IUCN Conservation Outlook Assessment 2017 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for Discovery Coast Atlantic Forest Reserves. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Discovery Coast Atlantic Forest Reserves

SITE INFORMATION

Country:
Brazil
Inscribed in: 1999
Criteria:
(ix) (x)

Site description:

The Discovery Coast Atlantic Forest Reserves, in the states of Bahia and Espírito Santo, consist of eight separate protected areas containing 112,000 ha of Atlantic forest and associated shrub (restingas). The rainforests of Brazil’s Atlantic coast are the world’s richest in terms of biodiversity. The site contains a distinct range of species with a high level of endemism and reveals a pattern of evolution that is not only of great scientific interest but is also of importance for conservation. © UNESCO

SUMMARY

2017 Conservation Outlook

Significant concern

While the establishment of the various protected areas was a highly needed step to serve the last remnants of one of the most fragmented and degraded forest regions on the planet and the serial approach are adequate and encouraging, the protected areas require more coherent and encompassing management. Underlying conflicts with impoverished local communities need to be addressed. At a time when better connectivity is urgently needed and recognition of a need to restore parts of the Atlantic Forest is emerging, the trends in the landscape surrounding the components keep deteriorating. Unless land use dynamics can be influenced to promote more environmentally friendly activities, further deterioration seems inevitable due to biological isolation. This is not even taking into account the expected impacts of climate change.

Current state and trend of VALUES

High Concern
Trend: Deteriorating

The relatively small remnants of the northeastern portion of the Atlantic Forest jointly comprising the serial property are biologically and ecologically isolated. The surrounding landscape is comprised of ever more intensely used pasture, cropland, and timber plantations. Even when disregarding anticipated climate change, a deteriorating scenario appears inevitable, unless more serious efforts are made to counter current trends.

Overall THREATS

Very High Threat

As elsewhere in the historically vast forest region known today as the "Atlantic Forest", fragmentation and biological and ecological isolation are key concerns. While the establishment of protected areas has halted centuries of mostly

unplanned forest conversion and degradation, illegal activities continue to be reported. The increasingly intensive use of the wider landscape for plantation forestry, agriculture and ranching, and in some areas for tourism, is taking an additional toll, e.g. through disturbance, chemical inputs and use of fires in pasture land. In the longer term, the fragmented forests are believed to be particularly vulnerable to the expected impacts of anticipated climate change.

Overall PROTECTION and MANAGEMENT

Some Concern

Despite undisputed success stories in specific thematic areas in individual components of the property, the overall protection and management of the property is not yet satisfactory. Most importantly, a coherent and encompassing approach for the multiple components is missing, the underlying conflicts with marginalized local residents could never be fully resolved and the pressures in the broader landscape are increasing even though reduced connectivity have been recognized as key conservation concerns.

FULL ASSESSMENT

Description of values

Values

World Heritage values

- **Most intact and largest remaining fragments of Atlantic Forest in the Brazilian Northeast**
  Criterion:(ix)

  The Brazilian Discovery Coast is a serial property encompassing the largest and best conserved remnants of Atlantic forest in the Northeastern Brazil and contains high numbers of rare and endemic species (IUCN evaluation, UNESCO World Heritage Centre website).

- **Exceptional biological diversity with a high degree of endemism**
  Criterion:(x)

  The various components of the serial property harbour an exceptional biological richness with a high degree of endemism. Jointly, they display the evolutionary history of the few remaining areas of Atlantic Forest and coastal Restinga shrub vegetation in Northeastern Brazil. The fact that only these few scattered remnants of a once vast forest remain, make them an irreplaceable part of the world’s forest heritage, including for scientific research (IUCN evaluation, UNESCO World Heritage Centre website).

Other important biodiversity values

- **Other international designations**

  The property lies within a Conservation International-designated

Conservation Hotspot, a WWF Global 200 Eco-region, a WWF/IUCN Centre of Plant Diversity, a BirdLife-designated Endemic Bird Area, and a vast UNESCO Biosphere Reserve.

Assessment information

Threats

Current Threats

Very High Threat

The most significant current threats are the biological and ecological isolation of the relatively small forest fragments, which in the long run results in eroding biodiversity; intensified commercial land-use in the wider region, fires and wood extraction and some ongoing illegal hunting further add to the expected degradation of the small area of natural habitat in the property.

▶ Fire/ Fire Suppression

Very High Threat
Inside site
Outside site

Fires are a routine instrument in pasture management in the region.

▶ Roads/ Railroads

High Threat
Inside site, extent of threat not known

Existing and planned roads are a key concern in terms of the well-documented direct and indirect effects of roads in forests. The Brazilian economic crisis has somewhat slowed down tourism infrastructure development (IUCN Consultation, 2017).

▶ Poaching

Very High Threat
Inside site, extent of threat not known

Outside site

Illegal hunting and wood extraction take place on continuous basis as part of the subsistence strategies of marginalized local people and indigenous groups (Consultation with parks staff, 2017). Fauna that leave the property are often shot in surrounding lands (WDPA, 2011; Veracel Research Station, 2011), but poaching occurs inside the PAs as well. The resilience of the populations affected by the small size of the forest remnants and poor connectivity between the remnants is limited. In the Discovery National Park, camera traps for biological studies were destroyed by gunshots and battering. One of the damaged cameras took pictures of domestic dogs indicating the presence of hunters (Alvarez, 2010). The wood wood illegally taken out the PAs is used for houses building and artisanal products.

► Other

Very High Threat
Inside site, extent of threat not known

The major threat is biological isolation in particular of the smaller components, which will slowly reduce the biodiversity of the property, in particular given increasing infrastructure development and pressures outside (WDPA, 2011). New protected areas were established in the World Heritage site region - Serra das Lontras national park (11.336 ha), Wildlife Refuge of Una (23.262 ha) and Rio dos Frades (894 ha), Extrative Reserves of Cassuruba (100.767 ha), Corumbau (89.596 ha) and Canavieiras (100.646 ha). Existing Parks had their areas increased – Pau Brasil (+ 7.381Ha) and Descobrimento (+ 1.548 ha). New private reserves were also established (IUCN Consultation, 2017).

Potential Threats

Very High Threat

Anticipated climate change is expected to impact the various components of the property. The fragmented forests areas remaining after longstanding degradation are much more susceptible to changing environmental conditions, such as increasing temperatures, decreasing rainfall and extreme weather events.

► Temperature extremes

Very High Threat
Inside site, extent of threat not known

Projections of climate change impacts suggest decreasing rainfall, increasing temperatures, more frequent occurrences of extreme weather events, and seal level rise (Marengo, n.d.). Other result coming out of the climate change is the coastal line erosion process and the expansion of the saline wedge, which would damage the mangroves systems.

Protection and management

Assessing Protection and Management

► Relationships with local people

Serious Concern

Relationships between the managers of the property, indigenous people, and marginalized squatters have often been tense and confrontational. After serious confrontations, a portion of Monte Pascoal National Park was returned to the indigenous Pataxó. Advisory Councils for each of the 3 national parks within the property have been designed in an attempt to provide a mechanism for discussion. Unless local communities reach living conditions reducing their precarious dependence on the scarce remaining forest, it is difficult to envision a solution to this grave conflict (UNEP/WCMC, 2012). The relationships with local communities continue to be strained (IUCN Consultation, 2017).

► Legal framework

Some Concern

The legal framework for the property is built from a series of declarations of the 8 conservation units that make up the property. These include: (1) Sooretama Biological Reserve established by Federal Decree in 1943; (2): Monte Pascoal National Park established by Federal Decree in 1973; (3) Vale do Rio Doce Natural Reserve established in 1973 (formerly the Linhares Forest Reserve); (4) Una Biological Reserve designated by Federal Decree in

1983; (5) Pau-Brasil CEPLAC Experimental Station designated by Decree in 1993; (6) Pau-Brasil National Park designated by Federal Decree in 1998; (7) 1998: Veracel (formerly VeraCruz) Station, a private Natural Heritage Reserve, received legal protection under Resolution 240 of the National Environmental Council (CONAMA) which also prohibited logging the forest; and,(8) Descobrimento National Park established by Federal Decree in 1999 (WDPA, 2011).

New protected areas were established in the World Heritage site region - Serra das Lontras National Park (11.336 ha), Wildlife Refuge of Una (2007 - 23.262 ha) and Rio dos Frades (2007 – 894 ha), Extractive Reserves of Cassuruba (2009 - 100.767 ha), Corumbau (2000 - 89.596 ha) and Canavieiras (2006 - 100.646 ha). Existing Parks had their areas increased – Pau Brasil (+ 7.381Ha) and Descobrimento (+ 1.548 ha). New private reserves were also established (IUCN Consultation, 2017), most of them in the buffer zone of PAs of the Discovery Coast Site. In the area of the site in Espírito Santo, for example, three private reserves were established covering almost 3,000 hectares, expanding the connection between Linhares Forest Reserve and Sooretama Biological Reserve.

► Enforcement

Serious Concern

The enforcement of the management plans of individual component protected areas and their buffer zones has been weakening. One reason is the shortage of staff and financial resources in all government levels. More attention must also be given for the governance structure (IUCN Consultation, 2017). Despite its benefits as an umbrella, the serial approach remains to be translated into a coherent approach to law enforcement on the ground.

► Integration into regional and national planning systems

Some Concern

There are ongoing difficulties in terms of coordinating with the large number of national, regional, and local governmental, non-governmental, and private entities and actors that have an interest in the property (UNEP-WCMC, 2011). IUCN Consultation, 2017). Ongoing forest restoration initiatives should be

mentioned in the context of regional integration. The Cooplantar (Atlantic Forest Reflorestation of Southern Bahia), the Espirito Santo state Reforestation Program are examples of what has been designed as a large scale reforestation effort undertaken together with the forestry companies. (IUCN Consultation, 2017).
The influence and economic importance of the eucalyptus forestry in the broader landscape, had given the stimulus for the establishment of the Forestry Forum of South and Southern Bahia state and of the Forestry Forum of Espírito Santo state. Both are part of the Brazilian Forests Dialogue, a movement established in Brazil in 2005 that connects companies business and NGOs aiming to build a propositional agenda, as a way to amplify the sustainable practices and the scale of the biodiversity conservation efforts in the region. This Regional Forums are also interested in the creation of ecological corridors in the region. They have conducted the integration of planning and actions of organizations and companies, including the monitoring of biodiversity and the sustainable practices and management of eucalyptus plantations in buffer zones around strictly PAs and within Environmental Protection Areas (APAs). The pulp and paper companies also have created private reserves and developed tools and actions for the restoration of the Atlantic Forest, especially the Permanent Preservation Areas-APP and Legal Reserve-RL for compliance with the forest legislation (Mesquita et al., 2011; Campanili et al., 2015).

► Management system

Some Concern

Management plans for al lcomponent protected areas that make up the property have been completed and are in use. These promote co-operation with the local industry, aim to restore and improve existing facilities, to increase the number of staff and facilitate the integration of local and federal institutions of research, protection and management. WWF Brasil, the Ford Foundation, Conservation International, and The Nature Conservancy have in the past supported a drive to increase the linkage of forest patches, establish participatory management and set up effective biodiversity conservation.
The forest’s relatively low level of de facto protection and high fragmentation prompted the Critical Ecosystem Partnership Fund (CEPF) to finance a five-year Atlantic Forest Hotspot program 2002-2007, to enlist NGOs, community groups, and others in the conservation and restoration of biodiversity

corridors.
Management plan for Sooretama BR dates back to 1981, and its emergency action plan from 1994. For Una BR, the management plan dates back to 1997, Monte Pascoal NP-undated (ICMBio web page). A 2007 operating plan for fire management exists for the Sooretama BR (IBAMA, 2007). Descobrimento national Park finalized its management plan in 2014 and Pau Brasil National Park in 2016. As a way to integrate management, two Mosaics of Protected Areas wer stablished in the region (IUCN Consultation, 2017). Mosaics of Protected Areas (MPAs) is a concept established by the Brazilian National Protected Areas System through Federal Law #9.985-00 (article 26) to strengthen clusters of public and private PAs. The Mosaics in the region are: the Extremo Sul da Bahia Mosaic with 8 public PAs and 4 privates PAs (Portaria nº 492-2010) and Foz do Rio Doce Mosaic with 4 public PAs and 3 private PAs (Portaria nº 489-2010). (Crepaldi et al., 2015)

► Management effectiveness

Some Concern

Formal evaluations in 2002/2003 and 2010 of the management effectiveness of the 3 national parks and 2 Biological Reserves of the property rated them all as “mediocre”, with the exception of the Sooretama Biological Reserve, which was rated as “good”. ”. Since 2015, besides RAPPAN, ICMBio is annually applying the SAMGE (Monitoring and Evaluation System) while the Rapid Assessment and Priorization of Protected Area Management-RAPPAM is revised each 5 years. In 2015, ICMBio launched the SIGTerra – Protected Areas Territorial Information Consolidation System, which goal is to qualify land tenure information of the federal protected area. Between 2012 and 2015, under the Tropical Forest Conservation Act project, a protocol to be used by the PA managers to evaluate the PA effectiveness was developed. In 2015 the protocol was tested for the first time. The worst score was given to the physical protection of the assessed PAs. Personnell and management tools were also assessed as not satisfactory (IUCN, Consultation, 2017).

► Implementation of Committee decisions and recommendations

Some Concern

The inscription decision in 1999 recommended that "the State Party should be encouraged to complete the "Plan of Action for the Atlantic Forest Region"

and other initiatives indicated in the IUCN evaluation". There is no documented governmental response to this recommendation.

► Boundaries

Some Concern

There are continuous disputes over the territory between the PAs and indigenous communities. In 2017 an Interinstitutional Working Group formed by .Fundação Nacional do Índio (Funai), Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) and Pataxó representatives initiated the discussions to build solutions that help converge biodiversity conservation and socio -environmental development in partially overllapping areas of the) Comexatibá indigenous territory.

► Sustainable finance

Some Concern

Conservation International – Brazil (Conservação Internacional) launched in 2016 an instrument of funding and management of financial resources initially destined to seven federal PAs of the region: Pau Brasil NP, Monte Pascoal NP, Descobrimento NP and Abrolhos NP; Corumbau and Cassurubá Extractive Reserves; and Rio dos Frades Wildlife Refuge. The fund began with a $ 2.1 million grant from the Global Conservation Fund (GCF) and will be applied in the preparation of these PAs for public use, tourism and environmental education (www.icmbio.gov.br/portal/ultimas-noticias/20-geral/8510-parque-do-pau-brasil-ja-pode-ser-visitado).

► Staff training and development

Data Deficient

Information on current staff numbers across the entire World Heritage property is not available.

► Sustainable use

Mostly Effective

The only permitted uses of the site are research, education, and tourism. There are concerns about the sustainability of tourism is some parts of the property. Conservation International is going to invest US 2 million in a new

project starting next year. The project will focus on 7 PAs of the heritage site aiming to improve the public use activities in those areas.

► Education and interpretation programs

Data Deficient

While education and interpretation programs are carried out in each of the components of the property (draft SOUV, 2011), the impact of those programs is not known. The Pau Brasil National Park is developing its own Environmental Education Project.

► Tourism and visitation management

Mostly Effective

Since forest conservation is the paramount aim of the reserves, visitation to most of the sites is restricted to certain areas or trails, as at Una, Sooretama and the research stations. The latter encourages ecotourism, ecological researchers and environmental education and Veracel Reserve has a canopy observation platform. The CEPLAC Experimental Station also has an environmental education program but no visitors are encouraged to visit the neighboring Pau-Brasil National Park. The Vale do Rio Doce Reserve has excellent ecotourism facilities. The most visited site is Monte Pascoal National Park. It has a visitors' centre and marked trails up the landmark that gives the protected area its name (WDPA, 2011). Pau Brasil National Park was part of a bidding process aimed to give concessions for some of the public use infrastructures already in place in this PA.

► Monitoring

Serious Concern

Monitoring is an integral part of the work of the research stations in some of the components of the property. A Coherent and coordinated monitoring programs across the multiple components remain a challenge. Since 1985, The SOS Mata Atlantic Foundation and The National Institute for Space Research (INPE) monitor the Atlantic Forest remnants in all 17 states were it occurs Between 2015 and 2016, of the total area under the Atlantic Forest Law - 130.973.638 hectares (93%) were evaluated. The deforestation in that period was 29.075 ha (IUCN Consultation, 2017).

► Research

Mostly Effective

There are two research stations: the Pau-Brasil CEPLAC Experimental Station, and the Veracel (previously Vera Cruz) Reserve For ecological research to use in its own reforestation programs and to educate the public about the flora and fauna of southern Bahia. Staff from the National Centre for Genetic Resources work there permanently and the station has released considerable information about its forest. All the protected areas have some facilities to accommodate visiting scientists. The Una and CEPLAC reserves also function as in situ genetic seed banks. Better coordination and coherence across the multiple components would be highly desirable (WDPA, 2011).

Overall assessment of protection and management

Some Concern

Despite undisputed success stories in specific thematic areas in individual components of the property, the overall protection and management of the property is not yet satisfactory. Most importantly, a coherent and encompassing approach for the multiple components is missing, the underlying conflicts with marginalized local residents could never be fully resolved and the pressures in the broader landscape are increasing even though reduced connectivity have been recognized as key conservation concerns.

► Assessment of the effectiveness of protection and management in addressing threats outside the site

Serious Concern

After longstanding historic logging in the entire region, actively promoted through the construction of the coastal highway in the 1970s, what is today the buffer zone of the property is under increasingly intense land use, mostly cattle ranching and forest plantations. Fire is but one example of the tangible impacts of this external pressure. Adding to those problems are the small dams built in farms for agriculture and livestock. Nonetheless, the component protected areas help to catalyze projects and initiatives such as the restoration of ecological corridors, aiming at inking the PAs. The MMA Corridor Program II, launched this year is an example. (IUCN Consultation,

2017).

▶ **Best practice examples**

Even though most implementation work remains to be done the approach to integrate different conservation categories and governance arrangements under one umbrella continues to serve as an innovative example.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Most intact and largest remaining fragments of Atlantic Forest in the Brazilian Northeast**
Critical
Trend:Deteriorating

The remnants of the northeastern portion of the Atlantic Forest protected in the 8 components that make up the property are isolated and surrounded by pasture, cropland, and timber plantations (WDPA, 2011).

▶ **Exceptional biological diversity with a high degree of endemism**
High Concern
Trend:Deteriorating

Even when not taking into account the anticipated impacts of climate change, a decline of the impressive biodiversity values is expected.

Summary of the Values

▶ **Assessment of the current state and trend of World Heritage values**
High Concern
Trend: Deteriorating

The relatively small remnants of the northeastern portion of the Atlantic Forest jointly comprising the serial property are biologically and ecologically

isolated. The surrounding landscape is comprised of ever more intensely used pasture, cropland, and timber plantations. Even when disregarding anticipated climate change, a deteriorating scenario appears inevitable, unless more serious efforts are made to counter current trends.

▶ **Assessment of the current state and trend of other important biodiversity values**

High Concern

Trend: Deteriorating

Additional information

Benefits

Understanding Benefits

▶ **Importance for research**

Given the longstanding and dramatic conversion and degradation of the Atlantic Forest throughout its historically vast range, the property is highly valued as a site for research in the last remaining patches of this forest type. The remnants are indispensable for the increasing restoration efforts.

▶ **Outdoor recreation and tourism, Natural beauty and scenery**

The PAs of the Discovery Coast form attractive areas containing forest, water courses, other natural and cultural landscapes, associated with numerous beautiful beaches that are already a major tourist destination in Northeast and Southeastern Brazil.

Summary of benefits

Conservation and the production of knowledge are seen as important benefits produced by these last major remnants of the northeastern Atlantic Forest, both at the national and international level. At least three PAs already carry out

actions or programs of tourism and/or reception of visitors: Veracel (Veracruz) Station; Pau Brazil National Park and Linhares Forest Reserve. Other PAs such as the Discovery National Park and Mount Pascoal National Park have high potential to increase the importance of recreation and tourism. The PAs of the Extreme South of Bahia are close to Porto Seguro, one of the biggest tourist destinations in Brazil, and the Abrolhos Complex, one of the key biodiverse areas of coral reefs and whale watching (humpback whale) in the South Atlantic.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Veracel Research Station		Monitoring of medium and large sized mammals through use of camera traps in the Veracel Reserve. Management and conservation of the Harpy Eagle in the Veracel Reserve. New proposals for public use of the Veracel Reserve.
2	SOS Mata Atlântica		Atlas of the Atlantic Forest Remnants. Technical Report 2015-2016.
3	Conservation International		Atlantic Forest Protection Fund (supported by the Global Conservation Fund) to start in 2018.
4	Floresta Viva		Atlantic Forest Biome restoration. Among other projects in the southern Bahia territory
5	Reflorestar Program		The program is an initiative of the state government of Espírito Santo and aims to promote the restoration of the hydrological cycle through the conservation and recovery of forest cover, with the generation of opportunities and income for the rural producer, stimulating the adoption of sustainable use of soils.
6	Linhares Forest Reserve		Monitoring of biodiversity; seedling production; and environmental education activities.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	National, state and local governments in cooperation with NGOs	Integrating approaches to balancing conservation and development in the broader region, consolidating the intentions expressed at the time of nominating the biosphere reserve encompassing the entire property	
2	Communication	The site is poorly known in its the regions where its components are located, nor by the actors dealing with public policies and/or managing the PAs and its buffer zones	
3	Strategic Planning	A Strategic Plan for the World Heritage Site would represent an important tool to help the coordination between the different management levels.	
4	Integrated Management	Integrated management of the separated components of the property as a single property to make the most of the opportunities afforded by this last remnant of the northeastern portion of the Atlantic Forest.	

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