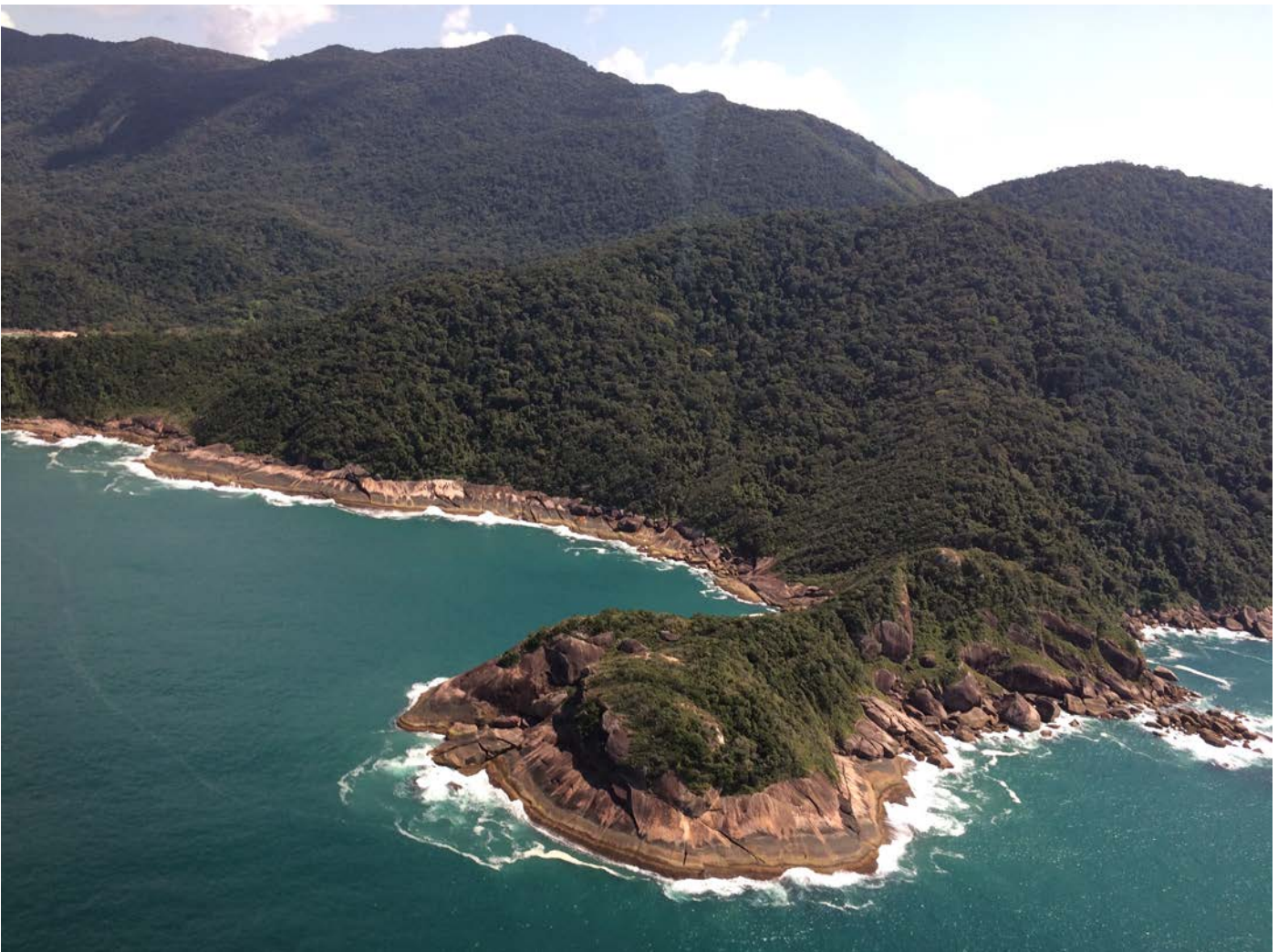


LATIN AMERICA / CARIBBEAN

PARATY CULTURE AND BIODIVERSITY

BRAZIL



Aerial view of the Juatinga Ecological Reserve component © IUCN / Doris Cordero

WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

PARATY CULTURE AND BIODIVERSITY (BRAZIL) – ID N° 1308 Rev

IUCN RECOMMENDATION TO WORLD HERITAGE COMMITTEE: To inscribe the property under natural criterion (x).

Key paragraphs of Operational Guidelines:

Paragraph 77: Nominated property meets World Heritage criterion.

Paragraph 78: Nominated property meets integrity, protection and management requirements.

Background note: Paraty was nominated under cultural criteria (ii), (iv) and (v) and as a cultural landscape in 2009. The nomination of Gold Route in Paraty and its landscape (Brazil) was deferred by the Committee (Decision 33 COM 8B.37), to allow the State Party to revise the property's dimensions and consider renominating Paraty as a mixed property, highlighting its exceptional natural and cultural values.

1. DOCUMENTATION

a) Date nomination received by IUCN: 25 March 2018.

b) Additional information officially requested from and provided by the State Parties: Following the joint IUCN-ICOMOS field mission, a letter requesting supplementary information was sent on 17 October 2018. Information was sought on boundaries, notably the rationale for placing some elements in the nominated area and others in the buffer zone; and the rationale for nominating certain components and not others. A response was received by IUCN on 14 November 2018.

Following the IUCN World Heritage Panel a joint progress report was sent by IUCN and ICOMOS to the State Party on 20 December 2018. This letter advised on the status of the evaluation process and IUCN sought responses/clarifications on a range of issues including further information on the selection of component parts; the specific plans and the committed implementation activities in the buffer zone to ensure connectivity is maintained and improved for mobile species and ecosystems between the different components; further details on threats such as those from the nuclear energy facilities in and adjacent to the buffer zone, threats from pollution and oil spill risks, as well as growing pressure from tourism, and consideration of climate change impacts; the plans to revise and strengthen the joint management plan, and the means that are being put in place to ensure implementation; and further details about the local communities, both in terms of involvement of the local and indigenous communities in the nomination and the management of the nominated property, and the ways the processes of nomination and inscription on the World Heritage List will proactively acknowledge and benefit the local and indigenous communities. The State Parties submitted additional information on 28 February 2019.

c) Additional literature consulted: Various sources, including: CEPF. (2011). Ecosystem Profile. Atlantic

Forest Biodiversity Hotspot. Critical Ecosystem Partnership Fund (CEPF); Conti, B., & Irving, M. (2014). Desafios para o ecoturismo no Parque Nacional da Serra da Bocaina: o caso da Vila de Trindade (Paraty, RJ). *Revista Brasileira De Ecoturismo (RBEcotur)*, 7(3); Fidelis Bahia, N.C., Seixas, C.S., Araujo, L.G., Farinaci, J.S. & Chamy, S. (2013). Implementation of a National Park over the traditional land of the Trindade community in Paraty, Brazil. 46-51, In Magro, T.C., Rodrigues, L.M., Silva Filho, D.F., Polizel, J.L., Leahy, J., Eds. 2013. *Protected Areas and Place Making*; Jagger, T. (2013). *World Heritage Nomination of Paraty and the surrounding Landscape and Seascape. Technical Recommendations from a Natural Heritage Perspective. Consultancy Report.*

d) Consultations: 9 desk reviews received. The field evaluation mission met with a wide range of stakeholders including federal, state and municipal authorities, traditional communities, and civil society organizations. Extensive consultation was held with the managing agencies for components of the nominated property: the Chico Mendes Institute for Biodiversity Conservation (ICMBio) and the Rio de Janeiro State Environment Institute (INEA).

e) Field Visit: Doris Cordero (IUCN) and Luis Maria Calvo (ICOMOS), 9-11 September 2018

f) Date of IUCN approval of this report: April 2019

2. SUMMARY OF NATURAL VALUES

Paraty Culture and Biodiversity (hereafter “Paraty”) is a mixed serial property located in the Serro do Mar region of Brazil, along the southern tip of the State of Rio de Janeiro, and the northern coast of the State of São Paulo. It is comprised of five components: the Serra da Bocaina National Park (the main reference point of the nominated property and the largest component); Ilha Grande State Park; Praia do Sul Biological Reserve; the Environmental Protection Area of Cairuçu; and the

Paraty Historic Centre. Following the field mission, the State Party advised on various boundary adjustments to the nominated property including a decision to propose the larger Environmental Protection Area of Cairuçu instead of the originally nominated Juatinga Ecological Reserve, noting the latter is enclosed within the former larger area. The nominated property now covers a total area of 204,634 ha with a buffer zone of 258,921 ha. Table 1 below details the configuration of the nominated property across the component areas.

ID #	Component	Area (ha)
1	Serra da Bocaina National Park	130,900
2	Ilha Grande State Park	12,052
3	Praia do Sul Biological Reserve	3,502
4	Environmental Protection Area of Cairuçu	26,652
5a	Paraty Historic Center	46
5b	Morro da Vila Velha	13
	Total Area	204,634
	<i>Buffer Zone</i>	<i>258,921</i>
	Property plus Buffer Zone	463,555

Table 1: Component parts constituting the nominated property, Paraty Culture and Biodiversity

The nominated property corresponds to a centre of endemism in the Atlantic Forest hotspot, one of the five most threatened biodiversity hotspots on the planet. It houses one of the areas of greatest biological diversity for this hotspot and may thus be considered a ‘hotspot within a hotspot.’ The nomination dossier highlights the context of the property and the relatively higher forest cover in this region: “The Atlantic Forest, the first colonized region in Brazil, underwent a continuous elimination of forest and it is estimated that today, only between 11% and 16% of the original forest cover remain... Among the 2,481 cities which have all of their territories in the Atlantic Forest, Angra dos Reis, Paraty and Ubatuba [main municipalities in the property of the proposed World Heritage Site] are among the 20 with the highest forest coverage... The three cities have forest and associated ecosystems coverage in 80%, 78% and 85% of their territories, respectively, which, for biome standards, are exceptional.”

Paraty’s geography, evolution and history has resulted in a unique diversity of landscapes from sea level to about 2,000 metres in elevation. Diversity and endemism are high, for example, more than 500 endemic species of vascular plants have been recorded. The occurrence of 36 species of rare plants is also notable, 29 of which are endemic to the nominated property, according to more than 170 scientists from 55 institutions in Brazil. The nominated property features approximately 45% of all the Atlantic Forest’s avifauna species with records of 450 species, a high biodiversity related in part to the

altitudinal gradients. Two Endemic Bird Areas are also found here, supporting 124 endemic bird species (57% of the total endemic bird species within the hotspot).

Within the nominated property are a remarkable 11 Key Biodiversity Areas (KBAs) related to terrestrial vertebrates, rare freshwater fish and rare plants. The ‘Ilha Grande’ Alliance for Zero Extinction site (AZE) is found within the nominated property, triggered by the presence of the Black-hooded Antwren (*Formicivora erythronotos*, EN), an endangered bird species. According to the Critical Ecosystem Partnership Fund (CEPF), the group of protected areas located in the Serra do Mar, including the Serra da Bocaina National Park, is one of the most extensive protected area complexes covering the remaining Atlantic Forest, harbouring an extremely high concentration of endemic and endangered species.

Paraty is home to an impressive array of fauna including many globally threatened species such as Jaguar (*Panthera onca*, NT), White-lipped Peccary (*Tayassu pecari*, VU), and several primate species such as Tufted Capuchin (*Cebus apella nigritus*, NT), Brown Howler Monkey (*Alouatta fusca*, LC) and Southern Muriqui (*Brachyteles arachnoides*, EN). All of these wider ranging species are threatened by habitat loss and degradation, particularly as a result of the conversion of land use or presence of extractive industries. Jaguars and White-lipped Peccary are poached for their pelts and other parts, but are also killed in retribution for livestock losses in ranching and other agricultural areas. White-lipped Peccary are hunted as food and it is important to note that there is a KBA for White-lipped Peccary found within the proposed boundaries of Paraty. Primates are generally sensitive to all forms of human disturbance. The presence of these species alongside panthers, ocelots, birds of prey and other key bird species is an indicator of the ecological health of the proposed site.

The inclusion within the nominated property of the Environmental Protection Area of Cairuçu results in the property now including several traditional communities (indigenous, quilombola and caiçara) whose cultural expressions and traditional ways of life based on a balanced and respectful relationship with the surrounding natural environment are an important attribute contributing to the claimed Outstanding Universal Value (OUV) of the mixed property.

3. COMPARISONS WITH OTHER AREAS

For natural values the dossier provides a comparison of the nominated property in relation to six inscribed mixed World Heritage sites in Latin America and the Caribbean (The Historic Sanctuary of Machu Picchu, Peru; Río Abiseo National Park, Peru; Tikal National Park (Guatemala); Ancient Maya City and Protected Tropical Forests of Calakmul, Mexico; Chiribiquete National Park – “The Maloca of the Jaguar”, Colombia; and Blue and

John Crow Mountains, Jamaica). The nomination's comparative analysis is concise yet convincing in concluding that Paraty compares favourably with other properties on the World Heritage List and in the Atlantic Forest in terms of its global biodiversity significance.

IUCN and UN Environment-WCMC have conducted further global comparative analysis using spatial overlays and additional literature review. This concludes that the biodiversity that characterises the nominated property is of global significance. Brazil has seven existing natural World Heritage sites: Central Amazon Conservation Complex ((ix)(x)); Pantanal Conservation Area ((vii)(ix)(x)); Brazilian Atlantic Islands: Fernando de Noronha and Atol das Rocas Reserves ((vii)(ix)(x)); and Cerrado Protected Areas: Chapada dos Veadeiros and Emas National Parks ((ix)(x)), plus three within the Atlantic Forest: Discovery Coast Atlantic Forest Reserves ((ix)(x)); Iguazu National Park ((vii)(x)); and Atlantic Forest South-East Reserves ((vii)(ix)(x)). The proposed Paraty Culture and Biodiversity features a biological diversity and uniqueness equal to or greater than these three latter sites already inscribed in the Atlantic Forest, as well as the other 45 World Heritage Sites (either natural or mixed) in tropical or subtropical areas with similar characteristics world-wide.

The nominated property is found in the Udvary Province (Serra do Mar Udvary Province) represented by only two other World Heritage sites, and no Tentative List sites. The terrestrial ecoregions that the nominated property represents are currently covered by only one World Heritage site, and no Tentative List sites. The nominated property is located in one of five leading biodiversity hotspots (the *Atlantic Forest* hotspot), known for its high richness in endemic species. It encompasses a Global 200 priority ecoregion (*Atlantic Forests*). Although the most diverse terrestrial ecoregions are found in the Western Arc Forests in the Amazon Basin, the Atlantic Forests ecoregion of Brazil (along with the Choco'-Darién ecoregion of north-western South America; Sumatra, and Peninsular Malaysia and northern Borneo forest ecoregions), is a close rival.

Paraty also encompasses two Endemic Bird Areas (*Atlantic Forest Lowlands*, and *Atlantic Forest Mountains*), and a Centre of Plant Diversity (*Mountain Ridges of Rio de Janeiro*). Whilst the hotspot, priority ecoregion, and endemic bird areas are shared across a handful of existing World Heritage Sites and Tentative List sites, the *Mountain Ridges of Rio de Janeiro* Centre of Plant Diversity is unique to the nominated property, and is not yet represented on the WH List or Tentative List.

The nominated property reports high species diversity, with similar, and in some cases higher levels of species diversity reported than other comparable World Heritage sites. It has the highest recorded number of mammal species (150), and bird species (450) when compared with natural World Heritage sites in the Atlantic Forest biodiversity hotspot.

The nominated property is similarly high in endemism. The section of the Atlantic Forest covered by the nominated property represents the greatest richness of endemism for vascular plants. The nominated property also features about 57% (124) of the total of endemic birds of this hotspot. Furthermore, according to WCMC and IUCN global gap analyses, the "Atlantic Forest Southeast Reserves / Serra do Mar Cluster" is one of the 78 most irreplaceable protected areas in the world, and the study made a recommendation to consider this as a good candidate serial World Heritage property.

4. INTEGRITY, PROTECTION AND MANAGEMENT

4.1. Protection

Most of the components of the nominated property have the highest level of protection possible under Brazilian law. Serra da Bocaina National Park and the Environmental Protection Area of Cairuçu are managed by the federal Chico Mendes Institute for Biodiversity Conservation (ICMBio) while the Ilha Grande State Park and Praia do Sul Biological Reserve are managed by the Rio de Janeiro State Environment Institute (INEA). They all have a strict preservation category.

Despite the high level of protection of the components of the nominated property, there is a need to improve integration and management decisions among the governmental agencies at municipal, state and federal level with jurisdictions in the nominated property. The integrity, which is key to the OUV of Paraty, lies in the integration of the five components and the integration of the cultural, natural and traditional use of the complex. This will need a more elaborated overarching management plan that addresses all the components of the site and their integration.

Nine of the protected areas that comprise the nominated property and its buffer zone, are integrated into the Ensemble of Protected Areas of Serra da Bocaina, which is a cohesive management unit that includes other protected areas such as Guarani Indigenous Lands and Quilombo Territories. Its Advisory Council meets periodically to discuss various conservation issues and integrated actions, as well as dialogues with the traditional communities of Caiçaras and Quilombolas.

From the marine perspective, as the bay itself is included only within the buffer zone, it is critical that the recommendations made under the "Integrated Management Project of the Ecosystem of the Ilha Grande Bay" (BIG) are followed, and that engagement in the strategies related to this project continue such that management frameworks adequately protect the ecosystem health of the bay itself.

IUCN considers that the protection status of the nominated property meets the requirements of the Operational Guidelines.

4.2 Boundaries

The Paraty mixed and serial nomination includes five components of which four are protected areas that belong to the National System of Protected Areas (SNUC) covering 99,97% of the proposed site. Serra da Bocaina National Park and the Environmental Protection Area of Cairuçu are managed by ICMBio, the federal agency of the Brazilian Ministry of the Environment for Protected Areas. The Ilha Grande State Park, Praia do Sul Biological Reserve and Juatinga Ecological Reserve (within the Environmental Protection Area of Cairuçu) are managed by the Rio de Janeiro State Environment Institute (INEA). They all have a strict preservation category. The Cairuçu Environmental Protection Area includes Juatinga Ecological Reserve, but 63% (16,692 ha) is managed for sustainable use.

Serra da Bocaina National Park is one of the largest protected areas in the Atlantic Forest, with highly conserved ecosystems and ecosystem services, due to its topography and difficult access. Ilha Grande State Park and its buffer zone connects the inland Atlantic Forest with the island ecosystems, including mangroves and a mosaic of primary and secondary forest. Praia do Sul Biological Reserve contains important Atlantic Forest and coastal vegetation with little human intervention.

The nominated property components' boundaries coincide with the four protected areas boundaries, plus the Paraty Historical Centre, presenting an adequate size to conserve ecosystems and habitats that host the most diverse Atlantic Forest flora and fauna. Additional information provided by the State Party regarding the property boundaries and ecological connectivity between components parts, provides a detailed explanation of the institutional and legal framework that supports a series of specific plans and actions in the buffer zone to ensure connectivity. Nevertheless, it is clear that the protected areas that comprises the 258,921 ha buffer zone, are crucial to the connectivity between the property components. It is important to note that much of the coastal area and all marine areas of the Bay are not included in the nominated property, but are listed as buffer zones.

Integrity of natural values in the nominated property is demonstrated by the presence of species that require large, intact swaths of habitat, such as the jaguars, cougars, white-lipped peccary, and primate species found at this site. The five components and their combined size, including the buffer zones, are adequate to ensure integrity, but the connectivity between them must be preserved and enhanced to maintain the functionality of the overall site. Any loss of connectivity and/or reduction of functional size of any part of the site would be damaging to its integrity.

ICUN considers that the boundaries of the nominated property meet the requirements of the Operational Guidelines.

4.3 Management

A Paraty Site Management Plan was developed by a participatory process led by ICMBio and the National Institute of Historic and Artistic Heritage (IPHAN). The Management Plan aims to preserve and enhance the site, establishing strategies and guidelines for the coordination of activities with the participation of public and private actors including traditional communities. There is an issue to better harmonize the many protected area and environmental protection area management plans that overlap around the nominated property to establish a more effective overarching management framework for the serial components and buffer zone.

The Paraty Site Management Committee, whose presidency will be held by ICMBio and IPHAN on a rotating basis, will have an Executive Committee comprising the two federal agencies, municipal governments, São Paulo State Government (Fundação Florestal), Rio de Janeiro State Government (INEA and INEPAC) and nongovernmental organizations. The Management Committee will also have an Advisory Council composed mostly of civil society organizations.

While the nomination dossier includes a table of human resources for the components of the nominated property it does not provide sufficient detail to fully assess staffing. However, levels appear low given the threats, challenges and complexity of the area. Regarding staffing skill levels, most civil servants belonging to IPHAN, ICMBio, INEA and other federal and state government institutions hold technical and graduate level degrees.

Protected areas established by federal, state and municipal governments have their own annual budget, as well as external resources from environmental compensation, local partnerships and cooperation projects. International cooperation projects can contribute to guaranteeing the financing of research, training, protection and conservation actions.

ICUN considers that the management of the nominated property meets the requirements of the Operational Guidelines.

4.4 Community

Serra da Bocaina National Park, the largest component of the nominated property, was established in 1971 partly on traditional lands. The strict protection status of this area prohibits traditional uses. In contrast, the recent expansion of component 4 to include all of the Cairuçu Environmental Protected Area adds over 16,000 ha designated for sustainable use by self-identified quilombos, caiçaras and indigenous peoples. The area's objectives are focused on the conservation of natural ecosystems, species, beautiful landscapes and hydrological systems and on the integration of these

landscape components with human communities. Therefore, Paraty Site structures will need to accommodate adequate and appropriate participation of these communities in management decision-making.

4.5 Threats

The original 1.4 million square kilometres of the Atlantic Forest region has been reduced to 7.3% of its original forest cover. The problem is exacerbated by the fact that the Atlantic Forest region is home to approximately 70% of Brazil's 169 million people, mainly in the megacities of São Paulo and Rio de Janeiro in the Serra do Mar Corridor. Paraty is located between these two cities, which are among the 50 largest cities in the world. The nominated property has suffered pressure since the opening in the 1970s of the BR 101 highway that connects Rio de Janeiro with São Paulo, and concomitant real estate speculation and predatory tourism has advanced and put pressure on traditional communities.

The Almirante Álvaro Alberto Nuclear Centre (CNAAA) is one of the most important ventures in the area, comprised by a complex of nuclear plants. Located at the margins of Highway BR-101 in Angra dos Reis, CNAAA came into operation in 1982. The nuclear complex houses two plants in operation (Angra I and Angra II) with a total power of 2,007 MW. The Angra 3 plant is under construction until 2026.

The Petrobrás Port Terminal (TEBIG) was built in 1977 to receive large ships focused on oil imports. Sea pollution caused by ships and other vessels, and the proliferation of exotic invasive species, threaten the marine biotic communities. Maritime traffic in the Ilha Grande Bay region is high, with oil tankers, platforms, cargo ships, tugboats and support ships circulating in the bay region, especially in the municipality of Angra dos Reis, located in the north end of the site.

Ranching is cited as a valuable socio-cultural asset. Ranching can have significant environmental impacts even at a small scale, particularly in sensitive environments. Human-wildlife conflict related to ranching may result in the mortality of keystone predators like jaguars and cougars. It is critical that any ranching operations are managed sustainably and with the conservation of these species in mind. Ranching can also negatively affect the watershed and coastal health of the proposed site. Care should be taken to ensure that water quality is preserved and that intensive practices and further land clearing are avoided, even within the buffer zone.

The protection strategies of the Atlantic Forest should also take into account increasing climatic instability, with an elevation in the incidence of extreme events. The conclusions of the first National Assessment Report of the Brazilian Panel of Climate Change (PBMC) on the natural and productive landscape of the Atlantic Forest and the studies on the consequences of climate change

on the native species of this hotspot, indicate a complex scenario by the end of this century, including the potential for impacts of sea level rise and more frequent and severe storm events. There may also be periods of drought that could negatively affect biodiversity and microhabitats within the proposed area.

Current estimates indicate that the annual flow of tourism in the Municipality of Paraty varies from 250,000 to 300,000 tourists, being the fourth most visited municipality in the country by foreign tourists. Another major tourist attraction is Ilha Grande State Park; recent data estimates that the island receives about 400,000 visitors per year. According to TurisAngra studies, the flow of tourist ships that sail to Ilha Grande Bay every year involves around 100 vessels, and an estimated 200,000 transatlantic passengers. Challenges include the management of wastewater and sewage to ensure the water quality of the Ilha Grande Bay is not compromised. Plans are underway to upgrade sewerage systems in light of increased tourism, and further mitigate impacts of insufficiently treated wastewater.

The nomination dossier describe the presence of 35 species of amphibians, of which 18 are endemic to the proposed site. The frogs of Brazil, as with most tropical countries, are threatened by the presence of the chytrid fungus. This fungus has decimated populations of frogs and continues to cause local, and possibly also species-level extinctions. Any analysis of biological richness, diversity, and conservation should include a statement on the presence or absence of chytrid, and there should be a strategic monitoring protocol in place. If chytrid is found, relevant parties should collaborate with amphibian conservation entities working in Brazil, particularly to provide additional support for the protection of the endemic amphibian species.

In conclusion, IUCN considers that the integrity, protection and management of the nominated property meet the requirements of the Operational Guidelines.

5. ADDITIONAL COMMENTS

5.1 Consideration in relation to serial properties

a) What is the justification for the serial approach?

The justification of the serial approach is based on the fact that the five site components are not a contiguous area, but all contain exceptional cultural and biological values that create a unique landscape. Specifically, the four protected areas contain a variety of Atlantic Forest habitats and ecosystems, including ombrophyllous forest, high-altitude grasslands, mangrove marshes and sandbanks that range between 2,000 m and sea level, which cannot be represented by a single site.

Two of the four natural components in the original nomination are contiguous; Praia do Sul Biological Reserve and Ilha Grande State Park constitute most of the land area of the dominant island in the bay. The

recent revision of the boundaries to expand component 4 to include all of the Cairuçú Environmental Protection Area rounds out the inclusion of the sites overarching feature, the natural amphitheatre, as component 4 is now contiguous with the largest component, the Serra de Bocaina National Park. Only the historic centre of Paraty does not have a common boundary among the components. All areas between the components—coastal areas and waters of Ilha Grande Bay—are included in the buffer zone.

b) Are the separate component parts of the nominated property functionally linked in relation to the requirements of the Operational Guidelines?

The serial site components of the nominated property are functionally linked in ways that maintain ecosystem processes and allow species to move through the landscape. However, more linkages of lower elevation slopes to the coast would be advantageous, especially source-to-the-sea watercourses.

The Paraty Historic Centre is nestled between the Serra da Bocaina National Park and the coastline, all surrounded by Atlantic Forest and the waters of the Ilha Grande Bay.

c) Is there an effective overall management framework for all the component parts of the nominated property?

The Paraty Site Management Plan calls for a management committee. “The federal and state bodies responsible for managing the areas that make up the proposed Site will comprise the Local Executive Committee together with representatives of city halls and civil society organizations. The presidency will be held by IPHAN and ICMBio’s representatives, alternately”. The Management Plan outlines goals, results, indicators, sources of verification and assumptions for all the serial site components and buffer zone, linking the protected areas management plans. Implementation of the plan will be the key to managing the serial site as a coherent whole, especially the articulation of existing plans for each of the constituent components. There is a need to improve the overarching management framework for the nominated property so as to better integrate management decisions among the governmental agencies at municipal, state and federal level, involved in the property.

6. APPLICATION OF CRITERIA

Paraty Culture and Biodiversity has been nominated under natural criteria (vii) and (x), as well as under cultural criteria (ii), (v) and (vi) which will be evaluated by ICOMOS.

Criterion (vii): Superlative natural phenomena or natural beauty or aesthetic importance

The nomination dossier does not make a case for superlative natural phenomena. However, it does present a justification for natural beauty or aesthetic

importance based on the dramatic and contrasting juxtaposition between mountain scenery blanketed with Atlantic Forest plunging into the sea and the diversity of coastal ecosystems. IUCN acknowledges the impressiveness of this land and seascape, however, notes that most of the coastline and all marine areas are excluded from the nominated area boundaries; they are included only in the buffer zone. Thus, the property within the boundaries does not present the complete picture described in the justification. In addition, the visual integrity is limited by the visible past forest loss and degradation in the lower elevations of all forests (where coffee was grown in the past; high-value timber was historically removed throughout the nominated area). Furthermore, the presence of large scale development in the region such as the Almirante Álvaro Alberto Nuclear Centre (CNAEA) and the Petrobrás Port Terminal (TEBIG) are considered to detract from the naturalness and aesthetic of the nominated property. IUCN considers that on balance the nominated property has not made a convincing case to meet criterion (vii) when compared with other similar properties in the Atlantic Forest region.

IUCN considers that the nominated property does not meet this criterion.

Criterion (x): Biodiversity and threatened species

The nominated property is located in the Atlantic Forest hotspot, one of five leading global biodiversity hotspots and the site is known for its high richness in endemic species. The remarkably high biodiversity of this area is due to a unique diversity of landscapes with a set of high mountains and strong altitudinal variation, and ecosystems that occupy areas from sea level to about 2,000 metres in elevation. The nominated property is noteworthy for the occurrence of at least 11 Key Biodiversity Areas (KBAs). This section of the Atlantic Forest represents the greatest richness of endemism for vascular plants within the hotspot with some 36 species of rare plants, 29 of which are endemic to the site. Among the rare plants of the site are species of herbaceous plants, epiphytes, shrubs and trees, which occupy specific habitats of forest environments and sandbanks, as well as along watercourses. With records of 450 species, birds represent 60% of the endangered species of vertebrate fauna identified for the nominated property. The nominated property is home to 45% of all the Atlantic Forest’s avifauna including 57% of the total of endemic bird species for the hotspot. The nominated property boasts impressive species richness across almost all taxa: 125 species of anurans (frogs and toads) have been recorded representing 34% of the species known from the Atlantic Forest and some 27 species of reptile are known from the site. 150 species of mammals are found within the nominated property including several globally significant primates such as the Southern Muriqui, which is considered a flagship species for the site. The larger components of the nominated property are also important for large range species such as jaguar, cougar, white-lipped peccary and primate species. The nominated property also supports a

similarly high diversity of marine biodiversity and endemism.

IUCN considers that the nominated property meets this criterion.

7. RECOMMENDATIONS

IUCN recommends that the World Heritage Committee adopts the following draft decision, noting that this will be harmonised as appropriate with the recommendations of ICOMOS regarding their evaluation of this mixed site nomination under the cultural criterion and included in the working document WHC/19/43.COM/8B:

The World Heritage Committee,

1. Having examined Documents WHC/19/43.COM/8B and WHC/19/43.COM/INF.8B2;

2. Inscribes Paraty Culture and Biodiversity (Brazil) on the World Heritage List under criterion (x);

3. Takes note of the following Statement of Outstanding Universal Value:

Brief Synthesis

The property, Paraty Culture and Biodiversity, is a serial property comprising five component parts, including four protected areas: Serra da Bocaina National Park; Juatinga Ecological Reserve (including the larger Environmental Protected Area of Cairuçu); Ilha Grande State Park; and Praia do Sul Biological Reserve, plus the historic centre of the municipality of Paraty. The 204,634 ha property is nestled in the majestic Serra do Mar, known locally as Serra da Bocaina, which demarcates the landscape of the region due to its rugged relief reaching over 2,000 m altitude. The property and its buffer zone present a natural amphitheatre of Atlantic Rainforest dropping down to Ilha Grande Bay. The two protected areas, Praia do Sul Biological Reserve and Ilha Grande State Park, also cover most of the largest island within the Bay, and the property's buffer zone includes many small islands, beaches, and coves.

The forest formations exhibit four distinct classifications according to altitude. This property represents the greatest concentration of endemism for vascular plants within the Atlantic Forest biodiversity hotspot, and also features 57% of the total of endemic bird species of this hotspot. The property's systems of fluvial sedimentation supports stands of mangrove and restinga, which are found on the coastal plains and function as important ecosystems for the transition between terrestrial and marine environments. The forests, mangroves, restinga, reefs and islands of the property shelter hundreds of mammals, amphibians, reptiles and birds, many endemic to the Atlantic Rainforest and threatened with extinction.

The geographical conditions of the area, a coastal plain abundant in food and natural shelter surrounded by the sea and mountains covered by forests, has allowed the occupation and transformation of the area by people in a unique way, first by the indigenous peoples and later by the Europeans, who chose it for being a safe refuge for ships and for being the main point of entry into the interior of the continent.

The property is also home to traditional Quilombolas, Guaranis and Caiçaras communities that maintain the way of life and the production system of their ancestors, as well as most of their relationships, rites and festivals.

Criteria

Criterion (x)

Paraty Culture and Biodiversity World Heritage property is located in the Atlantic Forest hotspot, one of five leading global biodiversity hotspots and the property is known for its high richness in endemic species. The remarkably high biodiversity of this area is due to a unique diversity of landscapes with a set of high mountains and strong altitudinal variation, and ecosystems that occupy areas from sea level to about 2,000 metres in elevation. The property is noteworthy for the occurrence of at least 11 Key Biodiversity Areas (KBAs). This section of the Atlantic Forest represents the greatest richness of endemism for vascular plants within the hotspot with some 36 species of rare plants, 29 of which are endemic to the site. Among the rare plants of the site are species of herbaceous plants, epiphytes, shrubs and trees, which occupy specific habitats of forest environments and sandbanks, as well as along watercourses. With records of 450 species, birds represent 60% of the endangered species of vertebrate fauna identified for the property. Paraty Culture and Biodiversity World Heritage property is home to 45% of all the Atlantic Forest's avifauna including 57% of the total of endemic bird species for the hotspot. The property boasts impressive species richness across almost all taxa: 125 species of anurans (frogs and toads) have been recorded representing 34% of the species known from the Atlantic Forest and some 27 species of reptile are known from the site. 150 species of mammals are found within the property including several globally significant primates such as the Southern Muriqui, which is considered a flagship species for the site. The larger components of the property are also important for large range species such as jaguar, cougar, white-lipped peccary and primate species. The property also supports a similarly high diversity of marine biodiversity and endemism.

Statement of Integrity

The property coincides with areas of high forest cover within the formerly extensive Atlantic Forest, with most of the site included in protected areas of the National System of Nature Protected Areas (SNUC), contributing to the maintenance of the environmental integrity of the landscape. The integrity of this landscape is evidenced by the presence of species that require large, intact

swaths of habitat. Further studies on the estimated population of jaguars within the inscribed area, as well as information on their movements would provide confirmation of the ecological integrity of the property. From the marine perspective, as the bay itself is included within the buffer zone, it is critical that the strategies and recommendations made under the “Integrated Management Project of the Ecosystem of the Ilha Grande Bay” (BIG) are effectively implemented to adequately protect the ecosystem health of Ilha Grande Bay itself.

The five combined component areas and their overall size, including the buffer zone are adequate to ensure integrity, but the connectivity between them must be preserved to maintain ecological functionality across the overall size. Any loss of connectivity and / or reduction of functional size of any part of the site would be damaging to its integrity. The management of the buffer zone is hence critical to the overall health of the property’s values.

In the southern portion of the site, in the overlap between the Serra do Mar State Park in São Paulo State and the Bocaina National Park, is the only location on the Atlantic Coast where the full altitudinal gradient between the coastline and the top of the mountain range is totally included within protected areas. Ilha Grande Bay demonstrates one of the highest levels of connectivity between the forest ecosystems of the Atlantic Forest and coastal shore ecosystems, contributing to the representation and preservation of its natural attributes.

Protection and Management

All of the components of the serial property are protected by municipal, state and federal legislation. Serra da Bocaina National Park is managed by ICMBio, the federal agency of the Brazilian Ministry of the Environment for Protected Areas. The Ilha Grande State Park, Praia do Sul Biological Reserve and Juatinga Ecological Reserve are managed by the Rio de Janeiro State Environment Institute (INEA). The Paraty Historical Centre has been protected by the National Historic and Artistic Heritage Institute (IPHAN) since in 1958. ICMBio, INEA and the Ministry of Environment, as well as IPHAN and the Ministry of Culture provide adequate long-term institutional protection and management to the property’s components and buffer zone. All protected areas have their own annual budget to ensure the implementation of research, training, protection and conservation actions.

Individual components of the serial property have management plans, however, the integrity of the property lies in the integration of the five components and the integration of the cultural, natural and traditional use of the complex. This will need an overarching management framework that address all the components of the site and ensures coordinated and harmonized management.

A challenge facing the property relates to developing a better understanding of the ecosystem and social aspects of human use within the property and buffer zone including traditional fishing practices and ranching to ensure they are ecologically, socially and economically sustainable. Tourism and surrounding development pressures stem from the property’s location between the two major cities of São Paulo and Rio De Janeiro. It is therefore important to assess the benefits and impacts of increasing tourism pressure on the property, especially in areas of ecological and cultural sensitivity. The context of the property is important to understand and manage given the presence of nuclear energy facilities in one portion of the buffer zone, as well as existing impacts from the oil industry. The threats of thermal pollution, chemical pollution, impacts from vessel traffic, and more are very serious and could compromise much of the aesthetic and ecological value of the coastal sections of the proposed site. Effective planning and response mechanisms are therefore critical to have in place.

Finally, an important dimension relates to engaging with local communities within and surrounding the property. Ongoing and enhanced efforts will be needed to build stronger participatory approaches that empower local communities in the management of the site and in generating and sharing benefits in a way that respects rights and improves social and economic sustainability in the region.

4. Expresses its appreciation to the State Party for its decision to add the wider Cairuçu Environmental Protected Area to the property, thereby including the entire natural amphitheatre of the Ilha Grande Bay;

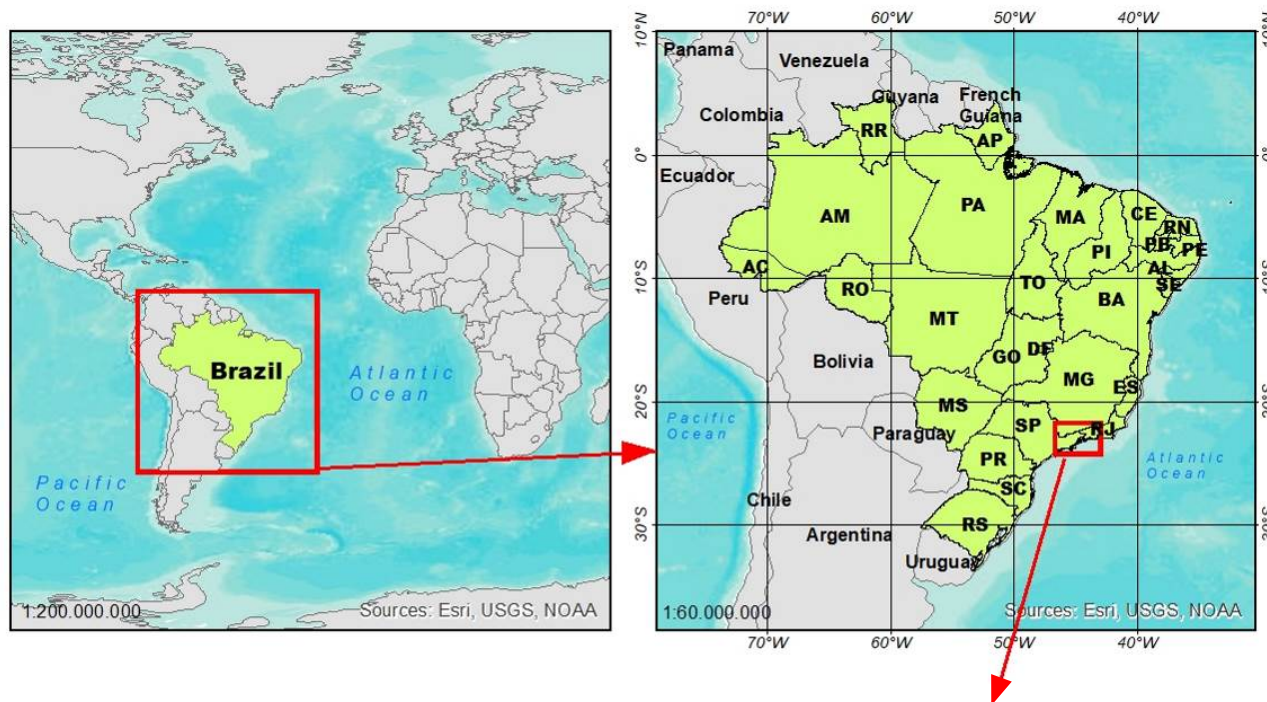
5. Recommends that the State Party undertake the following actions to strengthen the conservation of the property:

- a) Harmonize the many protected area and environmental protection area management plans that overlap around the property to establish an overarching management framework that address all the components of the site and ensures coordinated and harmonized management.
- b) Strengthen participatory governance mechanisms to enshrine the principles of free prior and informed consent and empower local communities in management and benefit generation and sharing as a contribution to improved social and economic sustainability in the region
- c) Ensure the maintenance of ecological connectivity between the property’s component parts with particular attention on the regulation and management of buffer zone uses and practices.
- d) Ensure effective monitoring of tourism use and impacts to forecast and plan for increasing tourism pressure on the property, especially in areas of ecological and cultural sensitivity

e) Finalize and implement plans to upgrade sewerage systems in light of increased tourism, and further mitigate impacts of insufficiently treated wastewater;

6. Encourages the State Party to consider the progressive addition of further suitable lower altitude forest areas to the inscribed property in order to further improve the representation of ecosystems and habitats across the property's altitude gradient.

Map 1: Location of the nominated property



Map 2: Nominated property and buffer zone

