

Brazil: Protection of Atlantic Coastal Forests in Minas Gerais

Ex post evaluation report

OECD sector	41030	
BMZ project ID	1998 67 219	
Project executing agency	State Forest Institute (<i>Instituto Estadual de Florestas de Minas Gerais</i> IEF) at the State Secretariat of the Environment and Sustainable Development (SEMAD)	
Consultant	GFA	
Year of ex post evaluation report	2010 (2010 sample)	
	Project appraisal (planned)	Ex post evaluation (actual)
Start of implementation	Q4 1999	Q1 2004
Period of implementation	48 months	48 months
Investment costs	EUR 14.98 million	EUR 15.42 million
Counterpart contribution	EUR 7.31 million	EUR 7.75 million
Financing, of which FC funds	EUR 7.67 million	EUR 7.67 million
Other institutions/donors involved	./.	./.
Performance rating	1	
• Relevance	1	
• Effectiveness	2	
• Efficiency	1	
• Overarching developmental impact	1	
• Sustainability	1	

Brief description, overall objective and project objectives with indicators

This German Financial Cooperation (FC) project in Minas Gerais is one out of six associated bilateral FC projects in Brazil's coastal forest region (*Mata Atlântica*). The Bilaterally Associated Projects are directed at the establishment and management of conservation areas, the regeneration of degraded natural forest zone, mapping, environmental monitoring and institutional strengthening as well as the use of sustainable management forms in the Brazilian Atlantic Coastal Forest, which contains a flora and fauna unique to the world and is recognised as a so-called "*biodiversity hotspot*". The project measures in Minas Gerais included:

- consolidating and strengthening protected areas/ PA (component I);
- establishing monitoring, licensing and control systems (component II);
- preventing or fighting forest fires (component III);

- sustainable development approaches in areas adjacent to the nature reserves (component IV); and
- Institutional strengthening, especially for project coordination (component V) as an interdisciplinary task.

The overall objective was "to help conserve the remaining forest resources and to re-store degraded areas of Atlantic coastal forests in Minas Gerais"; a complete forest cover survey and an annual deforestation rate of less than 5 % were defined as indicators to that respect.. The project objective was to "create the necessary conditions for long-term preservation of the protected areas (PA's) supported by the project" and to "promote initial approaches to sustainable land use in the project region". To measure achievement of this objective, the following indicators were defined:

- surface of degraded natural forest areas under regeneration in the PA's;
- number of new PA advisory councils established (involving local communities);
- improved PA management effectiveness as measured by WWF methodology;
- number of sustainable land campaigns initiated (esp. so-called *Bolsa Verde* Programme); and
- Adoption of an integrated land-use / regional development plan for at least one "multiple-use protected landscape".

Project design / major deviations from the original project planning and their main causes

Beyond the original scope, three additional PA's were taken up by the project; all PA's were provided with the necessary infrastructure and equipment, which is used extensively. The number of PA's covered was thus raised to 14 reserves in total, whereby an additional 1,200 km² were acquired through "land regulation" measures (i.e. purchase). As a result, the importance of the PA's for Minas Gerais' emerging ecotourism industry has increased significantly. Furthermore, capacities to systematically monitor logging activities and charcoal production have substantially improved, as well as those to prevent or fight forest fire; in those fields, modern technologies such as remote sensing systems (e.g. satellite imagery) are now being used. In particular, the project helped strengthen partnerships with institutions of particular relevance to forest and nature conservation – notably local authorities, the environmental police, the scientific community, civil society and the private sector; it also helped launch new initiatives such as land regulation measures, tax credits for sustainable land use and payments for environmental services. By contrast, the integrated land use component with its regional planning approaches proved more complex than expected – due to the multitude and heterogeneity of stakeholders involved.

Key results of the impact analysis and performance rating

The environmental impact of the project has clearly exceeded expectations. The project helped to substantially decrease the deforestation rate in Minas Gerais, supporting climate and forest protection policies both in Brazil as a whole and in Minas Gerais, and enhancing conservation of the *Mata Atlântica* as a biodiversity hotspot. The reforestation and regeneration of degraded areas with native tree species had a positive impact in terms of captured carbon and watershed protection. Approaches designed by the project have been adopted on a far wider scale and continue to prove very effective. Of equal importance is the project's contribution to enhanced involvement of local communities in managing PA's and adjacent areas; to the executing agency's planning techniques as well as its improved interaction with the local population.

On the one hand, more effective environmental monitoring has led to income losses for some small and medium-sized charcoal producers, cattle breeders and farmers in the poorer areas of northern Minas Gerais. On the other, the poorer population segments are likely to benefit directly in the medium term, as the *Bolsa Verde* Programme provides opportunities to generate positive income effects in poor rural communities, whereas conservation of natural resources will safeguard the target groups' economic and ecological livelihood base in the medium and long term. Still, there remains an urgent need to create sustainable alternative livelihoods, particularly for the poorer communities in the north of the country – a challenge beyond this project's scope; the state government is seeking to address this issue by introducing and pursuing well-targeted regional development strategies.

The key issue of natural forest cover loss identified at the time of project appraisal continues to be highly relevant; at least partly due to the project, the intensity of the problem has decreased. The constraint was acknowledged both by the Minas Gerais state government and the Brazilian federal government, and both were and are taking action. As such, the project's objectives were aligned to Brazilian environmental policy goals for the protection of coastal forests. Around the time of project initiation, Governor Neves of Minas Gerais started to place more emphasis on environmental policies. This was particularly reflected in the strategic development plan, which gives priority to a number of environmental objectives (e.g. increasing the area under *Mata Atlântica* cover to 40% by 2023, and raising the water quality index in ten water catchment areas). The project design proposed a combination of PA management and initiatives for sustainable land use and reforestation in the adjacent areas, for which the project established a sustainable basis. It also initiated efforts to interconnect the mostly fragmented remaining areas of coastal forests in Minas Gerais. The project was in keeping with the development policy goals of the German Ministry for Economic Cooperation and Development (BMZ) to conserve biodiversity and improve climate protection (Millennium Goal no. 7). Relevance: the project's relevance is rated as very good, and results have clearly exceeded expectations (sub-rating 1).

The project, to a very large extent, achieved its two objectives of (1) creating the necessary conditions for long-term preservation of the supported PA's and (2) promoting pilot approaches to sustainable land use in the project region. This is confirmed by the related indicators, which, in hindsight, were appropriately selected. In achieving the first objective, the project's contribution to improving the management and equipment of the nature reserves continues to produce considerable positive effects in the project area and beyond. In view of the nationwide implementation of the project's approaches to sustainable land use ("structural project" or *Bolsa Verde* Programme as described above), it can be concluded that the second objective was achieved as well. More recently, Minas Gerais' paradigm shift towards a participatory approach to PA management, which the project had helped to promote, has been further consolidated. Equipment and structures are properly operated and no substantial shortcomings have been identified. Effectiveness: the project's effectiveness is good, and the results are fully in line with expectations (sub-rating 2).

The project was implemented within a relatively short period of time. After three and a half years, 98% of the funds earmarked had been disbursed. Since then, the executing agency has mainly been using its own funds to finance further investments and general operations in order to pursue the project objectives; approximately 70 % of those funds originate from budgetary allocations and 30% from the agency's own revenues. All building projects and other measures were of appropriate design and fitted operational needs. The works carried out and the equipment procured was of good quality. Today, the state of repair of the FC-financed equipment and buildings is generally good or very

good, and they are used extensively and appropriately. All construction work and all other measures were carried out in the resource framework that had been made available. Three additional PA's – initially not included – were incorporated at a later stage thanks to savings. Still, the budget was overspent by only EUR 440,000, with the balance fully covered by counterpart contributions. On the one hand, the project helped conserve the natural resource base of densely populated areas, with particular view to water catchment areas; on the other, the project supported investments beneficial to the region's emerging ecotourism industry. In that respect, investment resources were properly allocated. The project's efficiency is regarded as very good and has clearly exceeded expectations (sub-rating 1).

The overall objective of the project was defined as "to help conserve the remaining natural forest resources and to restore degraded areas of Atlantic coastal forests in Minas Gerais ". Considering the relevant indicators – complete coastal forest cover survey in the project area and an annual forest loss of less than 5 % – the overall objective has been achieved. The executing agency has introduced a systematic monitoring scheme, which will even operate on a monthly basis from 2011 onward. In essence, coastal forest areas have decreased by less than 2 % since the project started. Between 2003 and 2005, 0.8% (or 33,567 hectares) of the remaining *Mata Atlântica* were lost, between 2005 and 2007, 0.4% (or 16,112 hectares), and between 2007 and 2009, only 0.2% (or 9,600 hectares). This very positive trend in combating deforestation – both in the *Mata Atlântica* and in other biomes of Minas Gerais – may also be attributed to the high priority accorded by the state government to forest protection, reforestation and regeneration, whilst simultaneously, public agencies have improved their overall work quality and efficiency. Therefore, we are confident that coastal forest protection will be further consolidated and enhanced, even though forest resources remain under intense pressure, with land use presenting a continued bone of contention in Minas Gerais. As pointed out above, the creation of alternative livelihoods, especially for the poorer communities in the north of Minas Gerais, remains a challenge that remains to be tackled comprehensively. In summary, the project's developmental impact is very good and has clearly exceeded expectations (sub-rating 1).

The conditions are in place to ensure sustainability of the project's achievements. All in all, equipment and infrastructure financed by the project are used extensively and appropriately in a good or very good condition. In case of repair or replacement required, the executing agency has provided the necessary funds. Although its budget has been substantially reduced, coverage of operating costs is not at risk. Minas Gerais has the necessary legal and institutional structures and participatory processes in place for maintaining and expanding the project's positive effects. As a whole, the project's developmental efficacy (which has been very positive to date) is very likely to continue undiminished or to even increase (sustainability level 1).

In various aspects, the project's outcome has clearly exceeded expectations, and the project operated very efficiently. Had the project not been implemented, it would either have taken much longer – or it would hardly have been possible at all – to achieve comparable effects in a similar time span. Thus, the project has been very successful, and its results have clearly exceeded expectations (overall performance rating 1).

General conclusions and recommendations

Projects that use indigenous (i.e. native) tree species for regeneration and/or reforestation of woodland or other areas offer enhanced opportunities to conserve biodiversity and create a network of natural habitats, on the one hand; on the other, they can promote sustainable land use by the communities living in the proximity of PA's. For new,

similar initiatives under preparation, it may be useful to analyse to what extent the model developed by this project can be applied. By introducing payments for environmental services aimed at forest conservation and regeneration, the project tried and tested a tool which definitely merits consideration for future projects.

Although initial successes may be achieved through command and control measures, the struggle against deforestation cannot be won unless a cooperative approach is adopted, providing alternatives to unsustainable practices. Complementing the command and control approach, cooperative methods can increase the effectiveness and efficiency of a programme – especially in the case of minor cases of illegal logging and deforestation occurring in close proximity to densely populated areas. In such cases, there is usually a land register, the land is privately held and the nature reserves in the area are rather small. Here it is crucial to raise awareness among, and offer technical advice to, landowners and land users in order to stop the degradation process.

A clear-cut approach to intensive cooperation with renowned universities may also offer a great potential. For instance, the project under review benefited from new technologies developed to improve the deforestation monitoring system and from cooperative research into the use of native tree species for carbon sequestration. Key success factors include a clear definition of the various stakeholders' specific tasks at the outset and close coordination of their activities during implementation.

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

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

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

A rating of 1 to 3 is a positive assessment and indicates a successful project while a rating of 4 to 6 is a negative assessment and indicates a project which has no sufficiently positive results.

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 an improvement is very unlikely. 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. A rating of 1 to 3 indicates a “successful” project while a rating of 4 to 6 indicates an “unsuccessful” project. In using (with a project-specific weighting) the five key factors to form an overall rating, it should be noted that a project can generally only be considered developmentally “successful” if the achievement of the project objective (“effectiveness”), the impact on the overall objective (“overarching developmental impact”) and the sustainability are considered at least “satisfactory” (rating 3).