IUCN Conservation Outlook Assessment 2014 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for Desembarco del Granma National Park. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Desembarco del Granma National Park

SITE INFORMATION

Country:
Cuba
Inscribed in: 1999
Criteria:
(vii) (viii)

Site description:

Desembarco del Granma National Park, with its uplifted marine terraces and associated ongoing development of karst topography and features, represents a globally significant example of geomorphologic and physiographic features and ongoing geological processes. The area, which is situated in and around Cabo Cruz in south-east Cuba, includes spectacular terraces and cliffs, as well as some of the most pristine and impressive coastal cliffs bordering the western Atlantic.
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SUMMARY

2014 Conservation Outlook

Good with some concerns

The geological values of the site and its exceptional scenic beauty for which the site was inscribed on the World Heritage List have so far been well preserved. However, its biodiversity values are being affected by a number of threats, with invasive species being one of the most serious ones. The most serious potential threat to the site's values is from climate change. Protection and management was reported as being adequate at the time of inscription and a large project is now being implemented by UNDP with the aim of enhancing protection and management of the site.

Current state and trend of VALUES

Low Concern
Trend: Stable

World Heritage values related to geologic features are in excellent condition while values scenic values have been degraded to some degree by climate change and introduced species.

Overall THREATS

Low Threat

While the geologic features of the property are not threatened, scenic values and biodiversity features are. Invasive species is the most serious current threat to the site's terrestrial biodiversity values. The most serious threats to the marine environment include climate change and invasive species, but pollution is a low-level threat in some areas. Increase in tourism could potentially have an impact on a Park not prepared to receive visitors, especially in the coastal zone. However, the most serious potential threat to the site is from climate change. However, overall the impact of these threats on the World Heritage values of the

site – geological features and scenic beauty – is low.

Overall PROTECTION and MANAGEMENT

Mostly Effective

Protection and management was reported as being adequate at the time of inscription. A large project is now being implemented by UNDP with the aim of enhancing protection and management of the site. Several activities (training of park managers, local communtiries, tourism planning, etc.) are being implemented. According to the last available management effectiveness evaluation score, the park is between a “regular” and “good” (depending on how the score is interpreted).

FULL ASSESSMENT

Description of values

Values

World Heritage values

- **World’s largest and best preserved coastal limestone terrace system of stunning beauty**
  Criterion:(vii)

  The terraces of Cabo Cruz form a singular coastal landscape in Cuba and are the world’s largest and best preserved coastal limestone terrace system. The imposing and nearly pristine coastal cliffs bordering the Western Atlantic are both a remarkable natural phenomenon and a stunningly beautiful sight. Jointly with the diverse, mostly native vegetation, the cliffs form an extraordinary visual ensemble of forms, contours, color and texture within a spectacular coastal setting. (SOUV, 2013)

- **Globally significant illustration of geomorphologic and physiographic features and ongoing geological processes**
  Criterion:(viii)

  The uplifted marine terraces of DGNP, and the continuing development of karst topography and features, are a globally significant illustration of geomorphologic and physiographic features and ongoing geological processes. DGNP displays a rare relief formed by the combination of tectonic movements in the still active contact zone between two tectonic plates and the effects of past sea level change in response to climate fluctuations. The karst forms include escarpments, cliffs, cave systems, river canyons and large sinkholes known as dolines in most diverse sizes and shapes. (SOUV,

2013)

Other important biodiversity values

► High species diversity and endemism

While recognized on the World Heritage List primarily for its landscape beauty and geology, DGNP also hosts noteworthy biodiversity values. More than 500 plant species have been recorded in what may still be an incomplete inventory. Around sixty percent of the known plants are endemic. Twelve species are only to be found within the DGNP making the property one of the centres of floral endemism within Cuba. The documentation of terrestrial fauna includes 13 mammals, 110 birds, hosting 95 % of the orders, 78,68 % of families, 50 % of genders and 37,85 % of species of birds found in Cuba (Hechevarria Garcia, undated), 44 reptiles and seven amphibians. The degree of endemism for reptiles and amphibians is in the range of a remarkable 90 % (SoOUV, 2013, SNAP, CNAP, 2013) The marine areas are home to coral formations while mangrove stands are found along the shores. The area can be regarded as one of the most important centres of plant diversity and endemism that exist in Cuba, being only surpassed by the mountainous massifs of the east of the country. According to data a total 512 species of plants exist in the site, of which around 60% are endemic. There is also a newly defined vegetation complex on the terraces (SoOUV, 2013).

Assessment information

Threats

Current Threats

Low Threat

While the geologic features of the property are not threatened, scenic values and biodiversity features are. Invasive species is the most serious current threat to the site’s terrestrial biodiversity values. The most serious threats to

the marine environment include climate change and invasive species, but pollution is a low-level threat in some areas. However, the impact of these threats on the World Heritage values of the site – geological features and scenic beauty – is low.

► Invasive Non-Native/ Alien Species

High Threat
Inside site
Outside site

The introduction of alien species in both the marine and terrestrial environments has had negative effects on native species' populations and distributions (Ecured, 2012; BirdLife, 2012). Alien invasive species pose a particular threat, as is well-known from island settings. Some woody species are reported to be an obstacle to natural regeneration of degraded forest areas. While management addresses this through an active nursery and reforestation program, eventually the reduction and, if possible, eradication should be sought. In terms of invasive animal species, including specimen of feral livestock, the situation appears to be manageable due to the extreme environmental conditions, the rugged relief and the property's and naturalness all of which jointly discourage colonization by invasives. Still, invasive species require monitoring and, if needed, management responses (SoOUV, 2013).

► Logging/ Wood Harvesting

Very Low Threat
Inside site

Despite the overall naturalness of the property there are localized impacts of past logging in the semi-deciduous forests north of the highest terraces, which occurred between around 1940 and 1980. These areas have since left to recover naturally (SoOUV, 2013).

► Crops

Very Low Threat
Inside site

Minor agricultural encroachments on the Park are reported for Boca del Toro

and La Jagüita. (Ecured, 2012; BirdLife, 2012; WCMC, 2011)

► Water Pollution

Very Low Threat
Inside site
Outside site

Effluents from nearby towns and sugar mills were reported as potentially affecting the property's reefs when the Park was nominated. (BirdLife, 2012; IUCN, 1999). However, marine currents go south to north and therefore this risk has been always low as sugar mills are on the northern part of the property and very far away from it.

Potential Threats

Low Threat

Increase in tourism could potentially have an impact on a Park not prepared to receive visitors, especially in the coastal zone. However, the most serious potential threat to the site is from climate change.

► Chemical changes in oceanic waters, Temperature changes

High Threat
Inside site
Outside site

This property is one of the 16 natural World Heritage sites most at risk from climate change. (Perry, 2011)

► Storms/Flooding

Low Threat
Inside site
Outside site

The entire Archipelago is located in the path of hurricane. In 2005, Hurricane Dennis destroyed housing of residing fishing ommunities and impacted biodiversity including Park's forests. (Torres et al. 2006).

► Tourism/ visitors/ recreation

Low Threat

Inside site

Increase in tourism could potentially have an impact on a Park not prepared to receive visitors, especially in the coastal zone. While this constitutes an opportunity for future funding it also implies very real risks to DGNP, for example in terms of infrastructure, disturbance and waste management (SoOUV, 2013).

Protection and management

Assessing Protection and Management

► Relationships with local people

Mostly Effective

At the time of nomination, there was little pressure from landowners or cooperatives ringing the park to encroach on forested areas and the surrounding agroforestry systems were among the most environmentally benign land uses in the tropics. Rural population density was low and growth rates are minimal (IUCN, 1999). Currently, at least 900 people live within the Park, most of them concentrated in the fishing village of Cabo Cruz. There are around 6,000 people living in the buffer zone. (EOE, 2012). The Empresa Nacional para la Protección de la Flora y la Fauna (ENPFF), which administers the Park, has a participatory approach to management. Several workshops and training events have been planned and implemented in the Province and for the PNDG since 2010 under the UNDP-GEF Financed Southern Archipelago Project (for example: landscape continuity for design and research from a participative conception (CNAP 2010). Important issues for communities and Park managers were discussed, including fishing, community services in general, health, and alternative economic activities to increase employment and improve environmental conditions (CNAP, 2012).

► Legal framework and enforcement

Mostly Effective

The Park, Cuba’s first, was established by ministerial resolution in 1986 and later extended, also by ministerial resolution. Besides applicable protected areas legislation, the Law on Environment, the Decree-Law on Forest

Heritage and Wild Fauna and specific stipulations related to Environmental Impact Assessments form the crucial legislative framework (SoOUV, 2013). A plan to assess the proposal to include DGNP in the SPAW list is underway (SNAP, CNAP 2013). According to the baseline management effectiveness evaluation results from the Southern Archipelago Project, DGNP obtained 3 (out of 3 points) in legal status and a 2 respectively in regulations and enforcement.

► Integration into regional and national planning systems

Highly Effective

Development of the management plan for the Park provides a regular opportunity to integrate management of the Park into regional and national planning systems. Territorial vision has been incorporated among the last socioeconomic assessments completed for local communities found in Cabo Cruz and Las Coloradas within or in the proximate areas of DGNP (CNAP 2013). A first workshop on Integrated Coastal Zone Management was organized in May 2010 (CNAP, 2010).

► Management system

Highly Effective

The entire property is owned by the government, represented by the Ministry of Science, Technology and Environment (CITMA). DGNP is managed by the National Enterprise for Flora and Fauna Protection (ENPFF), which operates under the auspices of the CITMA and is administered by the Ministry of Agriculture (MINAGRI). Management of the site is guided by management plans that are made for periods of five years and are implemented through annual operating plans, which contain programs and projects for implementing the various management activities. (SOUV, 2013).

► Management effectiveness

Mostly Effective

Though the management effectiveness of Cuban protected areas is measured in regularly, most recent results for the property are still not available. Under the Southern Archipelago Project, a workshop to review the methodology was organized (CNAP 2012). Overall baseline results (score) for management effectiveness for PNDG under this project was 59 out of 90

(using the WWF/WB Tracking Tool for PAs) (UNDP, undated)

▶ Implementation of Committee decisions and recommendations

Highly Effective

No Committee Decisions have been taken on the property since it was listed in 1999.

▶ Boundaries

Highly Effective

DGNP contains most key and interrelated natural elements present in the region, including the coral
reef of Cabo Cruz, sea grass beds and mangroves near Pilon, and the western part of the Park, and old
sub-marine terraces up to 30m deep. The property has sufficient size, altitudinal and climatic diversity and ecological elements necessary for the long-term conservation of the park’s terrestrial ecosystems and
in-shore marine ecosystems and their biological diversity, including endemic and migratory species (IUCN, 1999).

▶ Sustainable finance

Some Concern

The site receives international support through projects, such as the recent project by UNDP. However, the level of the site’s own financial resources is unclear.

▶ Staff training and development

Highly Effective

The park has a technical, administrative and ranger’s staff, trained and with the necessary experience to manage the site. (SOUV, 2013) At the time of nomination, the Park had a well-trained and motivated staff, one of the largest of any protected area in the Caribbean with nearly 200 staff members, including 16 professionals. (IUCN, 1999). Staff training in several aspects of protected area management (including species monitoring) under Southern Archipelago Project (CNAP, 2010)

► Sustainable use

Data Deficient

Local resource use within the property occurs mostly in the marine areas, in particular by residents of the fishing community of Cabo Cruz, which is situated within DGNP. Fishing and extraction of other marine resources by local and external users requires monitoring to keep harvesting levels in line with productivity (SoOUV, 2013).

► Education and interpretation programs

Mostly Effective

At the time of nomination there were ongoing environmental education and outreach programs with the limited local rural population in the Area. (IUCN, 1999). Under the Southern Archipelago project education and interpretation programs were considered “good.” With a score of 2 in the management effectiveness evaluation tool (MEET).

► Tourism and interpretation

Some Concern

There is little doubt that the tourism potential of DGNP exceeds the current use. While this constitutes an opportunity for future funding it also implies very real risks to DGNP, for example in terms of infrastructure, disturbance and waste management (SoOUV, 2013). Training activities and impact assessment of tourism activities are being implemented under the current UNDP-GEF Project (UNDP Project document, undated). In 2010, a proposal for a regional strategic plan for sustainble tourism development was initiated (CNAP, 2010)

► Monitoring

Mostly Effective

However, under the Southern Archipielago Project, a monitoring program is being developed and implemented (CNAP, 2010). This includes monitoring of Manati, iguana, aquatic and marine birds, and other species (CNAP, 2011).

► Research

Highly Effective

The site has been the focus of numerous studies and researches on the local fauna, geology and flora.
It is a very suitable locus for long-term studies of global climate change and the evolution of species between islands (WCMC, 2011). Recent studies have focused on avifauna, and on background information for the integrated management of mangroves (Ecured, 2012). Also, in 2012, an expedition on geologic and geomorphologic characteristics or the area was organized and important information was collected (CNAP, 2012).

Overall assessment of protection and management

Mostly Effective

Protection and management was reported as being adequate at the time of inscription. A large project is now being implemented by UNDP with the aim of enhancing protection and management of the site. Several activities (training of park managers, local communtiries, tourism planning, etc.) are being implemented. According to the last available management effectiveness evaluation score, the park is between a “regular” and “good” (depending on how the score is interpreted).

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

Mostly Effective

Most of the threats to the property are generated from outside, and these are considered to be relatively well managed.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► World’s largest and best preserved coastal limestone terrace system of stunning beauty

Low Concern
Trend:Stable

Scenic beauty is largely intact on land, but climate change and introduced species are impacting on the aesthetics of the site.

► Globally significant illustration of geomorphologic and physiographic features and ongoing geological processes

Good
Trend:Stable

The geological values are in good state and will continue thus.

Other important biodiversity values

► High species diversity and endemism

While recognized on the World Heritage List primarily for its landscape beauty and geology, DGNP also hosts noteworthy biodiversity values. More than 500 plant species have been recorded in what may still be an incomplete inventory. Around sixty percent of the known plants are endemic. Twelve species are only to be found within the DGNP making the property one of the centres of floral endemism within Cuba. The documentation of terrestrial fauna includes 13 mammals, 110 birds, hosting 95 % of the orders, 78,68 % of families, 50 % of genders and 37,85 % of species of birds found in Cuba (Hechevarria Garcia, undated), 44 reptiles and seven amphibians. The degree of endemism for reptiles and amphibians is in the range of a remarkable 90 % (SoOUV, 2013, SNAP, CNAP, 2013) The marine areas are home to coral formations while mangrove stands are found along the shores. The area can be regarded as one of the most important centres of plant diversity and endemism that exist in Cuba, being only surpassed by the mountainous massifs of the east of the country. According to data a total 512 species of plants exist in the site, of which around 60% are endemic. There is also a newly defined vegetation complex on the terraces (SoOUV, 2013).

Summary of the Values

▶ **Assessment of the current state and trend of World Heritage values**

Low Concern

Trend: Stable

World Heritage values related to geologic features are in excellent condition while values scenic values have been degraded to some degree by climate change and introduced species.

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

Data Deficient

Trend: Data Deficient

Terrestrial biodiversity has been impacted by climate change, introduced species, agriculture, and livestock, but the degree is unknown. Marine biodiversity has been impacted by climate change, introduced species, and marine pollution, but the information available is insufficient to determine the cumulative effects and pace of change.

Additional information

Key conservation issues

▶ **Climate change**

Global

This property is one of the 16 natural World Heritage sites most at risk from climate change. (Perry, 2011)

▶ **Invasive species**

Local

Alien invasive species pose a particular threat, as is well-known from island settings. Some woody species are reported to be an obstacle to natural

regeneration of degraded forest areas. While management addresses this through an active nursery and reforestation program, eventually the reduction and, if possible, eradication should be sought.

Benefits

Understanding Benefits

▶ **Fishing areas and conservation of fish stocks**

The site is a globally important nursery for marine fauna (e.g .lobster) (Muñoz-Nuñez D. 2009).

▶ **Is the protected area valued for its nature conservation?**

The listing of the site as World Heritage is testimony to the conservation values of the site

▶ **Fishing areas and conservation of fish stocks**

Resources from the site support livelihoods for people living in and around the site, though information is not sufficient to determine the kind or degrees of that support. The outside communities located in the adjacent areas of the park benefits from tourism.

Summary of benefits

The conservation values of the site are primary at the national and global level, while support to the livelihoods of communities in and around the Park are of greatest benefit at the local level. The site is also an important area for reproduction of marine species and fishing.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	GEF-UNDP-Cuba (CITMA, CNAP, ENFF, etc.)		PIMS no. 3973. Title: Application of a regional approach to the management of marine and coastal protected areas in Cuba's Southern Archipelagos Region: "This project would contribute to the conservation of marine biodiversity in Cuba, including fisheries resources of major regional importance, by creating capacities for the application of a regional approach to the management of marine and coastal protected areas in the Southern Archipelagos Region" (UNDP, undated)

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	N.A.	Exploration and development of options for sustainable finance.	

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