Ex post evaluation – Brazil

Sector: Biodiversity (CRS code: 4103000)
Project: Ecological corridors (Federal Ministry for Economic Cooperation and Development No. 2001 65 092)*
Implementing agency: Brazilian Ministry of the Environment (Ministério do Meio Ambiente, MMA)

Ex post evaluation report: 2017

		Planned	Actual
Investment costs (total)	EUR million	24.60	16.74
Counterpart contribution	EUR million	8.24	1.70
Funding	EUR million	16.36	15.04
of which BMZ budget funds	EUR million	16.36	15.04

*) Random sample 2017

Summary: The project conitrbuted EUR 15.0 million to the establishment of two “macro-ecological corridors”, i.e. the large-scale and systematic connection of protected public and private areas in the Amazon Basin and in the Atlantic rainforest as part of the Projeto Corredores Ecológicos (PCE). The executing agency was the Brazilian Ministry of the Environment (MMA) in partnership with the federal states of Amazonas, Bahia, and Espírito Santo. The focus of the initial phase (2002-2006), funded by the Rain Forest Trust Fund (RFT) of the World Bank, the United Nations Development Program (UNDP), German Technical Cooperation (TC) and the Brazilian federal and state governments, was to create the institutional prerequisites for setting up the corridors. The second, FC-funded phase (2007-2014) consisted of activities (1) to protect and monitor the tropical forest, (2) to set up and consolidate protected areas, (3) to develop and implement innovative concepts for preserving biodiversity and reducing the pressure on natural resources and (4) to support the set-up of the national, electronic environmental land register. The outputs included the establishment of monitoring systems, monitoring posts and radio communications systems, the carrying out of inspection patrols, the updating and production of protected area management and administration plans, and the establishment of public and private protected spaces.

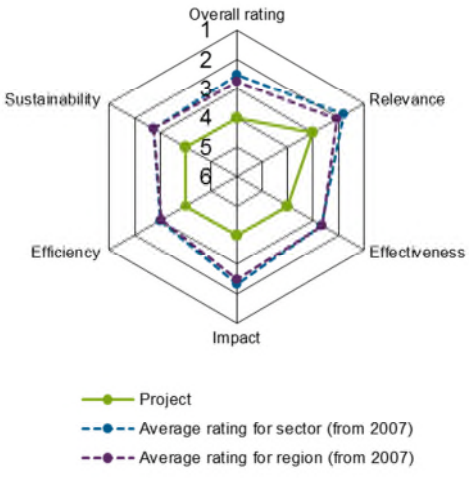
Objectives: Development objective: protection of the diversity of species and habitats in the ecological corridors in the Amazon Basin and the Atlantic coastal forest, and demonstration of the sustainability of the concept of ecological corridors (impact). Project objective: establishment of the ecological corridors (and, implicitly, their effective protection) (outcome).

Target group: The local population living off the natural resources in the supported ecological corridors, and public and private institutions that are responsible for conservation, regional planning and the land-use planning. A global benefit stems from CO_2 mitigation.

Overall rating: 4

Rationale: Numerous individual measures were implemented on a total surface area of 73.8 million ha, but permanent corridors – in legal, institutional, land-planning or landscape-design terms – were not created. Only 61% of the planned outputs were achieved in the macro-corridor in the Amazon Basin, and the figure stood at 55% in the macro-corridor in the Atlantic rainforest. Almost none of the set objectives on the outcome and impact levels were achieved. The implementation structure was centralised and cumbersome.

Highlights: Thanks to the designation of private protected areas around public protected areas, it was possible to achieve successes in the creation of connecting routes in relatively small expanses, so called “mini-corridors”, in the Atlantic rainforest.



Rating according to DAC criteria

Overall rating: 4

Ratings:

Relevance	3
Effectiveness	4
Efficiency	4
Impact	4
Sustainability	4

General conditions and classification of the project

In order to fulfil their own demands for living space, many species are dependent on networked biotope complexes that are interlinked across the landscape. However, the pressure on the use of natural resources (settlement, road construction, intensification of agriculture and forestry, etc.) means that the living spaces of many species are pushed back into small, scattered residual areas. These “biotope islands” are exposed to negative influences from the environment, are too small for many species and cannot fulfil complex demands for living space. The fragmentation of living spaces is therefore one of the most significant causes of the loss of biological diversity.[1]

The evaluated project was part of the pilot programme for the protection of the Brazilian tropical forests (PPG7), which had the objective of counteracting the erosion and conversion of the Brazilian tropical forest and had been prepared by the Brazilian government together with the World Bank from 1996 to 2002. In an initial phase from 2002 to 2006, the primary focus was on implementing technical assistance measures to create the general institutional basis. In the second phase considered here (2007 to 2014), which was funded by Financial Cooperation and the Brazilian federal and state governments, various activities were carried out in the two macro-corridors. Within the area of the central corridor of the federal state of Amazonas (Corredor Central da Amazônia, CCA) covering over 523,000 km^2, there are 55 protected areas and 65 indigenous areas, including the Amazônia Central biosphere reserve and four regions designated as World Heritage sites (Jaú National Park, Anavilhanas National Park, the Mamirauá Sustainable Development Reserve (SDR) and Amanã SDR). In the central corridor of the federal states of Bahia and Espírito Santo in the Atlantic rainforest (Corredor Central da Mata Atlântica, CCMA) with a total surface area of 213,000 km^2 (133,000 km^2 terrestrial and 80,000 km^2 maritime surface area) and 128 protected areas, the strategic focus was placed on the restoration of connecting routes for flora and fauna in the remaining partial habitats.

Relevance

With a forest surface area of 5.2 million km^2, Brazil is the country with the second largest tree cover in the world (including 41% primary forest).[2] The Amazon rainforest in Brazil accounts for approx. 61% of the Brazilian tree cover, with a surface area of 3.3 million km^2.[3] The Brazilian Atlantic rainforest (Mata Atlântica) currently (2017) still has a surface area of almost 100,000 km^2 and, thanks to its various altitudes and latitudes, it features an even greater wealth of species than the Amazon Basin. Both of these biomes have already lost large parts of their original surface area: the Brazilian Amazon rainforest has lost almost 20% of its area since the first measurements before 1970, and the Brazilian Atlantic rainforest over 90%.[4] Both of the biomes play a primary role in Brazilian biodiversity and climate protection efforts.

---

[1] For more detailed information about biotope networks, see Script 346/2013 by the German Federal Agency for Nature Conservation (Bundesamt für Naturschutz – BfN) (https://www.bfn.de/fileadmin/MDB/documents/service/Skript_346.pdf)

[2] http://www.globalforestwatch.org/countries/overview, http://www.globalforestwatch.org/country/BRA

[3] http://rainforests.mongabay.com/amazon/deforestation_calculations.html

[4] https://news.mongabay.com/2017/06/deforestation-in-the-brazilian-atlantic-forest-increased-almost-60-percent-in-the-last-year/

Since the 1970s, scientists have called more strongly for the development of biotope networks, in order to ensure the long-term protection of species; in the more recent past, these calls have also been linked more closely with the aspect of a climate change-related adaptation of propagation areas. The large number of laws and conventions on the topic of biotope networks[5] makes it clear that the need for biotope network measures for preventing the loss of species has been acknowledged worldwide. Complex mosaics of protected areas and corridors between protected areas have been taken into account in Brazilian law and in the corresponding decrees about the protected area system.[6] The activities of this project essentially matched Brazil's objectives and policies in terms of forest and species conservation, especially regarding the implementation of the law and the decrees on the national protected area system (SNUC) and the national forestry law. When the project measures were put into practice after years of preparation, however, the environmental policy interests in Brazil had shifted from macro-corridors to smaller mosaics and corridors, and from 2010 onwards the political support was lacking even for these measures. The current Brazilian National Biodiversity Strategy and Action Plan does not include any specific objectives regarding the creation of new ecological corridors in Brazil. In June 2017, the Brazilian Ministry of the Environment surprisingly launched a new programme[7] with the aim of promoting political approaches to favour connections between the protected areas and the areas located in between them.

The preservation and protection of biotope networks consisting of public protected areas and private areas, taking into account overarching protection and management mechanisms, were advisable in the two corridors CCA and CCMA from the point of view of landscape care and species conservation. The areas were representative for the two biomes. The logical framework was fundamentally sound. The PCE had the potential to contribute to the achievement of the Aichi Biodiversity Targets defined by the Parties to the Biodiversity Convention in 2011 and the Sustainable Development Goals (SDGs) which came into force in 2016. The CCA spanned interlinked forest areas and was intended to have forestalled the “arrival” of the agricultural frontier. Meanwhile, the project concept in the CCMA involved the restoration of connecting routes for flora and fauna in the remaining partial habitats of the deeply fragmented rainforest.[8] Essentially, the concept and the planned activities were suitable to enable the protection of the project areas while taking into account the interests of the neighbouring population and for creating connecting corridors for fauna and flora in adjacent public and private protected spaces. However, the creation of the macro-corridors, which were described by several discussion partners as “outsized”, was extremely ambitious.

As early as the previous phase, the implementation structure had proved to be centralised, cumbersome and remote from the project implementation.[9] However, any outsourcing of the financial and administrative process to a government-independent institution (as with the FUNBIO biodiversity foundation in the ARPA programme[10]) was not supported by the Brazilian side.

Relevance rating: 3

---

[5] Ramsar Convention of 1971, the Berne Convention of 1979, the Bonn Convention of 1983, the European Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora of 1992, the United Nations Convention on Biological Diversity (CBD) which came into force in 1993, the resolution on the global establishment of biotope network systems at COP7 in 2004, and anchoring in the German Federal Act for the Protection of Nature (Bundesnaturschutzgesetz) since 2002. For more detailed information about biotope networks, see Script 346/2013 by the German Federal Agency for Nature Conservation (Bundesamt für Naturschutz – BfN) (https://www.bfn.de/fileadmin/MDB/documents/service/Skript_346.pdf).

[6] Sistema Nacional de Unidades Conservação (SNUC); law on the national protected area system of 2000

[7] “Programa Conectividade de Paisagens”

[8] Focus of the measures in the CCA: (1) monitoring and fighting of forest fires, (2) management of protected areas and (3) preservation of biodiversity and reduction of the pressure on natural resources in the areas located between the protected areas. Focus of the measures in the CCMA: (1) monitoring, (2) set-up and management of protected areas and (3) preservation of biodiversity and reduction of the pressure on natural resources in the areas located between the protected areas. Protection of biodiversity in indigenous areas was carried out in parallel to these project measures through other projects under German development cooperation.

[9] Federal organisations (e.g. Ibama) and the participating federal states were incorporated in the implementation by the Ministry of the Environment by means of cooperation agreements and, in some cases, the allocation of funds; any procurements were mainly carried out by the Ministry of the Environment.

[10] Amazon Region Protected Areas Project

Effectiveness

The project objective was to set up the ecological corridors in the Amazon Basin and in the Atlantic rainforest (and, implicitly, their effective protection). The target achievement is assessed using the following indicators.

Indicator	Target value	Actual value as of EPE
(1) Two corridors that consist of significant areas of the Amazon Basin and the Atlantic rainforest have been set up.	40 million ha	Not achieved. Individual measures were implemented during the term of the project in a region covering a total surface area of 73.8 million ha, but no permanent corridors – in legal, institutional, land-planning or landscape-design terms – were created.
(2) The management plans in the supported protected areas are updated and implemented regularly.	--	Partially achieved. Protected areas in the CCA and CCMA with (a) management plan (b) management plan that has been developed or updated since 2007: CCA: (a) 94% (b) 53% CCMA: (a) 63 % (b) 29%
(3) Development of the average vegetation density in the supported protected areas in the CCA in the period 2006-2016.	Above the vegetation density in other protected areas in the CCA.	Not achieved. No significant difference, NDVI (normalised difference vegetation index) in the years 2006 and 2016 in all areas was 0.82-0.83.
(4) Development of the average vegetation density in the supported protected areas in the CCMA in the period 2006-2016.	Above the vegetation density in other protected areas in the CCMA.	Not achieved. Reduction of the NDVI in project areas by 4.5%, and in other protected areas by 2.5%.

In the two phases of the PCE, selective measures were implemented in 2002-2014 within the boundaries of the CCA and the CCMA defined for the project (in nearly 20 areas in the 52.3 million ha of the CCA and over 50 areas in the 21.3 million ha of the CCMA). It was possible to work more intensively in smaller sections of these huge areas: various “mini-corridors” were created within the CCMA.

The corridors were not legally or institutionally consolidated (Indicator 1).[11] The boundaries of the corridors that were defined for the project were not taken into account in the federal state regional planning (economic and ecological zoning) either. In addition, sustainable protection mechanisms in the CCA or consistent connecting routes within the area of the CCMA, which was described by several discussion partners as considerably outsized, were also scarcely established. A positive point to note is that additional public and private protected areas were created in the CCMA, although these areas are limited to just 2% of the surface area of the CCMA.

Since 2007, 20 management plans have been created or updated in the two corridors, including nine within this project. According to the available information, almost one in every two of the protected areas in the CCA, where project activities were implemented, possess a management plan that has been created or updated in the last ten years. In the CCMA, this applies to one in every three protected areas (Indicator 2). It may be assumed that most of the protected areas for which no information was available also do not possess any (up-to-date) management plan, so the actual achievement rate is probably lower.

[11] According to numerous actors involved (including MMA, World Bank, GIZ), this was also not to be expected.

Between 2006 and 2016, the vegetation density in the supported protected areas in the CCA changed only minimally (Indicator 3); there is no significant difference evident between the protected areas supported in the project (project areas) and other areas.[12] However, the threat was also relatively low, meaning that no significant effects were to be expected on the forest cover or the vegetation density. In the CCMA (Indicator 4), the vegetation density in the project areas fell more greatly than in protected areas which were not supported in the PCE.

In the technical final review, a sample of implemented project measures in the CCA and CCMA were visited at the end of 2015, from which two investment components in the CCA demonstrated severe operating problems.[13] In one building of the federal Institute for the Conservation of Biodiversity (ICMBio[14]) that had been expanded with project funds, only 50% of the surface area were being used. Prior to the EPE, there was also a visit to the Pau Brasil-Monte Pascoal Corridor in the federal state of Bahia in the CCMA, which extends over a surface area of 60 × 50 km. The Pau Brasil, Descobrimento and Monte Pascoal National Parks that were visited were supported in the PCE.[15] Following this visit, the Pau Brasil National Park was highlighted as an outstanding example of a well-managed protected area, with outstanding management, appropriate infrastructure and machinery, and extensive signage. The Monte Pascoal National Park, on the other hand, was characterised by serious conflicts with the indigenous population related to the use of resources in the overlapping indigenous area, Barra Velha; there were similar conflicts in the Descobrimento National Park.

Although positive effects of the project are perceptible, the degree of target achievement on the outcome level is below expectations for the project, and this can no longer be described as satisfactory.

Effectiveness rating: 4

Efficiency

Half of the project funds were deployed for measures in the macro-corridors (EUR 5.39 million for the CCA and EUR 3.40 million for the CCMA). This was not sufficient to carry out comprehensive measures on the 52 million ha of the CCA and the 21 million ha of the CCMA. According to the statements of the actors involved, the institutional implementation structure was far from what was needed and bureaucratic. The outflow of funds in the context of the cooperation agreements (so-called “convênios”) and the fund allocations of the Ministry of the Environment to implementing organisations were subject to statutory provisions (e.g. restrictions in cooperation agreements and subcontracting in the event of (temporary) payment arrears or in pre-election periods), changes in personnel and external factors (e.g. elections). The implementation of the numerous and, in some cases, extremely intricate measures proceeded accordingly slowly, although 32% of the funds were deployed for strategic coordination, project administration and technical support and although the initial phase of the project in 2002-2007 had concentrated on creating the institutional prerequisites for setting up the macro-corridors and on implementing protective measures. After numerous extensions to the term of the project, EUR 2.32 million – nearly one fifth of the funds that were provided at the start of the project for measures in the two corridors – was reassigned to support the national electronic system for registering rural properties and businesses (SiCAR). According to the final report by the consultant, 61% of the planned output was achieved in the CCA, and 55% in the CCMA. The production efficiency was therefore unsatisfactory.

Nevertheless, the allocation efficiency, especially within the implemented measures in the macro-corridors, can be described as satisfactory. A viable alternative would have been to concentrate more on the smaller areas and to ensure a formal establishment and institutionalisation of the supported landscape mosaics and the set-up of funding mechanisms to preserve them.

Efficiency rating: 4

---

[12] Reduction of 0.38% in supported project areas, 0.19% in other project areas and 0.36% in the CCA.

[13] An installed short-wave radio communications system was not used, and repair work on a monitoring ship was defective, so the operating permit was not awarded.

[14] Centro de Pesquisas e Conservação da Amazonin (CEPAM).

[15] Pau Brasil National Park (surface area of 19,027 ha, created in 1999): machinery, management plan, extension of the surface area by 7,400 ha; Descobrimento National Park (surface area of 22,693 ha, created in 1999): machinery, management plan, Monte Pascoal National Park (surface area of 22,383 ha, created in 1961): Protected Area Advisory Board.

Impact

According to the objectives of the PPG7, the objective on the Impact level was to make a contribution to protecting the diversity of species and habitats in the ecological corridors in the Amazon Basin and the Atlantic rainforest, and to provide evidence of the sustainability of the concept of ecological corridors.

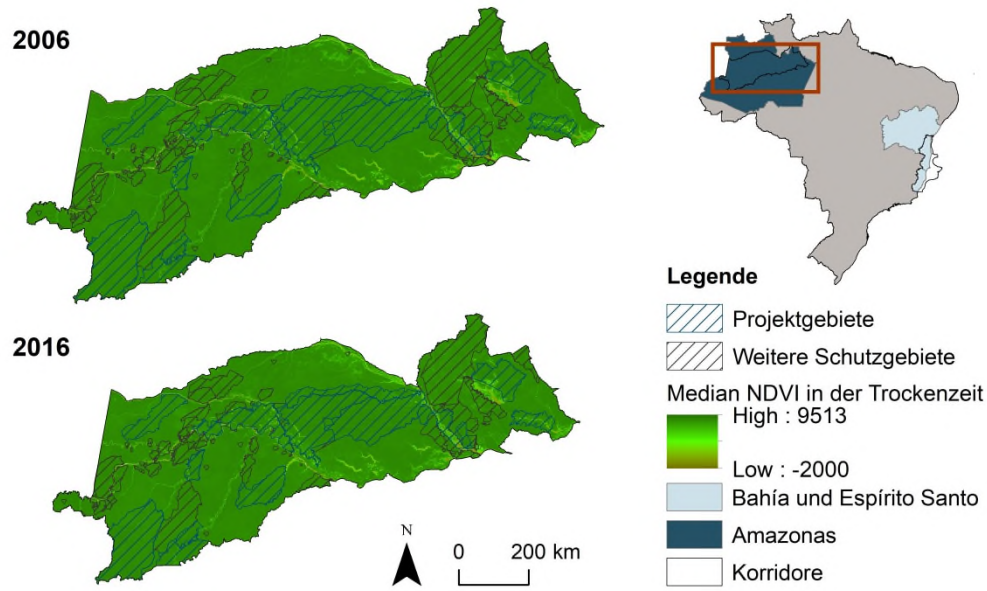
The achievement of the overarching targets of the project is assessed using the following indicators.

Indicator	EPE
(1) Approach of ecological corridors is continued and replicated.	Conditionally achieved.
(2) The vegetation density in the central corridor of the federal state of Amazonas (CCA) has developed positively between 2006 and 2016.	Not achieved. No change (NDVI: 0.82)
(3) The vegetation density in the central corridor in the Atlantic rainforest (CCMA) developed positively between 2006 and 2016.	Not achieved. Reduction of 7% (2006: 0.65, 2016: 0.61).
(4) Income effects relating to the project[16]	No effect can be detected

The actors involved could not confirm that the PCE demonstrated the concept of ecological corridors' viability. On the contrary, the project was described as a pilot experience with only modest learning success. Although there are now also ecological corridors in other regions of the country (e.g. the Corredor da Biodiversidade do Amapá), these corridors too do not have any binding legal, institutional or financial implications for regional planning and landscape care. The vegetation density did not develop positively between 2006 and 2016, and indeed it declined in the CCMA. It is assumed that the vegetation density developed positively in individual mini-corridors.

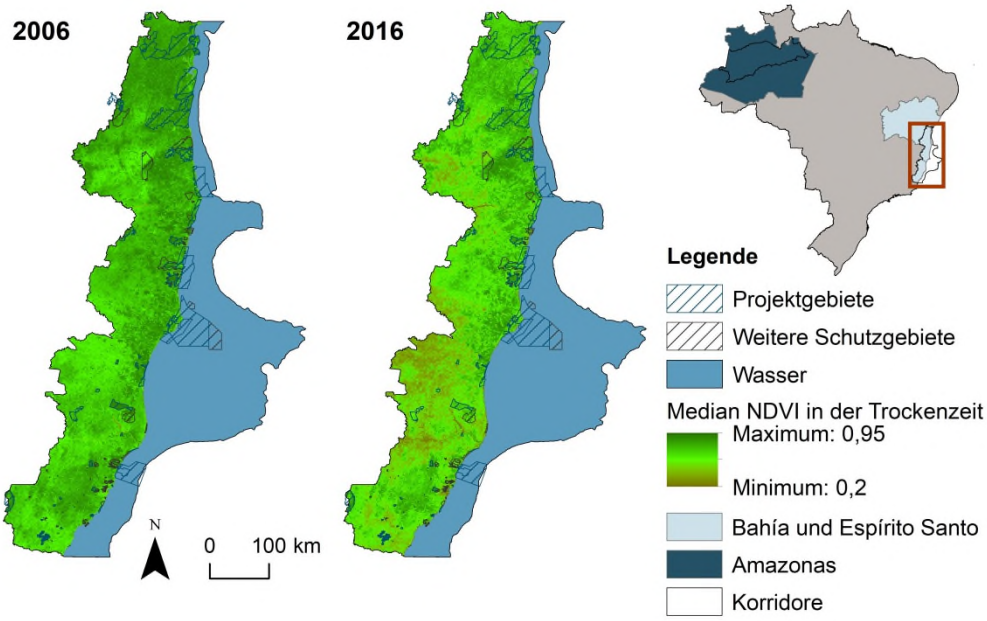
[16] Projects relating to nature conservation are characterised by a potential clash of objectives between the protection of resources and alleviation of poverty. Regardless of the project objectives, this indicator is therefore used for information purposes in FC.

Development of the vegetation density in the CCA



Internal analysis and preparation. Data sources: Corridors. Ministerió do Meio Ambiente (2017) [Online]. Dados geográficos. Available at http://mapas.mma.gov.br/i3geo/datadownload.htm. Project and protected areas. UNEP-WCMC and IUCN (2017), Protected Planet: The World Database on Protected Areas (WDPA) [Online], 06/2017, Cambridge, UK: UNEP-WCMC and IUCN. Available at www.protectedplanet.net and WWF Brazil (2017). PAs Observatory [Online]. Available at http://observatorio.wwf.org.br/mapa/ NDVI. K. Didan. (2015). MOD13Q1 MODIS/Terra Vegetation Indices 16-Day L3 Global 250m SIN Grid V006. NASA EOSDIS Land Processes DAAC. https://doi.org/10.5067/modis/mod13q1.006

Development of the vegetation density in the CCMA



Internal analysis and preparation. Data sources: Corridors. Ministerió do Meio Ambiente (2017) [Online]. Dados geográficos. Available at http://mapas.mma.gov.br/i3geo/datadownload.htm. Project and protected areas. UNEP-WCMC and IUCN (2017), Protected Planet: The World Database on Protected Areas (WDPA) [Online], 06/2017, Cambridge, UK: UNEP-WCMC and IUCN. Available at www.protectedplanet.net and WWF Brazil (2017). PAs Observatory [Online]. Available at http://observatorio.wwf.org.br/mapa/ NDVI. K. Didan. (2015). MOD13Q1 MODIS/Terra Vegetation Indices 16-Day L3 Global 250m SIN Grid V006. NASA EOSDIS Land Processes DAAC. https://doi.org/10.5067/modis/mod13q1.006

The deforestation rates in the Brazilian Amazon rainforest developed positively between 2007 and 2016 with an average of 7,511 km^2 per year, compared to the high rates of 18,525 km^2 on average up to 2006. However, they reached the highest level since 2008 again in 2016, at 7,989 km^2.[17] In percentage terms, the deforestation in the Brazilian Amazon rainforest increased most dramatically in the federal state of Amazonas (54%), followed by Acre (47%) and Pará (41%). In the Brazilian Atlantic rainforest, the average annual deforestation rates were 829 km^2 between 1985 and 2005, and between 2006 and 2016 they were only 176 km^2, but these then rose again in 2016 by 58% to 291 km^2[18]. In absolute figures, the deforestation increased most dramatically in the federal state of Bahia (123 km^2, an increase of 207%)[19]. In the second federal state in the CCMA, Espírito Santo, 3 km^2 of Atlantic rainforest was deforested in 2016, an increase of 116% compared to the previous year.[20] Nowadays, only 8.5% of the original surface area of the Mata Atlântica is still well-preserved forest on adjacent areas covering more than 10 km^2.[21] The deforestation is minimal in the majority of the Pau Brasil-Monte Pascoal corridor which was visited, but it is substantial in the Monte Pascoal National Park. The area overlaps with the indigenous area of Barra Velha, and the Pataxó living there use the wood for artistic crafts. The Descobrimento National Park is also threatened, and conflicts with the indigenous population are looming. The concerns of the indigenous peoples in terms of the management of their land were not taken into account when setting up the protected areas. Two communities in the north of the CCMA, Belmonte and Santa Cruz Cabrália, were responsible for 42% of the deforestation in the federal state of Bahia in the past year. 30% of the deforestation in the entire Mata Atlântica was carried out in the south of Bahia, an area that also forms part of the CCMA.[22]

Successes due to and regardless of the project measures can be seen in the creation of connecting routes in private areas. A major cellulose manufacturer operating in the region manages 91,429 ha of eucalyptus plantations and 114,625 ha of protected areas. Half of these plantations consist of native vegetation that is preserved or planted in the valleys between the eucalyptus trees. An indicator for the success of these measures was the recent sighting of a jaguar – the first in 20 years. Smaller eucalyptus growers have also contributed to the reforestation of degraded areas in the region. In the Pau Brasil National Park, there is currently an invitation to tender for a concession for an outlet for tourist activities, which is highly promising thanks to the proximity to the holiday resort of Porto Seguro. Around the National Park, there are 12 private protected spaces[23] which were created in 2008 and 2009, and create connecting routes through to the Atlantic Ocean.

In the CCA, protected areas were selected in particular where there was a relatively poor population who use the forest for their livelihood. There is no information available about whether local residents or people living in the protected areas are affected negatively by the designation of protected areas in the CCMA, but as a rule there is a balancing of interests. In areas experiencing conflicts, the project explicitly did not intervene (e.g. in the conflict between nature conservation interests and the use of the wood for artistic crafts in the Monte Pascal National Park, which has existed since the founding of the park in 1961).

In the south of Bahia, project funds were used for the construction of a building for the public prosecution service responsible for environmental protection (Ministerio Público). In addition, the public prosecution service's cooperation with other institutions responsible for forest protection and monitoring (e.g. Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Ibama), urban municipalities) was reconfigured. On the basis of findings from the technical final inspection, this contributed to the effective implementation of the updated forestry law. An indirect and positive side-effect was the out-of-court agreement between the public prosecution service and two international cellulose producers concerning

[17] Compared to 2012 with a historically low deforestation rate, this represents an increase of 75% (and compared to 2015, an increase of almost 29%). http://rainforests.mongabay.com/amazon/deforestation_calculations.html

[18] http://www.inpe.br/noticias/noticia.php?Cod_Noticia=4471

[19] Bahia, Minas Gerais and Paraná together caused 80% of the total deforestation in 2016. http://www.inpe.br/noticias/noticia.php?Cod_Noticia=4471

[20] https://www.sosma.org.br/

[21] http://www.mma.gov.br/biomas/mata-atlantica

[22] https://www.sosma.org.br/106279/desmatamento-da-mata-atlantica-cresce-quase-60-em-um-ano/

[23] Reserva Particular do Patrimônio Natural (RPPN)

compensation payments for non-compliance with environmental requirements amounting to a converted total of approx. EUR 12 million, as well as the reforestation of approximately 25,000 ha.[24]

Although positive effects of the project are perceptible, the degree of target achievement on the impact level is below expectations for the project, and this can no longer be described as satisfactory.

Impact rating: 4

Sustainability

A legal instrument was not created to map the status of the ecological corridors, and legal establishment of the corridors has not been achieved. Legal sustainability was achieved in the newly designated 23 protected areas covering 2% of the surface area of the CCMA and in the private protected areas. There are no established mechanisms for funding the corridor approach in a sustainable way. The existing funding mechanisms relate exclusively to the protected areas themselves. Sustainable funding is not necessary in the designated private protected spaces, as they are protected by the owners themselves in the context of managing their own assets. There is no specified institution that is responsible for the further development and management of ecological corridors. However, in parts of the region (e.g. in Espírito Santo), there are institutions such as the National Environment Agency that still feel committed to the corridor idea. The Ministry of the Environment (MMA) hopes to promote political approaches that favour the connectivity of the landscape through the recently launched “Programa Conectividade de Paisagens”.

As a result, deforestation can be assumed to have been sustainably reduced in the individual protected areas created and the mini-corridors supported, especially in private areas. Against the background of the current budget restrictions in Brazil that affect ICMBio and Ibama in particular, appropriate support for the project areas and, in turn, the maintenance of the achieved effects in the short and medium term, is improbable. There is a risk that the available resources will not be adequate for monitoring the pressure on resource use in the existing protected areas. The political pressure of the agricultural lobby has increased considerably and can be seen in laws that drive forward further deforestation and that are tolerated or supported to some extent by the federal government.[25] This development is closely linked to the current instability in the political system in Brazil which could last for an unforeseeable period of time.

The development effectiveness of the project is unsatisfactory up to the time of the ex post evaluation and is very unlikely to improve.

Sustainability rating: 4

[24] The Arboretum Project was set up with these compensation payments, which aims at restoring the biodiversity in the Mata Atlântica. http://programaarboretum.eco.br/

[25] (1) Retrospective legalisation of illegal land acquisitions up to 2011 on public land (surface areas up to 2,500 ha). (2) Reduction of the protection status of protected areas in the Amazon Basin covering 350,000 ha. (3) Proof required at a later date of the presence of indigenous peoples in already established indigenous territories since 1988.

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

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

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

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

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

Sustainability level 1 (very good sustainability): The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

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

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

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

The **overall rating** on the six-point scale is compiled from a weighting of all 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).