2021                                                                                                                                     | <b>Year of random sample</b> | 2020 |

### Objectives and project outline

The outcome-level objective was to reduce pressure on the extended Phong Nha-Ke Bang National Park and improve its management. At impact level, the goal was to maintain the biodiversity of the extended Phong Nha-Ke Bang National Park. The project aimed to achieve these goals through implementation in four areas of intervention – a) park management and protection, b) forest restoration and management, c) promotion of alternative sources of income, d) improvement of law enforcement.

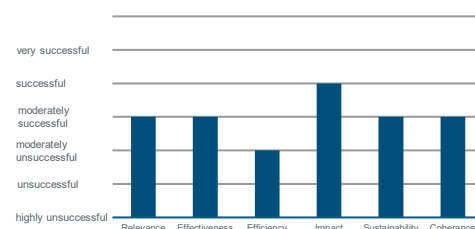
### Key findings

Up to the time of the EPE, Phong Nha-Ke Bang National Park was fundamentally capable of promoting the preservation of natural resources in the region. Due to minor interferences, floral and faunal biodiversity has deteriorated slightly, but remains at a high level. The capacity of the park administrative authorities to monitor illegal activity in the park was improved, but the threat status also rose due to an expansion of infrastructure and the promotion of mass tourism.

The local population's participation is one noteworthy component. Joint patrols were set up, consisting of park rangers and members of the community, and are still conducted by 21 participating villages. The village conservation groups also led to people becoming more aware of the importance of protecting forest resources.

With regard to the use of forest and agricultural land in the buffer zone, the objectives and goal of sustainability were only partially achieved. A new national directive banning forest cultivation in natural forests and a lack of financial resources are preventing the sustainable use of designated community forests. A number of the 34 communities have lost interest in maintaining and regularly thinning out the forests. It also became evident that the focus on native trees compared to quick-growing exotic varieties may be to the detriment of economic effectiveness over the short and medium term.

**Overall rating:**  
moderately successful



### Conclusions

#### Successes and failures

- Village conservation groups promote the protection of the forest
- SMART software facilitates more efficient monitoring of park patrols
- Focus on native, slow-growing species of tree can hinder economic effectiveness

#### Recommendations:

- When designating natural community forests, the focus should be on sustainability (through exit strategies, certification systems, follow-on financing)
- Local capacities and objectives must be actively incorporated into the project's design

## Rating according to DAC criteria

### Overall rating: 3

#### Ratings:

|                |   |
|----------------|---|
| Relevance      | 3 |
| Effectiveness  | 3 |
| Coherence      | 3 |
| Efficiency     | 4 |
| Impact         | 2 |
| Sustainability | 3 |

#### Breakdown of total costs

|                           |             | Planned | Actual |
|---------------------------|-------------|---------|--------|
| Investment costs          | EUR million | 15.77   | 10.62  |
| Counterpart contribution  | EUR million | 3.14    | 2.70   |
| Financing                 | EUR million | 12.63   | 7.92   |
| of which BMZ budget funds | EUR million | 8       | 6.12   |

#### Relevance

The project appraisal report identifies the intense pressure on Pho Nha-Ke Bang National Park as a core problem. Fauna was primarily affected by poaching for the consumption of game, as well as for the production of traditional medicine. Flora was heavily damaged by illegal logging related to the exploitation of rare timbers and tree oils. In addition, the park was threatened by unsustainable mass tourism and infrastructure projects related to this (including a plan to run a cable car through the national park). Poor law enforcement and a high level of poverty among the neighbouring population contributed to this situation. The identification of this problem is based on an analysis of income levels and earning opportunities for the local population and of the situation at the park authorities. From the perspective at the time and also today, the **identification of the core problem** is generally comprehensible and appropriate. The following measures were developed to tackle this problem: (1) improve law enforcement by enhancing management of the park, (2) promote park tourism to increase the park authorities' financial resources, and (3) promote alternative sources of income for the local population by restoring the forest and sustainably managing reforested areas on the basis of a savings book model and issuing microloans to develop alternative sources of income (e.g. orchid cultivation, honey and mushroom production, fruit trees).

As such, the project pursued a holistic approach and an internationally oriented project design (integrated conservation and development project) was selected while also incorporating regional experience. This took the multi-causal nature of the problem into account. A positive view is also taken of the fact that the approach was reviewed and adjusted during the project. For instance, promotion of the development of tourism was replaced with a stronger focus on law enforcement. In the final inspection, this was explained by the fact that the provincial government and tourism sector had already invested enough in the area, but further action was still needed in the field of law enforcement.

Quang Binh was and still is one of the poorer provinces in the country. For instance, 27% of people lived below the national poverty line in 2006 (16% being the national average) and 11% in 2016 (national average: 6%) (General Statistics Office 2020). However, it is not one of the poorest provinces, which recorded levels of around 40% in 2006 and over 20% in 2016. And yet, the population in the remote areas of the park is particularly affected by poverty. A total of 75% of all households in the project region, particularly members of ethnic minorities, lived below the national poverty line of VND 200,000 per capita a month

(roughly EUR 10). From a poverty-based perspective, the selected project region was therefore appropriate.

The project's target group was the roughly 56,000 inhabitants of the national park's catchment area. They relied heavily on the use of natural resources for their livelihood, and at the beginning of the project they had few legal options for using the forest and no secure access to alternative sources of income. The target group lived in 13 municipalities in the districts of Bo Trach, Minh Hoa and Quang Ninh, which border the park to the north, east and south. They possessed less than 6,000 ha of land with low levels of soil fertility. The promotion of sustainable forest management was proposed as an alternative source of income for the local population. This plan involved restoration and reforestation measures for over 4,250 ha of land in the project region, including participation by the local population. The majority of the flora planted were slow-growing local native species of tree. Furthermore, the plan was to transfer 11,900 ha of municipal forest to village communities for sustainable management. The approach of using the so-called savings book model was designed to provide compensation for forest work and forest maintenance during the forest's restoration. Compensation payments were set up for a period of six years. The goal was for the local population to generate profit from the sale of timber over the long term. Legal security was to be established through the allocation of land usage rights to ensure long-term maintenance of the forest and the generation of profits. Additionally, by creating a concept for alternative income options and, on this basis, issuing micro-loans to the local population, the goal was to promote sources of income that were independent of the park, such as orchid cultivation or honey and mushroom production.

The promoted activities are potentially able to reduce pressure on the park, though the extent to which this was actually anticipated remains unclear. For example, the extent to which the target group actually reached were involved in the overall poaching problem is not clear (targeting). Furthermore, it is also important to question whether long-term investments (timber industry) are an attractive alternative to the quick profits that can be generated from illegal use of the forest. While savings book payments can have short-term compensation effects, they do not exclude any further illegal use of the forest per se. In the medium term in particular (after the compensation payments and before the generation of forest profits), the income effects achievable by the local population beyond the status quo are questionable.

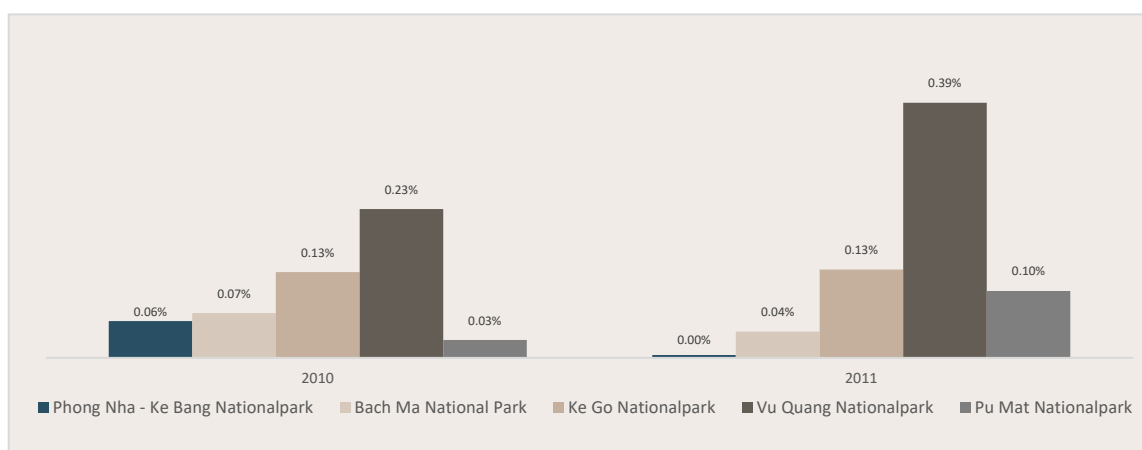
To improve the park's management, the project proposed a number of planning-related activities (e.g., land use plan and tourism strategy). However, some of the structural factors in the park were not sufficiently addressed. According to the information provided by interviewees, for example, there were problems with corruption within the park authorities. For instance, members of the patrol teams had an economic interest in the continuation of illegal forest use, particularly in the sale of protected species of animal. To be recruited into the park, it was said that interested parties were required to pay two to three times their annual salary as a bribe. According to interviewees, this generated an incentive for the illegal sale of wild animal products to offset the payment. Furthermore, it was not clear whether the provincial government possessed the specialist and executive skills needed to implement some of the measures. Here, the provincial government lacked experience in international development cooperation in particular, as well as in tendering processes. The complex institutional setup also called into question whether the provincial government would possess the authority needed to make decisions regarding the park authorities (see Efficiency). At the same time, experience from other projects had already shown that designs spanning several provinces would have reduced dependence on the individual provincial governments, which would have improved the efficiency of the implementation.

At an initial glance, the selected indicators appear to provide very relevant information with regard to the project's target achievement. However, their ability to be measured is questionable. For instance, according to the interviewees, estimating the population development of the defined keystone species would have been a 5-year project in itself. There was no adequate comparative data for estimating illegal use of the park. As such, it was not possible for the project to assess whether better park management and better law enforcement simply enabled more crimes to be identified or whether illegal use of the park had actually declined (see Effectiveness). The indicators were not adjusted during the project.

When looking at the selection of the project region from an ecological perspective, one noticeable aspect is that, in 2010 and 2011, the percentage of trees lost in other (nearby) protected areas was a lot higher than in Phong Nha-Ke Bang National Park (see figure 1). In absolute figures, the national park lost a total of 95 ha of its 118 kha of trees, while Vu Quang National Park, for example, lost 361 ha from its tree population, which is almost half the size (56.2 kha) of Phong Nha-Ke Bang. In view of the acute threat level,

Ke Go or Vu Quang National Parks – which both have high levels of biodiversity and are also home to rare and protected species of flora and fauna – may have been more suitable choices. However, the park's national and international significance for biodiversity protection, the potential for income from sustainable tourism and the opportunity to create a large, cross-border protected area with other territories in Laos were unique attributes of Phong Nha-Ke Bang.

**Figure 1: Relative loss of the tree population in the project region and other regional conservation areas**



Own data. Data sources: IUCN (2021) World Database of Protected Areas & the Global Forest Watch.<sup>1</sup>

In an **international context**, the project contributes to the achievement of several Sustainable Development Goals, particularly number 15 “Protecting terrestrial ecosystems”. Thanks to its income-increasing elements, there is also a link to goal 1 “Ending poverty” and 2 “Zero hunger”.

In the **context of German development cooperation**, the project follows the reform concept “BMZ 2030” of the Federal Ministry for Economic Cooperation and Development, since it involves participatory approaches and aims to empower civil society, improve resilience and food security.

On the whole, the project addressed a relevant problem using a suitable and established approach. The planned measures had the potential to help reduce the core problem. Due to the unresolved incongruity between the goals of KfW and those of the provincial government/park rangers, the foreseeable weaknesses in the local partners, the project's design as a cooperative project, and the poor choice of indicators, the project is rated as satisfactory.

**Relevance rating: 3**

### Coherence

Since the project was set up as a cooperative programme with GIZ, efforts should have been made to increase the coherence of the two implementing organisation's activities. However, according to those involved, it was difficult to liaise and divide up the work. At an institutional level, KfW and GIZ often had different opinions on the willingness of local partners to cooperate and encountered difficulties in syncing the different components with one another. For this reason, the task of organisation was split with KfW focusing on the measures involving the park authorities, reforestation, and the provision of micro-loans, while GIZ was responsible for the participative development of the buffer zone development plan and the creation of a concept for alternative sources of income. The concept for alternative sources of income was intended to highlight additional fields for FC investment. These were then to guide the micro-lending

<sup>1</sup> The “loss of the tree population” can have both natural and anthropological causes, so, in certain circumstances, it does not qualify as targeted “deforestation” by humans.

process by KfW to the target group in order to promote alternative sources of income. It was not possible to achieve this intended degree of complementarity because plans that were developed in the TC component were either not sufficiently compatible with the FC measures (concept for alternative sources of income) or were completed too late to be implemented/approved by the local authorities (buffer zone development plan).

The project was built on KfW's savings book approach. This had already been piloted and successfully applied in Vietnam for a number of years. Experience from similar projects in other countries was also incorporated into the design, such as the use of SMART software for national park monitoring.

Another positive aspect worth highlighting is the project's complementarity with projects by other donors. These projects pursued similar objectives and approaches but did not focus as much on Quang Binh province. This project therefore closed an important gap.

The Vietnamese development priorities were ambivalent with regard to this project. On the one hand, their focus was on promoting economic development and, in particular, Vietnam's further development as a tourist destination. The government's five-year plan for 2006–2011, which was valid at the start of the project, set out major investments in the tourism sector. On the other hand, as a member of the International Union for Conservation (IUCN) and as part of its National Protection Strategy, Vietnam has made a commitment to widescale conservation, significantly increasing its investment in this sector, and making the issue a greater political priority. However, this issue is only covered in a few pages of the five-year plan with a lot less depth than other areas. As was the goal of the project, the Vietnamese strategy also set out to link conservation to economic development to tap into alternative sources of income for the local population.

In terms of tourism development, there were discrepancies between the project's vision and that of the provincial government. The project envisaged the development of a sustainable eco-tourism strategy, which would limit visitor numbers, for example, prevent any further caves from being developed for tourism, and only permit certain activities within the park. By contrast, the provincial government aimed to develop all flowstone caves for mass tourism, e.g., by building a cable car, and also to promote other attractions, such as water sports. The main tourist attractions – the flowstone caves – do not lose much of their appeal as a result of poaching and forest clearance and therefore provide no incentive for preserving biodiversity. At the start of the project, the provincial government did not have a concept that combined the conservation goals and development needs of the local population. For the provincial government, preserving biodiversity in the park was only interesting to the extent that it allowed the national park to achieve the status of a World Heritage Site for Biodiversity (in addition to its status as a World Heritage Site for Geology and Geomorphology). This additional status held the promise of greater interest from tourists. As such, there was no motivation to protect biodiversity beyond the minimum requirements needed for gaining the status.

This is also regarded as exemplary in relation to Road 20. This road runs in direct proximity to the core of the national park. Plans to extend this road were already causing concern at the start of the project because, on the one hand, it could be used as a gateway for poaching and illegal tree felling in the national park and, on the other hand, it could be used to transport illegal timber out of the neighbouring Lao park or between the two conservation areas on the Vietnamese and Lao side. As a result of these concerns, an agreement was made prior to the start of the project that the PPC would declare in writing that it would not improve the road but merely replace the surface.

The design also envisaged close cooperation with local NGOs. The intention was that they would support the monitoring of law enforcement and biodiversity and also the issuing of micro-loans. However, participation by these NGOs was very slow to begin with, and then in some cases did not come to fruition at all (see Efficiency). In addition, during the course of the project, other donors and projects were active in the area, including the Asian Development Bank, ActionAid, Plan International, Helvetas and IFAD, though there was no noteworthy cooperation with any of these.

On the whole, due to the planned coordination and cooperation with TC and local NGOs, the project's coherence is rated as satisfactory. The difficult practical complementarity between FC and TC and the discrepancies with local priorities meant that the project failed to meet expectations.

**Coherence rating: 3**

## Effectiveness

The project's goal was to reduce pressure on the extended national park and improve its management. In general, the data situation relating to target achievement at the end of the project is unsatisfactory. The poor basis of data can be attributed to weaknesses in the target system and the definition of the indicators. Two indicators were defined at the start of the project for measuring the project's success.

| Indicator                                                             | Target level                                                                                                                              | Status at final inspection (2016)                                                                                                                                                  | Status EPE                                                                  |
|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| a) Illegal use of the park has been significantly reduced.            | Decrease in reported offences of at least 50% paired with a 100% increase in the number of offences followed up; source: data from SMART. | A rise in the number of offences brought to prosecution can be ascertained. This can also be regarded as a direct result of the project's training and awareness-raising measures. | SMART data was not available for the evaluation.                            |
| b) The national park is managed according to international standards. | Effective management is measured by a rise in METT values (at least 70% of the maximum values possible per category).                     | The total METT score increased at a gradual rate over the years (2008: 63.5%, 2012: 64.5%, 2016: 75.5%).                                                                           | METT is not currently applied, which is why no data was available for 2021. |

Remark on a): The SMART monitoring system introduced noted a rise in offences brought to prosecution at the end of the project. One year after the final inspection, the Vietnamese government reported a fall in the number of offences between 2015 and 2017 (IUCN 2017). When evaluating these developments, it must be noted that illegal use of the park was one of the check-related offences. Recording these offences depends heavily on reports from the local population as well as on the intensity of checks and law enforcement by park rangers. The observed changes in the figures could therefore indicate both an increase in offences and a drop in unrecorded cases as a result of better park management. It is not possible to make a conclusive interpretation based on the data available. In its 2017 report, the International Union for Conservation of Nature (IUCN) came to the conclusion that, while there had been progress in the control of illegal logging and poaching, these activities continued to pose a serious threat to the park (IUCN 2017).

Remark on b): The internationally recognised Management Effectiveness Tracking Tool (METT) was introduced into the park authorities during the project.<sup>2</sup> The goal of achieving a score of 70% from a base value of 63.5% was exceeded (75.5%). In 2017, the IUCN observed, in particular, weaknesses in effective law enforcement, in the management of the buffer zone and in sustainable tourism development (IUCN 2017), and as such, in the areas due to be improved by the project. After the project ended, no further METT surveys were conducted, meaning that it is very difficult to track any qualitative changes.

At most, the evaluation of the outcome indicators therefore leads to the conclusion that the target for improved park management has been achieved. Due to the unclear interpretation of changes in recorded offences, no reliable conclusions can be drawn regarding a reduction in pressure on the park's usage. Consequently, further evaluation benchmarks will be used.

## Milestones

Due to the wide-ranging concerns at the start of the project, comprehensive implementation agreements were concluded, which are extremely unusual in terms of their scope and range. Amended to include

<sup>2</sup> The METT is based on the Management Effectiveness Framework of the World Commission on Protected Areas and looks at the dimensions of context, planning, input, process, output, and outcome in the management of protected areas. It is the standard tool for assessing progress under the biodiversity convention. Scores are specified as a percentage of the maximum score possible.



additional points, a number of the implementation agreements were defined as milestones in 2013, which measure project progress and therefore were supposed to trigger the disbursement of additional funds. The milestones were: 1) Expansion of the national park, 2) Improvement of law enforcement, 3) Non-expansion of road 20, 4) Protection of biodiversity corridors along the border with Laos, and 5) Allocation of forest land.

Based on the achievement of many of these milestones, which are rooted at output level, it is possible to verify the plausibility of the target achievement. The expansion of the national park and the allocation of forest land are in a plausible and sustainable causal relationship with the targets and can therefore be evaluated as indices. The other milestones contain declarations of intent at most and can be revised at any time.

### Influence of measures

Following the revision of the project structures, the idea was that four areas of intervention (plus one area of complementary cross-over tasks) and their respective outputs would contribute to the target achievement (see table 1).

**Table 1: Areas of intervention**

| Area of intervention                          | Results                                                                                                                                                                                                   |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A) Park management and conservation           | The capacity of park management and conservation has been improved.                                                                                                                                       |
| B) Forest restoration and management          | Selected areas of the forest in the buffer zone are restored, protected, and sustainably utilised by local farmers, villages/groups, state forest enterprises and the protection forest management board. |
| C) Promotion of alternative sources of income | Alternative sources of income in the buffer zone have been identified and are promoted in harmony with conservation goals and the sustainable use of resources.                                           |
| D) Law enforcement                            | Law enforcement has been improved and forest-related offences, illegal trading and smuggling have been reduced in Quang Binh.                                                                             |

### Area of intervention A: Park management and conservation

The interviewees were all in agreement that the measures to improve park management were central to the target achievement. Measures to develop the park (expanding its surface area, improving park infrastructure, purchasing equipment, creating zones and boundaries), measures to increase the professionalism of the park authorities (developing a management plan, running training sessions, introducing the METT system, developing a law enforcement action plan), and awareness-raising campaigns helped to reduce a number of factors that at the very least facilitated the problem. The improved management of the park led to its UNESCO recognition under criteria viii, ix and x, meaning that a rise in income from tourism was anticipated. At the same time, it also forms the basis for improved law enforcement against illegal activities. At the time of the EPE, the park authorities had set up control offices in important locations and were using advanced equipment, such as drones, GPS, and monitoring software when patrolling the park. The SMART software introduced by the project is still successfully used today and enables the park authorities to record in detail whether and where the park rangers are out on patrol in the forest.

### Area of intervention B: Forest restoration and management

The project participants interviewed regard the measures in the area of forest restoration and management as a central factor for target achievement. The original target of 4,250 ha for restoration and natural regeneration was reduced to 3,900 ha in October 2013. An area of 3,475 ha had been restored by the end of the project. As part of the promotion of municipal forest management, 8,277 ha were transferred to 34 community forest management groups in the form of a certified land usage title. A savings book approach

was applied during the project, which enabled farmers to use all timber products for their own use and other forestry products to generate a profit but also required them to replant trees and sustainably farm the areas entrusted to them. In return, over the period of six years, they receive compensation for each successfully reforested or farmed hectare, the status of which is assessed on an annual basis. The disbursement of the funds already made available continued to be effective even after the end of the project, up to their (planned) depletion. According to the final inspection, the allocation of land titles provided a significant incentive for managing the areas of forest in a sustainable manner. The reforestation activities still exist today, and the population is already benefiting from them. Some of the people from the target group are already generating initial earnings from felling replanted trees and are able to improve their livelihoods as a result. However, the focus on planting native species of tree means that a genuine economic benefit will not be generated from the reforested areas until after about 30 years. Since the project ended, Prime Minister Directive no. 13 has entered into force in Vietnam. This directive sets out the suspension of farming of natural forest, meaning that the communities will no longer be able to harvest wood or any other products from the forest. Since support funds are no longer provided and there is a ban on farming municipal forests, there was no strong incentive for continuing to farm forests in a sustainable manner for many of the 34 municipalities at the time of the EPE. For instance, parts of the forest have already been illegally felled in the municipal forests, e.g., in the village of Phu Nhieu and the municipality of Thuong Hoa. To tackle this issue, the district government is currently attempting to join a World Bank project. This could enable it to continue supporting the municipalities.

Allocating land titles proved more difficult in some communities than in others. Communities always share allocated land with the state forest enterprises – who farm the commercial forest – and the national park. Some villages who were allocated sufficient surface area on paper only had a (too small) section of this area at their disposal later down the line. These villages could not be assisted by the project because larger-scale, regional reallocation would have been needed for this.

#### **Area of intervention C: Promotion of alternative sources of income**

The aspect of promoting alternative sources of income had not been implemented by the end of the project. No partners for issuing the planned micro-loans could be found on time and the requisite concepts, which were supposed to have been created in the TC component – such as the buffer zone development plan or the concept for alternative sources of income – were developed too late or were not approved by the provincial government on time. These packages of measures were therefore not implemented, and the goal was not achieved.

#### **Area of intervention D: Law enforcement**

Another equally important package of measures was law enforcement. The development and introduction of the law enforcement action plan with training courses in the area of law enforcement as well as in the definition of species, monitoring, patrol documentation, and the use of modern equipment for park staff improved the professionalism of law enforcement. This – combined with the creation of village conservation groups who go on patrols with the park rangers and thus localise law enforcement – was intended to lead to a reduction in illegal tree felling and poaching. In particular, the creation of (local) public relations work, e.g., by the NGO Education for Nature Vietnam or the survey on the consumption of game, seemed to be effective according to the project participants and helped to put public pressure on the park's management team. The joint patrols, which consist of park rangers and members of the community, are still in existence and use the SMART software for documentation purposes. A total of 21 of the village conservation groups still exist today. In this context, a number of the interviewees also explained that the idea of joint patrols – who contribute to the park's protection whilst also enabling the park authorities and community members to keep one another in check – has been very well received in the project region as time has passed. However, these groups rely on other donors for financing.

Important factors that benefited or even facilitated the project's success in the first place were outside of the project's sphere of influence. The increasing importance of protecting biodiversity within central government, for example, led to the plans to build a cable car being withdrawn. Furthermore, political decisions that went against the preservation of biodiversity and consequently the project's goals led to the decision to reduce funding and stop prolonging the project. Consequently, this resulted in a lower level of target achievement.



However, possibly the biggest factor involved was the change in personnel. Much of the progress was not made until after a change in the partner's institutional setup, a change in those responsible for the project on the partner side, and a change in senior leadership at the park authorities. It is difficult to assess what impact the project could have made without these changes and what improvements to the park's management would have occurred without the project and merely with a change in the park director.

On the whole, the failure to implement area of intervention C and the current risks to the sustainability of the forest's restoration and management have meant that the project did not meet large sections of its goals. The significant improvements to the park's management and the field of law enforcement – which are key to the park's protection – mean that the project has been successful to a limited extent, though it is still below expectations.

### Effectiveness rating: 3

#### Efficiency

The project's efficiency was affected by both internal and external factors. These factors influenced both the project's implementation efficiency in terms of time, the coordination and management costs, and also the production and allocation efficiency on an indirect basis.

The cooperation and capacity of the Vietnamese partner were key factors in the efficient implementation of the various measures. At the start of the project in particular and during the initial years of implementation, this cooperation was extremely slow, leading to a loss in implementation efficiency. The provincial government and responsible project-implementing unit only appeared to bear responsibility for and show commitment to certain parts of the project. Their lack of experience in international development cooperation led to difficulties during the requisite tendering procedures and other processes. Little effort was put into dealing with central and disbursement-relevant implementation agreements, which – after prompting – were only fulfilled to the extent required to achieve readiness for disbursement. Due to the losses in implementation efficiency, these agreements were not fulfilled until 15 months after the financing agreement was signed.

Furthermore, the participation of other NGOs in the project, such as Cologne Zoo, Frankfurter Zoologische Gesellschaft, and Flora and Fauna International (FFI), was initially hindered more than it was supported despite multiple commitments and agreements. As a result, negotiations regarding these NGOs' participation lasted almost three years. This led to some of the NGOs losing interest, withdrawing capacity or focusing more on other projects and issues.

Due to its lack of experience in the field of project management, the provincial government was initially out of its depth due to the unfamiliar magnitude, national level of importance, unusual degree of complexity and new procedures that it had yet to become familiar with. The institutional setup exacerbated this problem. In Vietnam, the Ministry of Agriculture and Rural Development (MARD) is normally responsible for managing national parks. Since Phong Nha-Ke Bang National Park is located exclusively within one province, the MARD commissioned the province's government (PPC-QB) to manage the park. So, the project-executing agency was PPC-QB. The project was implemented by the Provincial Project Management Unit (PPMU), which was initially under the Department for Planning and Investment but then reported directly to the PPC-QB. This setup meant that KfW employees did not have any contact with the park for a long time but instead were forced to always communicate via the PPMU, who had little experience with international FC. This was reflected in particular by flawed and delayed tendering and slow decision-making processes.

Slow decisions by the provincial government during the first years of implementation led to the necessity of implementation agreements and a closely monitored milestone approach. This approach was designed to expedite the measures' implementation, though it also required the entire project structure to be revised. This restructuring and the slow progress resulted in significant additional costs for project management and relatively high consultancy costs externally. For instance, the costs for accompanying technical support rose by EUR 816,886 to EUR 2.53 million, which corresponded to 34% of the project's total costs.

Problems with implementing the monitoring system reduced the project's efficiency even further. Since many of the indicators could not be measured and due to a lack of output monitoring, there was no

steering-relevant data available regarding the success of various measures during the course of the project, which could have helped to improve production and allocation efficiency.

In general, efficiency is significantly below expectations and – despite later progress in the project – the negative results dominate, particularly those caused by the long delays, cost increases and lack of monitoring.

**Efficiency rating: 4**

## Impact

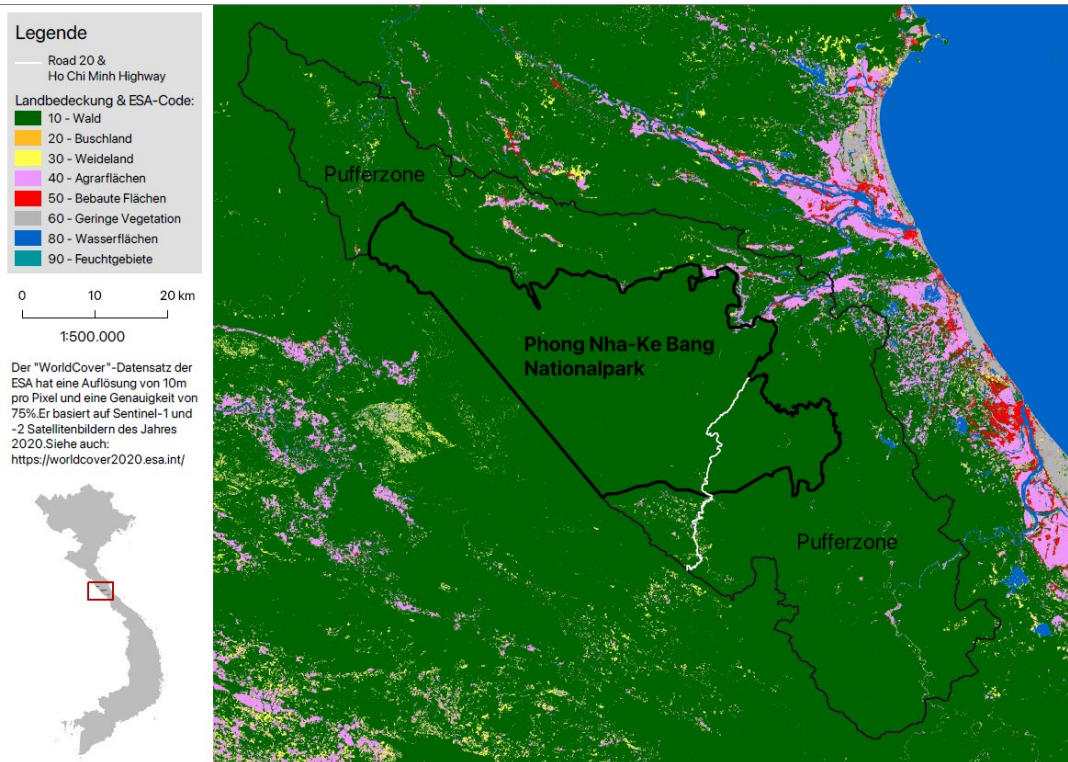
Two indicators were defined to measure the achievement of the overarching developmental impacts, the ultimate objective, the protection of biodiversity in the expanded national park.

| Indicator                                                                                    | Target level                                    | Status at final inspection (2016)                                                                                                                                                                                                                                                                                                                                    | Status EPE                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a) Stable tree population in the national park after 6 years                                 | No deterioration caused by man-made influences. | Findings from a study conducted in 2013 suggest that deforestation within the park's boundaries is quite low. At the time the project was completed, the results of a nationwide comparative study were not yet available.                                                                                                                                           | The loss of the tree population has risen but is still at a low level.                                                                                                                                                          |
| b) Stabilisation of the populations of selected keystone species from the sixth project year | No deterioration caused by man-made influences. | A species monitoring plan was prepared by the project. However, the NP's management team regarded the monitoring of primates as a greater priority and instead conducted three studies on this subject at six-month intervals in 2015 and 2016. As a result, no statement can be made regarding changes in the populations of the original keystone species planned. | Since no species monitoring was implemented, no reliable statements can be made regarding keystone species. However, on the whole, animal populations in the national park continue to be under threat from human intervention. |

Remark on a): In 2013, the tree population was recorded in a baseline study using satellite images from the year 2010. No new data was recorded by the end of the project, meaning that no statement regarding the project's success could be made on the basis of project data.

However, the analysis of up-to-date satellite data provides a good overview of the current status quo of the park and the buffer zone (see figure 2). Based on this data, it can be ascertained that 99.66% of the park is covered by forest, 0.13% by grass land, and 0.13% by farmland. The remaining 0.08% of the national park consists of bush, low vegetation, water bodies, wetlands and buildings. Apart from the roughly 155 hectares of arable land – which is a clear indication that parts of the national park are used for agriculture – it can still be said that the park's status quo as a conservation area is generally ok.

Figure 1: Coverage map of Phong Nha-Ke Bang National Park and its buffer zone



Own data. Data sources: ESA's Worldcover data record<sup>3</sup>

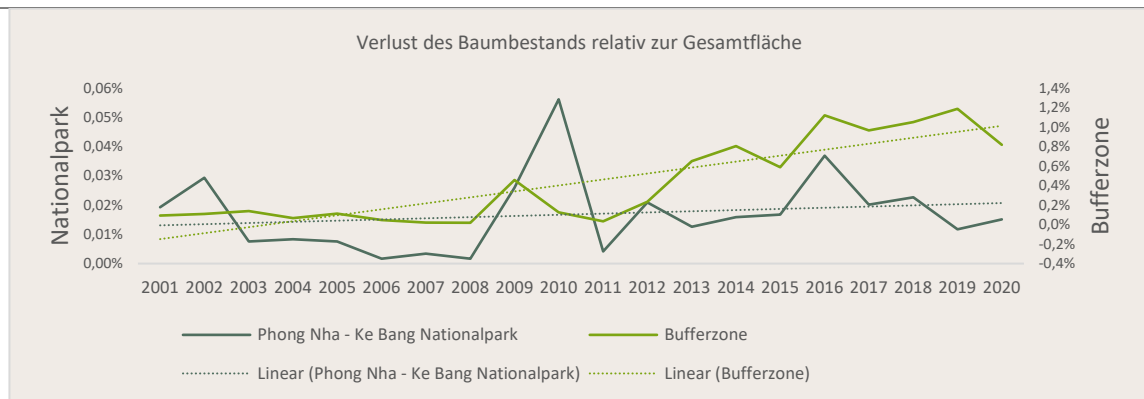
However, an analysis of the loss of the tree population in the Pho Nha-Ke Bang National Park area over the last 10 and 20 years reveals a slight rise in forest loss (see figure 4). Nevertheless, this rise is significantly lower than the loss of the tree population in the buffer zone. And these losses are not necessarily caused by humans in all areas.

However, the Global Forest Watch data and up-to-date satellite images clearly show that the area of the park in which human settlements are visible has suffered the biggest loss of tree population. For instance, satellite images of the southern side of the park, close to the border with Laos, show a settlement along Road 20 and a clear loss in tree population is visible in close proximity to this settlement. A similar picture is visible on the south-eastern side of the park.

It is not possible to clearly ascertain the extent to which the loss of the tree population would have been greater without the project's intervention. However, it is highly likely that this would have been the case. Heavier levels of deforestation and land usage (figure 4) within the buffer zone is an indication of the high amount of pressure on the area surrounding the park. This opinion was expressed by various interviewees, which highlights the project's impact with regard to the general protection of the park.

<sup>3</sup> The ESA's "WorldCover" data record has a resolution of 10 m \*per pixel and an accuracy rate of 75%. It is based on Sentinel 1 and 2 satellite images from 2020. see also: <https://worldcover2020.esa.int/>

Figure 2: Loss of the tree population



Own data. Data sources: Global Forest Watch.<sup>45</sup>

Remark on b): Originally the populations of selected keystone species were due to be reviewed over the course of the project and the goal was for these populations to have stabilised after six years. The requisite species monitoring plan was not created until 2013 and was never implemented by the park management team as the monitoring of primates was prioritised. Based on the project data, no statements can be made regarding target achievement.

However, further data sources are available beyond the project indicators and data. An analysis by Global Forest Watch based on data recorded by the United Nations Environment World Conservation Monitoring Centre shows that biodiversity in the park continues to be broadly intact. However, human influence is clearly visible in the buffer zone, which also impacts on biodiversity on the outskirts of the national park. In its 2020 report, the International Union for Conservation of Nature comes to the conclusion that biodiversity in the national park remains at a high level but has still deteriorated. The high level of biodiversity can be attributed in particular to the remote and hard-to-access location of many parts of the national park, which is also confirmed by the satellite images mentioned above.

Despite an implementation agreement to the contrary, Road 20 was extended, and the road surface was improved in 2012. According to a UNEP WCMC report, these road works involved detonations, deforestation, erosion and changes to neighbouring rivers (IUCN). As a result of the building works, the population of Asian elephants was driven out of the area, potentially for good. The absence of their feeding activities and excretion may have further, as yet unknown effects on biodiversity. Furthermore, there have been fewer sightings of a number of larger mammals over the last few years (IUCN, 2015; UNESCO, 2017), which can be attributed to factors including poaching, negative changes to the habitat, tourism and other interventions. State authorities report on six species of important large mammals (tiger, Asian black bear, dhole, daur, giant muntjac and saola) in small to very small populations (IUCN).

Project participants interviewed reported a significant reduction in pressure on the forest, even though potential income had yet to be fully exploited by the end of the project. Farmers also spoke of the positive effects of forestation at higher altitudes on the rice yields in lower-level fields. Illegal activities continue to present a risk to the diversity of flora, even though the threat has been reduced thanks to better controls. As already mentioned in the final inspection, a greater threat is presented by the invasive bindweed, *Merremia boissiana*, which has already caused major damage in other national parks. However, there is no precise data available regarding the current status of the bindweed population.

The data suggests a stable tree population, consistently high biodiversity and a general reduction in pressure on the national park. Thanks to improved park administration, law enforcement, forest rehabilitation

<sup>4</sup> The "loss of the tree population" can have both natural and anthropological causes, so, in certain circumstances, it does not qualify as targeted "deforestation" by humans.

<sup>5</sup> From 2011 onwards, data was prepared according to an updated methodology, which may capture additional losses. Caution should be exercised when comparing the original data for the years 2001–2010 and data from the following years.

and management, the project has plausibly made a contribution to this. The threat to populations of certain species of animals and the influence of the bindweed merremia boisiana should be regarded with concern. The overarching developmental impacts are therefore deemed good. However, reference is made here to the lack of any systematic recording of key parameters, which meant that this evaluation was forced to seek out alternative data sources.

### Overarching developmental impact rating: 2

#### Sustainability

Generally speaking, the project's measures are only partially sustainable. The planting of native trees with long turnover times can adversely affect sustainability since the focus for the target population is often on the direct benefits. Furthermore, the designation of community forests as natural production forests to facilitate a sustainable source of income through the sale of natural resources – such as the popular high-yielding plants of bamboo or rattan – is also not necessarily sustainable as they can be revised at any time. This was made clear in expert interviews and from visits to neighbouring villages in the project region.

The village conservation groups led to people becoming more aware of the importance of protecting forest resources. Nowadays, the use of joint patrols is well-known outside of the project area in Vietnam and some other national parks have copied the concept.

Nevertheless, these groups remain reliant on external financial and technical support and on support from interest groups, which means that the sustainability of the project and its impacts have not been ensured. While the groups were being compensated using the savings book approach for joint patrols, the patrols' deployment was documented and checked with the help of SMART software. This is no longer the case since the funds were depleted (as planned). The project had no strategy for the time after the funds had run out. To ensure that the groups are sustainable, the village-conservation-group approach is due to receive further financing under a USAID biodiversity project run by the WWF.

Another of the project's goals was to improve park management and the national park's administration by standardising and optimising workflows. The park administrative authorities' capacity and management are being improved by training courses. The extent to which sustainable knowledge management is being ensured remains unclear. A current risk to operations lies in the reduced income caused by lower visitor numbers during the COVID-19 pandemic.

The building works on Road 20 already posed a risk to sustainability during the course of the project. After confirmation by the PPC that they did not wish to connect the road to the Lao road network, the project was still implemented despite the building works. At the time of the final inspection, the road was connected to the Ca Rong border crossing, which facilitated at least rudimentary movement of goods. A more extensive connection to the Lao road network was under discussion at the end of the project. An analysis of the exact impacts of the road work has yet to be carried out. According to a report by the Vietnamese government, the road improved access for the local population. UNECP-WCMC data and satellite images confirm this appraisal (see impact). This situation and the inability to prevent this during the project call many of the successes into question.

Furthermore, improvements to prosecutions were introduced in conjunction with increased coordination between forest rangers, the police and border authorities, as well as education and awareness-raising programmes for the local population. The park authority is currently developing a plan for controlling and tracing forest products on Road 20 and the major branch of the Ho-Chi-Minh highway to the Barie ranger stations in the park in an effort to combat poaching and illegal activities in the national park area.

The project's sustainability is at risk but is generally regarded as just about satisfactory.

### Sustainability rating: 3

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

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

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

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

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